



# SRI LANKA JOURNAL OF SURGERY

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# 50<sup>th</sup>

*Anniversary*

*Golden Jubilee Special Edition*

ABSTRACTS OF THE  
50<sup>th</sup> ANNUAL ACADEMIC SESSIONS - 2021  
OF  
THE COLLEGE OF SURGEONS OF SRI LANKA  
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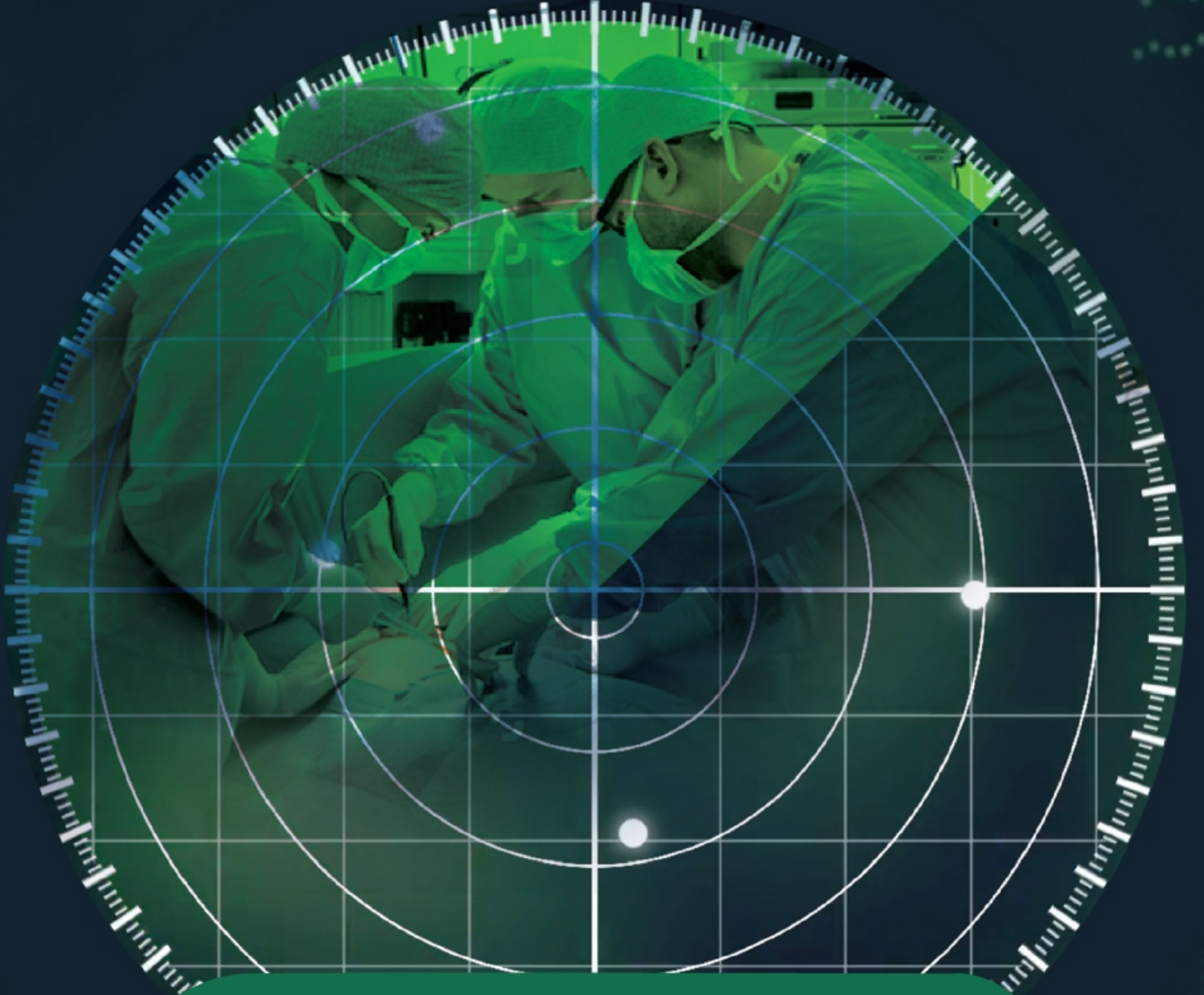
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**Accepted abstracts**



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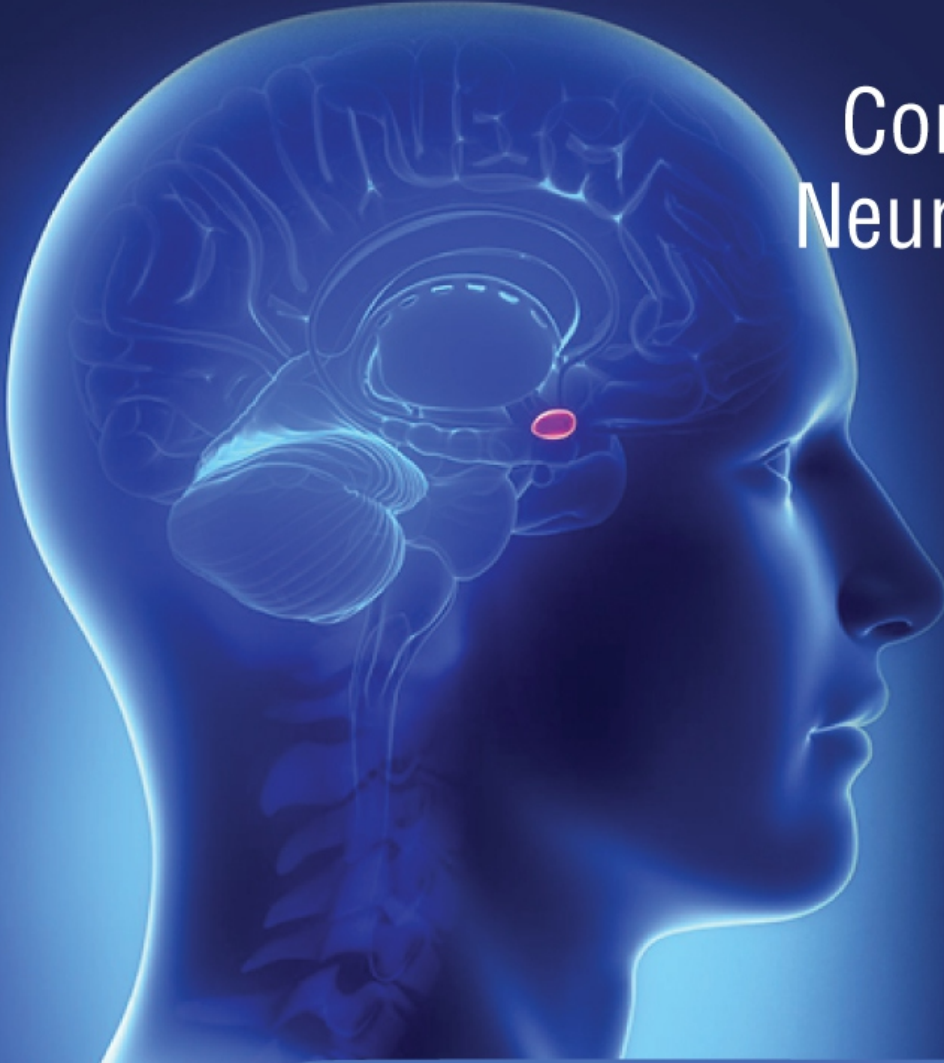
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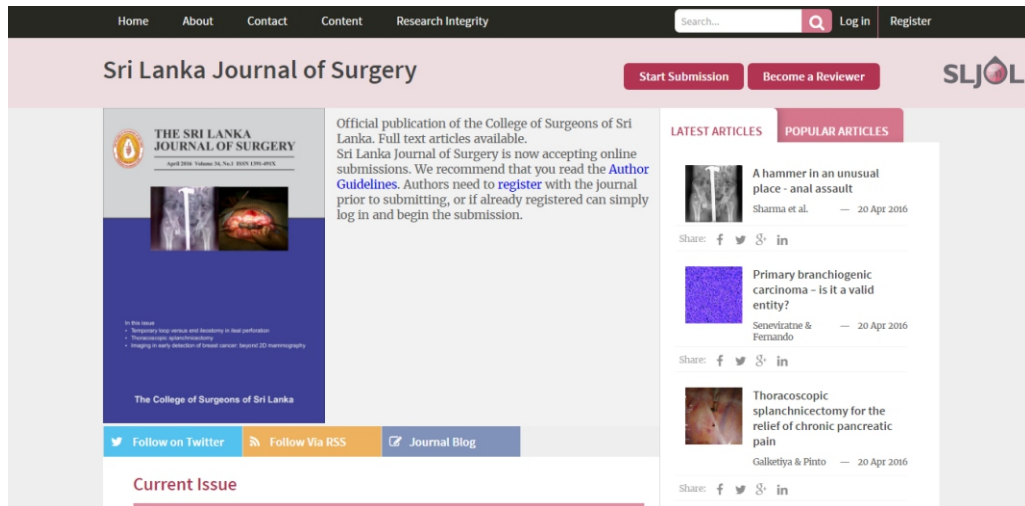
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# ABSTRACTS

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## ORAL PRESENTATIONS



## **OP 06 - Single center experience in pediatric percutaneous nephrolithotomies (PCNL).**

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**Department of urology, National Hospital Kandy, Sri Lanka**

### **Introduction**

PCNL is became the treatment of choice for large renal stones in pediatric population, and it is a technically challenging procedure when we transform from adult practice to pediatric. The aim of the study is to demonstrate our experience and outcome of pediatric PCNLs

### **Methods**

We collected the completed data from nineteen patients among 45 patients who underwent PCNL between December 2016 to December 2020. The basic demographic features, radiologic features of stone, and intraoperative findings were recorded and analyzed.

### **Results**

Mean age of the study was 7, average weight of the study group was 18.92 kg, and female to male ratio was 1:0.9. The mean size of the stone was 1.63. All underwent prone position PCNL, and the mean procedure time was 34.1 minutes. 14 (73.68%) stones were accessed via lower pole puncture. 11 (57.89%) were dilated up to 24Fr, and rest dilated up-to 16Fr. We inserted nephrostomy to 12 (63.17%), nephrostomy with stent in 4(21.1%), and three were totally tubeless. Stone clearance rate was 99%, and 17 (89.47%) had Clavien-Dindo 1 complications. The mean day of discharge was two.

### **Discussion & conclusion**

We analyzed only nineteen patients among the 45 patients because of inadequate data and got good outcome in children like adults with minimum postoperative morbidity. Pediatric PCNL is the safe and minimally invasive procedure with good stone clearance when it done by the experienced hands in high volume centers.

## **OP 24 - Laparoscopic pyeloplasty for congenital ureteropelvic junction obstruction: Single center experience.**

**C Samaraweera, N Jahan, C Hingalagoda, C Wickramasekera, J Vidanapathirana, N Seneviratne, S Udurawana, Y Manikkage**  
**Sri Jayawardenapura General Hospital, Sri Lanka**

### **Introduction**

Laparoscopic pyeloplasty(LP) has been developed as a minimally invasive alternative to open pyeloplasty for the treatment of ureteropelvic junction obstruction (UPJO). This is a preferred method in terms of reduced morbidity and better cosmesis when compared to open surgery.

### **Methods**

40 patients treated at Sri Jayewardenapura General hospital between March 2014 to December 2020, were analyzed. All had radiological findings of UPJO on CT urogram and impaired drainage on DTPA renal scan. All underwent LP either Flap, V-Y plasty or Anderson-Hynes technique via 3/4 ports (ports size 10mm and 5mm). Outcome was assessed clinically and diuretic renogram at 6 months.

### **Results**

Mean age was 32 years (17-61), male to female ratio was 22:18(1:0.8). Intrinsic stenosis, anomalous vessel and high implantation of the ureter was found in 25(62.5%), 11(27.5%), 4(10%) respectively. The mean operating time and was 176 min. Simultaneously laparoscopic pyelolithotomy was done in 7(17.5%) patients. There were no conversions to open method. There were no blood transfusions. Mean hospital stay was 3.5 days (3-9). There we prolong ileus, port site infection and urinary fistula in two patients each. All patient's symptoms were resolved with 32(80%) patients showing significant improvement of the eGFR. However, 5(12.5%) patients required laser endopyelotomy who failed to demonstrate a satisfactory improvement on DTPA.

### **Conclusion**

Although LP is technically demanding, offers excellent symptomatic relief and renal preservation. It offers less morbidity, with aesthetic and post-operative convalescence benefits and lower complication rates emerging as a viable option replacing open surgery.

**OP 34 - Does PSA >4ng/ml warrants a trans rectal ultrasound (TRUS) guided biopsy? outcome of detecting clinically significant prostate cancer.**

**J Winapathirana, S Udurawana, C Hingalagoda, Y Manikkage, C Wickramasekera, J Jahan, C Samaraweera, S Rodrigo, B Abeywickrama, S Samaraweera, N Senevirathne**  
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### **Introduction**

Early detection of prostate cancer (T1c) which the most prevalent in the west, have shown 22% and 67% cancer detection rates, for PSA values 4-10 and PSA >10 respectively. The objective was to undertake TRUS biopsy in all patients presenting with PSA>4 to find the cancer detection rate(CDR) and find their clinical outcomes.

### **Methods**

A descriptive study was done at Sri Jayewardenapura General Hospital from August 2014 to June 2021. All patients with PSA>4 (repeated when indicated) underwent standard 10-12 core TRUS biopsy. Patients with biopsy proven malignancy underwent bone scan and/or MRI/CT of prostate for staging as; localized (OC), locally advanced(LA) and metastatic disease(MD) after which clinical outcome was assessed.

### **Results**

Out of 400 patients CDR was 36.5%(146). Mean age of cancer group was 70.8 years (43-85) compared to 67.13 years (48-85) in the benign group. CDR was 13.8%(21/152), 30%(37/123), 70% (88/125) in subgroups with PSA 4-10, 10.1– 20, > 20 respectively. Out of the benign group 41.3%(105) had biopsy proven prostatitis while 7(2.7%) had cancer at TURP. Of those who had cancer at biopsy 22.6%(33), 13%(19), 64.6%(94) had OC, LA, MD respectively. One third of OC group had PSA between 4-10 ng/ml. Of the OC group 17(51%), 10(30%), 6(20%) underwent radical prostatectomy, radical radiotherapy and active surveillance respectively. Overall 87(57%) patients with cancer underwent medical/surgical castration.

### **Discussion**

Despite a higher incidence of prostatitis, PSA 4-10 must not be ignored, since often it demonstrates clinically important cancers which are potentially curable. Hence there should be a low threshold to perform TRUS biopsy when PSA>4.

**OP 40 - Urinary stone composition, characteristics and associations in a cohort of Sri Lankan Patients.**

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**University of Sri Jayawardenapura, Sri Lanka**

### **Introduction**

The study describes urinary stone composition and associations in a cohort of patients in Sri Lanka.

### **Methods**

Stones from a single center were analyzed using infrared spectrometry. Multinomial Logistic Regression Analysis was performed to create a model for relationship between different stone sizes, age, diabetes, hypertension and renal functions.

### **Results**

Of 400 patients, 72.6% were male. Mean age was 49.9 years( $\pm 15.3$ ). 70.3% stones were oxalate, 16.3% pure uric acid(UA), 7% mixed and 6.4% infection-related. 31.4% were <1cm, 40.9% were 1-1.9 cm, 22.9% were 2-3.9cm and 4.9% were >4cm, with a significant difference in composition according to the size category ( $p = 0.042$ ). Of mixed stones, 85.7% had >50% oxalate, 14.3% <50% oxalate mostly in combination with UA. In this cohort, 23.19% of all stones contained UA either in pure or mixed form. In 30/47 staghorns, composition was pure UA, oxalate, mixed and infection in 40%, 40%, 10% and 10% respectively. In fitted MNLR model, with 1cm-stone size as reference, hypertension was significantly associated with size 2-3.9cm (OR=1.3; 95%CI = 1.1 -9.9) and >4 cm stones(OR=2.6; 95%CI = 1.2 -23.4). Elevated serum UA did not show a statistically increased tendency while elevated serum creatinine shows 3 times increased tendency for UA stones compared to others (OR=3.3; 95%CI= 1.8-6.1).

### **Conclusion**

There is a remarkable reduction of infection-related stones and a rise in UA containing stones in this study. Larger stones and staghorns are mostly oxalate and UA. The association of elevated creatinine and hypertension with UA stones warrants further study.

## **OP 25 - Comparison of outcome following partial vs radical nephrectomy for localized renal cancer.**

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Sri Jayawardenapura General Hospital, Sri Lanka

### **Introduction**

Partial nephrectomy (PN) is associated with higher rates of post-surgical complications compared with radical nephrectomy (RN). However long-term oncological outcome of RN and PN are comparable. The objective was to compare outcomes of PN vs RN in patients with localized renal cancers T1/T2.

### **Methods**

All renal masses that underwent nephrectomy from August 2013 to April 2021 were included. Patients with bilateral or T3/T4 tumours were excluded. Clinico-pathological features, complications and overall cancer-specific survival were analyzed using cox regression method. Functional outcome was measured by change of eGFR at follow-up.

### **Results**

Out of 102 patients, 32 (31.3%) underwent PN and 70 (68.7%) RN. Overall 56 (55%) were performed laparoscopically. Except for hypertension in PN group ( $P=0.03$ ); age, sex and other comorbidities were comparable in both groups. Mean tumor diameter for PN was 3.1cm vs 5.9cm for RN ( $P=0.001$ ), commonest histological type was clear cell carcinoma for PN =28 (87.5%) vs RN=48 (68.5%);  $P=0.04$  were significantly different between groups but perioperative complications were similar. Cancer specific and overall survival were equal in both groups despite a significant drop in eGFR in the RN group (PN=2.4% vs RN=20.2%,  $P=0.04$ ) at median follow-up of 32 months. One death due to a cardiac event in PN group and two local recurrence in RN group was observed.

### **Conclusion**

PN lowers the postoperative risk of CKD. Despite a more complex operation; a higher acute surgical morbidity was not observed in PN group probably due to use of laparoscopic approach and/or judiciously use of PN in T1 tumours. Short term survival results appear satisfactory.

## **OP08 - Alteration in activities of daily living and self-image in haemodialysis patients following arteriovenous fistula formation.**

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### **Introductions**

Arteriovenous fistula (AVF) can limit the activities of daily living (ADL) and cause negative impact on self-image. The aim of this study was to identify alterations in ADL, as there are limited studies available on this topic.

### **Methods**

This is a descriptive, quantitative and cross sectional study done in Haemodialysis (HD) unit at the National hospital of Sri Lanka, Colombo during the month of July 2020.

The data of 50 patients who attended to HD unit were collected using an interviewer-based, structured questionnaire containing 20 questions including behaviour and self-image. Difficulty levels were given a score i.e. No difficulty-1, Mild-2, Moderate-3, Severe-4, unable to do-5. The scores were also compared between dominant and non-dominant arm groups.

### **Results**

Mean age was 47 years (29-68y). Majority were males (66%). Risk factors for chronic kidney disease were hypertension in 45 (90%) and diabetes mellitus in 29 (58%). AVF was formed on non-dominant limb in 39 (78%).

Although AVF did not impair majority of patients' daily activities (overall median score-1), some behaviours were affected. Such as wearing a watch and carrying a bag (median score-3) and sleeping (median score-2). The difficulties of writing, eating and driving were significantly higher in dominant arm AVF group ( $P < 0.05$ ). Impairment of self-image due to AVF was not significant ( $P > 0.05$ ) but many preferred brachiocephalic over radio-cephalic AVF due to cosmetic reasons.

### **Conclusions**

AVF restricts some key routine activities especially in dominant arm group. But it does not negatively influence their self-image. These results are useful for preoperative counselling and education.



**OP 36 - Survival and prosthesis use amongst patients undergoing major lower limb amputation for chronic limb threatening ischaemia: 4 years follow up of a single unit experience.**

**TD Gooneratne, AA Nishanthan, A M Alabadaarachchi, J Arudchelvam, KAN Chanaka, MHP Godakandage, MRN Cassim, RMPD Kularathne, S M Wijeyaratne**  
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### **Introduction**

Despite advances in medicine 30% of patients with chronic limb threatening ischemia (CLTI) require major lower limb amputation (MLLA). Long-term outcome of this specific cohort is poorly described worldwide and especially in Sri Lanka.

### **Methods**

Consecutive patients who underwent MLLA for CLTI during 2015-2019 were retrospectively analysed for perioperative, short-term, and long-term outcomes as well as on prosthesis use/habits.

### **Results**

106 below-knee amputations (BKA) and 48 above-knee amputations (AKA) were followed up for a mean duration of 50 months (37-78). Mean age of the cohort was 63 years. Majority were male (60%) with multiple comorbidities (diabetes (83.8%), hypertension (49.4%), ischaemic heart disease (20%) and smoking (32.5%). Equal proportion underwent MLLA as primary (45%) or secondary (55%).

30-day mortality was 6%. Mean length of in-hospital stay (LOS) was 18 days (3-56). Overall survival at 1, 2 and 4 years was 73.32%, 64.30% and 34.76% respectively. On a multivariate regression analysis only AKA vs BKA had a significant impact on mortality (4-year survival for AKA vs BKA; 20% vs 44%;  $p=0.015$ ). There was no significant impact on primary vs secondary MLLA.

Only 54% of amputees were in possession of a prosthetic limb. However primary use of prosthesis was for cosmesis, with only 12% mobile independently and 33% using the prosthesis as an adjunct for mobilization.

### **Conclusions**

MLLA for CLTI is associated with high 30-day mortality, LOS and overall survival up to 4 years follow up. Prosthesis use and mobility is extremely poor in the Sri Lankan context.

**OP 38 - Knowledge and practice on temporary vascular access catheter insertion for haemodialysis: A single centre experience.**

**K Piratheep, MHP Godakandage, AA Nishanthan, A M Alabadaarachchi, J Arudchelvam, KAN Chanaka, MRN Cassim, RMPD Kularathne, S M Wijeyaratne, TD Gooneratne**  
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### **Introduction**

With the increase in the end stage renal disease population in Sri Lanka, the need for haemodialysis is on the rise. Patients without a mature arteriovenous fistula need temporary vascular access catheter insertion. Therefore, this has become a frequently performed procedure.

### **Methods**

A descriptive cross-sectional study, with a self-administered questionnaire, was performed at National Hospital of Sri Lanka in June 2021. Registrars, senior registrars, consultants, and medical officers participated.

### **Results**

50 were included – 30(60%) registrars, 13(26%) were senior registrars, 03(6%) consultants, 04(8%) medical officers. Majority (22,44%) were from general medicine. Everyone (100%) inserted at least one catheter a month while thirty-six (72%) had experience of more than a year. 47(94%) were right hand dominant. 36 (72%) learnt from a senior while 10(20%) by self-learning.

Ultrasound scan (USS) guided insertion was used by only 44% (22). complications were haemorrhage (28,56%), haemothorax (2,4%) and death (3,6%). All these have encountered resistance during insertion. Only 62% (31) perform routine chest X-ray after neck access.

29 (58%) correctly managed 50% or more case scenarios assessed in the questionnaire, which covered decision making, troubleshooting and complications. 36 (72%) preferred more training.

### **Conclusion**

This study shows that all deaths following vascular access catheters encountered resistance during insertion. This indicates that if resistance is encountered during insertion the procedure should be abandoned. Only 44% used ultrasound guidance but all the central line insertion should be done with ultrasound guidance.

**OP 39 - Vascular surgeon performed lower limb arterial duplex scans in patients with occlusive arterial disease: A comparison study with Angiography.**  
**MHP Godakandage, AM Alabadaarachchi, AANishanthan, J Arudchelvam, KAN Chanaka, MRN Cassim, RMPD Kularathne, SM Wijeyaratne, TD Gooneratne**  
**University Vascular and Transplant unit NHSL, Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

### **Introduction**

Duplex ultrasonography (DUS) is a non-invasive modality used in Occlusive Arterial Disease (OAD) imaging. However, many factors influence the interpretation of the imaging. This study describes the comparison between DUS and angiography (Computerized tomographic angiography (CTA) or catheter angiography (DSA)).

### **Methodology**

This is a retrospective study. Images (DUS and Angiography) of patients presenting with OAD to the university vascular and transplant surgical unit, Colombo (NHSL) from July 2020 to July 2021 were analysed. Infrainguinal OAD was considered, and Global Anatomic Staging System (GLASS) grading was used.

### **Results**

Images from 41 limbs (39 patients) were studied. Majority were males (61%, 25). Mean age was 64.83 years (40-95). All underwent either CTA (23, 56.1%) or DSA (18, 43.9%) along with DUS. Separate GLASS scores were given to femoropopliteal, infrapopliteal segments and to the whole lower limb (GLASS stage).

Cohen's kappa test showed a moderate agreement for all segments and the whole limb GLASS scores between DUS and angiography (femoropopliteal / infrapopliteal / whole limb -  $k=0.488/0.448/0.470$ ).

However, paired sample t test revealed a significant difference in the mean GLASS scores for the infrapopliteal segment and the whole limb between DUS and angiography ( $p=0.011$  /  $p=0.011$ ) i.e., DUS underestimates the lesions.

### **Conclusion**

Vascular surgeon performed leg DUS moderately correlates with the CTA/DSA. However, it significantly underestimates the lesions probably at the popliteal arterial decision level. Therefore, angiography should be combined with DUS to plan the interventions.

**OP 09 - Knowledge and practice on self-care of an arteriovenous fistula in haemodialysis patients.**  
**PD Weeraddana, MDP Pinto, J Arudchelvam**  
**Vascular and Transplant Unit, National Hospital of Sri Lanka**

### **Introductions**

An Arteriovenous Fistula (AVF) is the best access for haemodialysis (HD). Promoting self-care behaviours will minimize complications. The aim of this study was to assess the knowledge and practice about self-care of AVF among haemodialysis patients.

### **Method**

This was a cross-sectional descriptive study done at the National Hospital of Sri Lanka, during the month of July 2020. The data from 50 patients on maintenance HD was collected by using an interviewer administered, structured questionnaire comprising of 12 questions. Knowledge on self-care of an AVF and practice of each were assessed and categorized into poor (<50%), average (50-70%) and good (>70%).

### **Results**

This study included 33(66%) males and 17(34%) females. Mean age was 47 years (Range: 29-68y). Risk factors for chronic kidney disease were hypertension in 45(90%) and diabetes mellitus in 29(58%). Majority (78%) had AVF on non-dominant upper limb and commonest site was brachiocephalic (66%).

Knowledge was good in 26(52%) of participants and average in 17(34%). Good practice was seen in 17(54%). Both knowledge and practice were poor on daily inspection of AVF for features of infection (18%) or ischemia (32%). Knowledge was average on daily AVF thrill check-up (56%). Knowledge scores were not different between age groups, gender or education level. Majority (70%) were educated only during the perioperative period. Family was educated only in 12%.

### **Conclusion**

Although overall knowledge and practice were satisfactory, both were poor in some key aspects. Therefore, good educational programmes, regular reminders and periodic evaluations on AVF self-care are recommended to minimize the complications.

**OP 37 - Long-term outcomes of major lower limb amputation after revascularization in chronic limb threatening ischaemia: A truly dreaded outcome or a negativity bias?**

**T D Gooneratne, KAN Chanaka, MRN Cassim,**

**AANishanthan, A M Alabadaarachchi, J Arudchelvam,**

**MHP Godakandage, RMPD Kularathne,**

**SM Wijeyaratne**

**University Vascular and Transplant unit NHSL,  
Department of Surgery, Faculty of Medicine, University  
of Colombo, Sri Lanka**

**Introduction**

Despite a successful revascularization for critical limb ischaemia (CLTI) 30% require a secondary major lower limb amputation (MLLA) at 3-years follow-up. Assumptions that secondary MLLA has inferior outcomes than a primary MLLA are fuelled by paucity of data on this cohort. We studied the long-term outcomes and factors related to mortality following secondary MLLA in CLTI.

**Methods**

A retrospective analysis was conducted on registry data of patients with CLTI who underwent MLLA secondary to open revascularization at the University Vascular Unit, NHSL from 2017 - 2021.

**Results**

15% (85/336) of patients required a secondary MLLA. Mean age was 64 (30-89) years. Majority were male (56%), within 3 months of revascularization (69%) and below-knee amputations (61%). 30-day mortality was 7%. Overall survival at 1, 2 and 3 years was 75%, 66% and 57% respectively. Increasing age, comorbid profile, bypass/conduit type had no significant impact on overall survival. Early secondary MLLA (<3months from bypass) was a significant predictor of poor survival (<3months [42%] vs >3 months [59%];  $p=0.024$ ). 3-year survival was not significantly inferior to unmatched bypass patients (68%,  $p=0.081$ ) but was superior to matched primary MLLA (37%,  $p=0.008$ ) from the same unit and period. The above-knee/below-knee ratio was significantly inferior to primary MLLA (1:1.6 vs 1:3.6;  $p=0.02$ )

**Conclusion**

Contrary to assumptions, long-term survival of secondary MLLA for CLTI is acceptable. Despite the likelihood of a higher-level amputation, secondary MLLA demonstrates superior survival to primary MLLA. Timing of MLLA (primary vs early secondary vs late secondary) is predictive of increased mortality and warrants further research.

**OP 19 - Post breast reconstruction quality of life and patient satisfaction in breast cancer patients.**

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**Sanjeewa Seneviratne**

**Department of Surgery, Faculty of Medicine, University of  
Colombo, Sri Lanka**

**Introduction**

Breast and nipple reconstruction following mastectomy has been shown to enhance quality of life (QOL) and patient satisfaction in women with breast cancer. This study was conducted to evaluate QOL and patient satisfaction following breast reconstruction in Sri Lanka.

**Methods**

This cross-sectional descriptive study was conducted in a cohort of post-mastectomy breast cancer patients ( $n=11$ ) who had undergone breast reconstruction surgery, using a validated self-administering European Organization for Research and Treatment of Cancer (EORTC-QLQ) Breast Reconstruction Questionnaire (BRECON23).

**Results**

Considering overall patient satisfaction, 45.5% ( $n=5$ ) expressed that they were very much satisfied having undergone a breast reconstruction. However, only one patient was fully satisfied with the size, shape and or appearance of the reconstructed breast. Many reported low satisfaction levels after nipple preservation, with only one patient being fully satisfied with its appearance and nipple sensation. The most common side effects of surgery included tingling sensation in their arm (54.6%,  $n=6$ ) and fullness under their arm (36.4%,  $n=4$ ). Feeling less attractive sexually and a loss of pleasurable sensation from the breast was reported by 36.4% ( $n=4$ ) and 45.5% ( $n=5$ ), respectively. Furthermore, 45.5% ( $n=5$ ) felt that the role of the breast in their sexuality was affected.

**Discussion and conclusions**

This study shows mixed outcomes with significant disparity in QOL of patients following breast reconstruction surgery. Post-reconstruction QOL and factors influencing patient satisfaction in breast cancer patients need further evaluation in a larger cohort.



#### **OP 04 - Effectiveness of ultrasound (US) guided nerve blocks as a method of post-operative analgesia in breast surgery.**

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NHSL, Sri Lanka

##### **Introduction**

Adequate post op analgesia is paramount in Surgery. In breast surgery, PECS (lateral and medial pectoral nerve) block, paravertebral block and Serratus anterior plane block provide better analgesia and less side effects. The aim of this study is to compare its efficacy in relation to conventional oral analgesics.

##### **Methods**

Randomized single blind controlled trial was conducted at National Hospital of Sri Lanka. Each individual was given a randomly selected envelope which contained the method of post op analgesia during the clinic visit. After anesthetizing the patient, allocated method was checked and applied. The pain was assessed 6 hours and 24 hours after the surgery using the numeric scale by the same observer. Control group was prescribed with paracetamol and non-steroidal anti-inflammatory drugs (NSAIDs).

##### **Results**

Total sample of 52 patients were recruited. Out of them, 26 patients were given nerve blocks. Mean age of the case group was  $52.73 \pm 9.04$  years and  $51.53 \pm 8.6$  years in the control group. Mean pain score after 6 hours were  $1.25 \pm 0.91$  (case group) and  $1.80 \pm 0.74$  ( $p = .02$ ). Mean pain score after 24 hours post operatively,  $1.00 \pm 0.10$  (case group) and  $1.69 \pm 0.97$  ( $p = .003$ ). There is no significant improvement in pain after 24 hours compared to 6 hours ( $p > 0.05$ ).

##### **Conclusion**

US guided nerve blocks provide better post op analgesia up to 24 hours following breast surgeries. Regular implementation would carry high benefit to the patients during their post op period.

#### **OP 14 - Chest wall perforator flaps for partial breast reconstruction in breast carcinoma: initial experience from a tertiary care hospital in Sri Lanka.**

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**N Rajapaksha**  
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##### **Introduction**

Breast conserving surgery (BCS) is the standard practice in early breast cancer. The tumour to breast volume ratio is a limiting factor for optimal oncological clearance while achieving optimal cosmesis. The chest wall perforator flaps (CWPF) gives an opportunity for partial breast reconstruction (PBR) in these patients to overcome these obstacles.

##### **Methods**

A prospective descriptive cross-sectional study was conducted at the Colombo North Teaching Hospital, from December 2019 to June 2021. All patients with higher tumour to breast volume ratio and/or willing to undergo BCS during this period with CWPF were included in the study. The end points were; (i) tumour characteristics (ii) flap characteristics/complications (iii) re-excision rate, (iv) donor site complications & (v) local recurrence.

##### **Results**

26 patients underwent BCS with CWPF with a median age of 47 years. 54% had T2. 54% had hormone receptor positive/Her2 Negative cancer. 46% underwent PBR with LiCAP and 4% had TDAP. MiCAP flaps were used in 28.5% patients and AiCAP 17.5% patients. Flaps were raised on a median of 2 (1-3) perforators and the median flap length was 12 cm (9-22). The median specimen weight was 67.5 g (38-180). 57% underwent sentinel node biopsy. Five (17.9%) underwent re-excision of margins  $< 1$  mm on histology. 14% had fat necrosis while 7% with AiCAP had wound dehiscence. 3.5% with triple negative cancer had a local recurrence.

##### **Discussion & Conclusion**

BCS using CWPF is a feasible option allowing wider tumour resections. Long term follow-up data is needed to evaluate oncological safety and cosmetic outcomes.

**OP 20 - Breast cancer related financial toxicity in a country with access to universal non-fee levying healthcare.**

**Sarith Ranawaka, Sathika Gunarathna, Chris Booth<sup>2</sup>, Sanjeewa Gunasekara<sup>3</sup>, Sanjeewa Seneviratne<sup>1</sup>, Thiwanka Wijeratne<sup>2</sup>**

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### **Introduction**

Financial toxicity (adverse personal financial burden) in cancer results from treatment related expenditure and reduced or lost income. This study aims to explore medium term financial toxicity among women with breast cancer in Sri Lanka.

### **Methods**

This cross-sectional descriptive study was conducted among 200 women with breast cancer (stage I-IV) receiving treatment from Apeksha Hospital, Maharagama between 6-18 months from cancer diagnosis using a pre-tested interviewer administered questionnaire.

### **Results**

A majority (n=115, 57.5%) reported a perceived financial burden of 4 or more on a scale of 1-5. The per-month average out of pocket expenditure exceeded the monthly household earning capacity in 37.9% (n=50). Approximately 44% (n=88) utilized private healthcare for consultations, investigations, or treatment with large heterogeneity in the services obtained.

37% (n=74) reported loss of work with 45.5% (n=91) being dependent on lifelong savings, 26% (n=52) on pawning/selling property and 13% (n=26) on private loans. Compromises on food and education of children were made by 31.5% (n=63) and 20.5% (n=41), respectively. Only 11.5% (n=23) benefited from healthcare insurance while 78% (n=156) received financial support from family and relatives. Financial burden showed positive correlations with cancer stage and distance to the nearest radiotherapy unit ( $p=0.033$ ,  $p=0.152$ ;  $p=0.016$ ,  $p=0.170$ , respectively) and a negative correlation with monthly income ( $p=0.014$ ,  $p=0.214$ ).

### **Discussion**

A substantial financial toxicity has been experienced by a majority in this group despite the availability of universal free healthcare. There is an urgent need to explore determinants of financial toxicity which may help develop methods to minimize financial toxicity.

**OP 28 - Audit on assessment of knowledge on Cardiopulmonary Resuscitation of nurses in a single surgical unit of National Hospital of Sri Lanka.**

**Piyumi Abeygunarathna, Anura Banagala,**

**Dameera Weeratunga**

**National Hospital Sri Lanka**

### **Introduction**

Basic life support (BLS) and advanced life support (ALS) are essential skills for a health care worker (HCW) to perform effective cardiopulmonary resuscitation (CPR). Nurses are the usual first responders to critically ill and cardiac arrest patients, in a ward setting, therefore their knowledge and skills on CPR should be up to date and accurate.

### **Methods**

A questionnaire based descriptive, cross-sectional study was conducted among nurses, working in a single surgical unit of National Hospital of Sri Lanka, during 1st to 15th July 2021. The questionnaire was developed using European Resuscitation Council guidelines 2021 and results were analysed using SPSS version 22.

### **Results**

25-nurses with male: female ratio of 0.12: 0.88, were enrolled into the study. They had median age of 33 years and mode years in service of 4 years, while 64% and 36% of them had previous exposure to BLS and ALS courses respectively. Mean percentage mark for the total assessment was 53% ( $\pm 13.5$ ). They scored mean mark of 49 ( $\pm 18$ ), 54 ( $\pm 21$ ), 57 ( $\pm 26$ ) and 40 ( $\pm 17$ ) for questions to cardiac arrest recognition, chest compression, medication, and rhythm assessment respectively.

### **Discussion**

Despite playing major roles in ward-based resuscitation teams, participants had poor previous attendance to BLS and ALS programs and poor knowledge in cardiac arrest recognition and rhythm assessment.

### **Conclusion**

Regular CPR programmes should be introduced into the system as continuous professional development programme and assessing CPR knowledge and skills as a quasi-experimental design is recommended to evaluate the retention level to create an effective CPR programme.

## **OP 05 - Local recurrence rate following the breast conservation therapy. Any predictors?**

**PG N Dhanushka, S Abeysekara, A De Silva**

**NHSL, Sri Lanka**

**Local recurrence rate following the breast conservation therapy. Any predictors?**

### **Introduction**

Wide local excision (WLE) is the standard method of treatment for early breast cancers. After the surgery radiotherapy should be given to the specific tumour site to reduce the recurrence. Hence it is mandatory to follow up these patients to determine the local recurrence rate of the tumour which is the main objective of the study

### **Methodology**

We followed up 57 consecutive patients who had T1 or T2 lesions, with no axillary spread, undergone WLE at least 2 years back. Follow-up was done via telephone conversation with all patients, the post operative investigations were traced via emails. Adjusted odds ratio, binary logistic regression and survival analysis were carried out

### **Results**

Out of 57 patients, 6 patients developed recurrence after radiotherapy. The median time of recurrence is 2.78 years. Out of the factors studied, axillary status was the only factor which showed a significant association ( $p=0.04$ ). The other factors including tumour multifocality, presence of Peau d'orange appearance, skin tethering, nipple inversion, BIRADS status, oestrogen status, progesterone status, HER 2 status, Luminal type, tumour position in quadrants, lymphovascular invasion, and perinural invasion were not significantly associated.

### **Conclusion**

Tumour recurrence following breast conservation surgery is associated with the axillary status. However, further research is warranted to discover other associated factors to predict recurrence following breast conservative surgery.

## **OP 02 - Retrospective study on early outcome of laparoscopic three stage (McKeown) oesophagectomy with cervical anastomosis.**

**W R M Obayasekara, A Jayasekara, N A D P Niwunhella,**

**S D Mahapatuna, W G R C K Sirisena**

**District General Hospital Hambantota, Sri Lanka**

### **Introduction**

Oesophageal carcinoma is the 3rd commonest cancer in males & the 4th commonest cancer in females in Sri Lanka (1). The standard curative treatment for patients with operable esophageal cancer is, perioperative chemotherapy or chemoradiotherapy followed by open transthoracic or trans hiatal esophagectomy. Minimally invasive esophagectomy is now known to minimize overall post-operative morbidity and mortality (2,)

### **Methods**

Study incorporated consecutive 21 patients who underwent laparoscopic McKeown oesophagectomy from May 2017 to May 2021 at General Hospital Hambantota to study surgical sequel. Patients were followed up maximally for up to 3 years.

### **Results**

Males were predominant in presentation (62%). The mean age of presentation was 61.6 years for males, 63.2 years for females. Anatomical location depicted 23.8% mid esophageal, 23.4% lower esophageal, and gastro-esophageal-junction (GOJ) tumors accounted for 42.8%. The prevalence of squamous cell carcinoma was 66.6%. All the patients were given neo-adjuvant chemo-radiotherapy or chemotherapy. The mean operating time was 210 minutes. The conversion to open surgery rate was zero. Mean number of lymph nodes harvest was 16 (4-26). Intraoperative blood loss ranged from 150-350cc. Postoperative mean ICU stay was 4 days.

81% had overall post-operative recovery out of which 57% had uncomplicated recovery. Four patients died within the first 30 days postoperative period, pneumonia accounts for 3 deaths and cardiac dysrhythmia accounts for 1 death. 24% had postoperative pneumonia, 14% had unilateral vocal cord palsy and 9.5% had cervical anastomosis leak, which were managed nonoperatively. Mean hospital stay was 17 (11-43) days.

### **Conclusion**

Laparoscopic three-stage McKeown esophagectomy with cervical.



## **OP 07 - Knowledge, attitudes and practices regarding patient safety among surgical trainees in Sri Lanka.**

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### **Introduction**

Surgical trainees play an integral role in the perioperative workup and surgical patient safety. This study was aimed to assess surgical trainees' knowledge, attitudes and practices regarding surgical patient safety

### **Methods**

A descriptive cross-sectional study among 105 surgical trainees (males=96.1%, n=101; mean age=33.3 years, range:30-40) was performed using a self-administered validated questionnaires on knowledge, attitudes (Safety Attitude Questionnaire-SAQ) and practices (Questionnaire on evidence-based safety practices and reporting of medical errors). Responses were marked on a 5-point Likert scale and analysed.

### **Results**

Approximately two thirds (n=72,68.6%) were junior registrars and the rest (n=33,31.4%) were senior registrars. The median knowledge score was 60% (range:10-90). Median SAQ score was 73.7% (151/205) (range:56.6%-95.1%). Approximately 65%(n=68) claimed they were aware of the protocols of marking the surgical site. Nearly three quarters (n=78,74.3%) have read the WHO safe surgery guidelines. Eighty-seven participants (84.5%) had not attended a formal risk management course. Nearly 87%(n=91) scored >75% on practices and attitudes of the WHO safety checklist. Only 53.3%(n=56) believed that medical errors were handled appropriately in their clinical area and less than a third(31.4%,n=33) believed the work environment was favorable to discuss errors. Only 54.3%(n=57) had received appropriate feedback about their performances.

### **Conclusion**

Overall, the patient safety culture among surgical trainees was found to be suboptimal. Formal teaching sessions, workshops and local guidelines may help improve knowledge and attitudes on patient safety among surgical trainees. Furthermore, working conditions need to be improved to encourage discussion of medical errors and allow frequent feedback.

## **OP 11 - Laparoscopic Cholecystectomy combined with Para Umbilical Hernia Mesh Repair: Results of a case series.**

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### **Introduction**

Association between symptomatic gall stone disease and paraumbilical hernia (PUH) are not uncommon and the prevalence of both together is around 10%. In such cases, many centers perform laparoscopic cholecystectomy (LC) and anatomical repair, rather than a mesh repair for PUH. Simultaneous performance of LC and PUH mesh repair combines a clean-contaminated surgery and a clean surgery together. Many of these patients will need a mesh repair for recurrent PUH during the follow-up period. This study assesses the feasibility of LC with mesh repair for PUH.

### **Methods**

The combined LC and PUH mesh repair (open) were performed on 8 patients at Teaching Hospital Jaffna between 2017 to 2019. Patients with symptomatic gall stone disease and a PUH with a defect size of  $\geq 2$  cm, as measured by ultrasonography, were included in this study. Upon completion of LC, the umbilical port site skin incision was slightly extended for placement of mesh. Postoperative infection and PUH recurrence were analyzed.

### **Results**

There were 5 females and 3 males with a mean age of 57.25 years. One patient had a superficial surgical site infection that settled with antibiotic treatment. PUH recurrence was not observed during the three years of the follow-up period.

### **Discussion / conclusion**

Although controversial opinions about combined LC with PUH mesh repair have been described in the literature, yet this technique is safe and effective. It is cost-effective and helps to avoid exposure to second anesthesia and hospital stay for PUH recurrence following anatomical repair.

## **OP 12 - Endotherapy for post cholecystectomy biliary strictures: A retrospective analysis with a minimum 2 year follow up.**

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### **Introduction**

Post cholecystectomy biliary strictures (PCBS) lead to critical sequelae including death. Endotherapy is an alternative to reconstructive hepaticojejunostomy in managing PCBS.

### **Methods**

A retrospective analysis of endotherapy for PCBS from February 2014 to February 2021 was conducted, at a tertiary referral center. Endotherapy included serial insertion of multiple plastic stents (MPS) 3 monthly or temporary insertion of a fully covered metal stent (FCMS). The technique, and outcomes of endotherapy were analyzed.

### **Results**

Out of 72 patients with bile duct injury, 19 with Strasberg E1 – E3 PCBS (without complete occlusion) were treated with endotherapy (73.7% females; mean age - 47 years). Biliary bifurcation was not involved in the majority (Strasburg type E1 - 42.1%, E2 – 52.6%) except for 1 (Strasburg E3 - 5.3%). Stricture resolution was successful in 15 (78.9%) patients. Of those, 14 had serial MPS (mean number of stents = 4.3, mean number ERCP = 6.8) and 1 had FCMS placed for 6 months. Endotherapy related complications were observed in 5 patients (stent migration [1], acute pancreatitis [2], cholangitis [2]) with zero mortality. During the mean follow up of 3.7 years (range 2.4 – 5.2 years), 2 (13.3%) developed stricture recurrence requiring retreatment with endotherapy. Reconstructive hepaticojejunostomy was required in 4 patients (15.8%) who had tight strictures (Strasburg type E2) which did not allow more than 2 plastic stents.

### **Discussion and Conclusions**

Endoscopic placement of serial MPS or FCMS is a safe alternative to reconstructive hepaticojejunostomy for Strasberg type E1 to E3 PCBS with satisfactory long term outcomes.

## **OP 23 - Endoscopic ultrasound in the assessment of the distal common bile duct lesions not detected by Computed thermography or Magnetic resonance Imaging; initial experience from a tertiary referral center.**

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**T G Amal Priyantha**

**Department Of Surgical gastroenterology, Colombo South Teaching Hospital, Sri Lanka**

### **Introduction**

In patients with obstructive jaundice, Endoscopic ultrasonography (EUS) is useful when distal common bile duct (CBD) pathology is not evident despite extensive imaging with CT or MRI.

### **Material and method**

In a descriptive study, data from patients who had isolated bile duct dilatation without demonstrable pathology in CECT or MRI over two year period were analyzed. Data were analyzed using R software.

### **Results**

After excluding the other pathologies 28 patients out of 138 patients fulfilled the selection criteria. They were between 25 to 85 years of age (median= 65) and male to female ratio was 1:3. Mean CBD diameter was 1.3 cm (0.9 to 2.4). All patients had either clinical and/or biochemical evidence of obstructive jaundice. They have undergone ultrasound scan followed by either CECT or MRCP. All EUS were done within median of 2 (1 to 4) weeks from last investigation. Ten patients had normal EUS possibly due to passage of stones and had normal USS and liver biochemistry after 6 weeks. Two were diagnosed as having benign strictures due to chronic pancreatitis and 02 other patients were diagnosed with choledochal cysts. Six patients diagnosed with distal Cholangiocarcinoma underwent surgery and confirmed by histology. Further 05 were diagnosed with peri-ampullary tumours. In 03 patients diagnosis was inconclusive.

Two patients diagnosed negative for malignancy turnout to be a peri-ampullary tumor and cholangiocarcinoma during the follow up.

### **Conclusion**

EUS in experience hands is a useful adjunct to other imaging modalities. EUS before ERCP for suspected CBD stones can avoid ERCP.

### **OP 33 - The management algorithm of infected pancreatic necrosis at teaching hospital Peradeniya.**

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**Division of Hepatopancreatobiliary Surgery, Professorial Surgical Unit, Teaching Hospital Peradeniya, Sri Lanka**

#### **Introduction**

Infected pancreatic necrosis is one of the fatal complications following necrotizing pancreatitis. This carries an approximately 40% mortality if not properly treated. Appropriate drainage and correct timing for the drainage are the key factors in successful management of this condition.

#### **Methods**

This is a case series of 12 patients who underwent either a drainage procedure or necrosectomy for infected pancreatic necrosis at Teaching Hospital Peradeniya from January 2017 to April 2021. More than 30% necrosis is usually considered as severe necrotizing pancreatitis. Infected necrosis is confirmed on CECT showing gas in the necrosis or collection. A simple algorithm was used for surgical drainage.

#### **Results**

Out of the 12 patients, two had ruptured peripancreatic fluid collections with infected necrosis and underwent a laparoscopic washout with necrosectomy. Six patients had well localized retrogastric collections of which five underwent trans-gastric drainage with the remaining patient undergoing a transphincteric drainage as the collection was in the head. The other four patients had infected necrosis which was drained through a total extraperitoneal lateral approach. Mortality was zero. Mean hospital stay following the procedure was 11 days. Two patients in the transgastric drainage group needed re-drainage. One patient in the total extraperitoneal lateral approach group had a recollection after 3 weeks which was managed conservatively.

#### **Conclusion**

Outcome of infected pancreatic necrosis in this study group has shown good results with a simple and a safe algorithm.

### **OP 01 - Neoplasms of the Appendix—A retrospective analysis of 5-year data on histopathology of appendicectomy specimen in a tertiary care hospital, Sri Lanka.**

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**Postgraduate Institute of Medicine, North Colombo Teaching Hospital, Sri Lanka**

#### **Introduction**

Right iliac fossa pain due to appendicular disease is a common presentation to a surgical casualty ward. Neoplasms of the appendix are rare but sometimes they present with acute symptoms similar to acute appendicitis. Studies on neoplasms of appendicectomy are sparse in Sri Lanka. Our objective is to study the epidemiological, demographic characteristics and histopathological data on appendicectomy specimens.

#### **Method**

A retrospective descriptive study using the database on appendicectomy specimens in the pathology department of Colombo North teaching hospital, Ragama from January 2015 to December 2019.

#### **Results**

Neoplastic lesions were noted in 16(0.82%) among 1939 appendicectomy specimen. All (n=16, 100%) were primary neoplasms and the male to female ratio was 5:11. Incidence was higher in the elderly population compared to the young. Six of the 16 specimens (37.5%) had associated features of acute appendicitis. The commonest neoplasm was neuroendocrine tumours(NET) including goblet cell carcinoid tumour (n=9, 56.25%). The mean age was 33 years and overall incidence of NET was 0.46%. Mucinous neoplasms were noted in 6(37.5%) with an overall incidence of 0.3%. The median age was 59 years. The resection margin was well away from the tumour in all(n=9) NETs while the tumour had involved the resection margin in 4 of 6 (66.6%) of mucinous neoplasms.

#### **Conclusion**

Appendicular neoplasms are rare. The incidence is higher in the elderly population. Neuroendocrine tumours are the commonest incidental tumours and they are less aggressive at the time of diagnosis. meticulous dissection is important with a good resection margin clearance in suspected mucinous appendiceal neoplasms.



**OP 10 - Clinicopathological parameters and treatment outcome of solitary rectal ulcer syndrome (SRUS) treated with multimodal step-up approach - Descriptive analysis from tertiary referral center.**

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T G Amal Priyantha  
Department of surgical gastroenterology, Colombo South  
teaching hospital**

### **Introduction**

Solitary rectal ulcer syndrome (SRUS) is a chronic benign anorectal condition. It is assumed to be a part of mucosal prolapse syndrome (MPS).

### **Aim**

To analyze the demography, symptoms, and treatment outcomes among patients with SRUS.

### **Materials and methods**

Data from consecutive SRUS patients confirmed with histology over 4 year period were retrospectively analyzed. Patients with multiple pathologies were excluded.

### **Results**

During the study period 25 patients were diagnosed with SRUS. The median age was 22(12 to 64). Male-to-female ratio was 16: 9. Median duration of symptoms was 8 months (1 to 84).

Majority (n=19, 76 %) were presented with rectal bleeding. Other symptoms include incomplete evacuation (32%), tenasmus (4%), lump at the anus (28%) and prolonged straining (25%). Most of them complained constipation (56%) and 12.5% had diarrhea whereas 6.25% had normal bowel habits. In addition 25% had mucous discharge and 44% used self-digitation. Though most patients (n= 20) had ulcers there were 02 patients with nodular type misdiagnosing as malignancy. Multiple ulcers were seen in 25% of the patients and 42.85% were located within 5cm from the anal verge.

Twenty three patients had argon plasma coagulation to control bleeding. Two patients with nodular type underwent trans-anal excision. Other treatments include dietary fiber, laxatives, rectal steroids and/or 5-ASA. Three patients who had Laparoscopic abdominal rectopexy for associated rectal prolapse were symptom-free at six months.

### **Conclusion**

Per rectal bleeding is the commonest presentation of SRUS. Nodular type may mimic malignancy and require local excision. Symptoms associated with SRUS need multimodal step up approach.

**PP 16 - Analysis of diagnostic tests and clinical prediction scores in children undergoing appendicectomy.**

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Sri Lanka**

### **Introduction**

Acute appendicitis is the commonest paediatric abdominal emergency. Despite having many clinical prediction scores, diagnosis of acute appendicitis in children remains a challenge.

### **Methods**

A prospective study of children undergoing appendicectomy at the Lady Ridgeway Hospital from May 2020 to July 2021 was conducted. Clinical feature, investigations and parameters of Paediatric Appendicitis Score (PAS), Alvarado Score and Paediatric Appendicitis Risk Calculator (pARC) score was recorded. Data was analyzed using SPSS 21 version and  $p < 0.05$  was deemed significant.

### **Results**

A total of 122 children underwent appendicectomy [99 (81%) laparoscopic] with 74 (61%) having uncomplicated appendicitis (UA) and 36 (30%) having complicated appendicitis (CA). Negative appendicectomy (NA) rate was 9%. CRP levels were significantly higher [ $p = 0.001$ ] in CA group compared to UA [CA=147.43mg/dl, UA=73.29 mg/dl]. No such difference was found in the total white cell count [CA=16.15 $\times 10^9$ /L, UA = 17.28  $\times 10^9$ /L] or neutrophil count [CA=13.18 $\times 10^9$ /L, UA = 13.57  $\times 10^9$ /L] between the 2 groups. Positive USS findings were seen in 80% (32/40) with appendicitis. There was a significant difference [ $p = 0.03$ ] in the pARC score between appendicitis vs. NA groups (62.99 $\pm 24.58$  vs 37.92 $\pm 31.86$ ). Differences in PAS (7.47 $\pm 1.86$  vs. 6.75 $\pm 2.18$ ) and Alvarado scores (7.53 $\pm 1.72$  vs. 6.50 $\pm 1.98$ ) were not significant. In all 3 scores, there was no significant difference between UA and CA groups.

### **Discussion and Conclusions**

Of the 3 scores, pARC score seems better in differentiating appendicitis from NA. CRP can be useful marker to differentiate UA and CA.

## **OP 17 - Management of appendicitis during COVID pandemic 'To operate or not to operate'.**

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### **Introduction**

Acute appendicitis is a common cause of emergency surgical admission and appendectomy is one of the commonest emergency surgical procedures. During COVID, a lot of changes have been made in health care strategy including management of appendicitis. Laparoscopic appendectomy, being an aerosol-generating procedure, was avoided. Patients were treated with antibiotics as per national guidelines.

### **Method**

We conducted a clinical audit to assess the outcome of the changed management guideline during COVID. Total 71 patients admitted with acute appendicitis between March 2020 and July 2020 were included. The aim of this audit was to rationalize the practice during COVID and review the guideline based on the results.

### **Result**

Among 71 patients, the majority (57.7%) were acute uncomplicated appendicitis in CT scan. Other complications included abscess (5.6%), perforation (12.7%), impacted appendicolith (18.3%), and mucocele. 54.9% were managed conservatively and 39.4% underwent laparoscopic appendectomy. Other interventions included open appendectomy, Imaging guided drainage, and laparotomy. The complication rate was higher in patients receiving antibiotics (38.5%) than those who had an operation (14.3%). 6 (15.4%) conservatively treated patients eventually needed appendectomy.

### **Discussion**

A conservative approach was adopted in managing an acute surgical condition recognizing the risk of increased post-op morbidity and mortality in COVID 19. However, looking at the rate of complications after antibiotic treatment for appendicitis, early appendectomy appears to be the more reasonable option.

### **Conclusion**

The guideline for conservative management of appendicitis should be reviewed. Diagnostic imaging can be done to rule out other possible pathologies but the early operation would help to reduce the overall complication rate in patients.

## **OP 18 - Efficacy of ligation of intersphincteric fistula tract in treatment of perianal fistula.**

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### **Introduction**

Ligation of Intersphincteric Fistula Tract (LIFT) is a novel method of treating perianal fistulas. It has become well-established for managing fistulae worldwide, with cure rates of 61% - 94% and almost no incontinence; compared with other standard surgical procedures which show cure rates of 60-80%, and incontinence rates of 12.5% to >30%.

### **Introduction**

Assess the efficacy of LIFT for treatment of perianal fistulas in terms of cure rates, recurrence, and incontinence in Sri Lankan patients.

### **Method**

Seventeen patients who have undergone LIFT from June 2019 to December 2020 were followed up prospectively. All patients were operated by a single surgeon. Validated interviewer-based questionnaires, Faecal Incontinence Quality of Life Scale (FIQLS) and Cleveland Clinic Incontinence Scoring System (CCISS) were administered to assess post-operative quality of life and faecal incontinence respectively. Symptoms suggestive of recurrence were inquired, and symptomatic patients examined to confirm recurrence.

### **Results**

Fourteen males and three females were followed up for a median of 18.5 months (range 8.2 - 25.9 months). Five patients (29.41%) had recurrence. Incontinence was not reported by any patient. All patients reported excellent scores on the FIQLS with good average scores for Lifestyle (4.00), Coping/Behaviour (3.99), Depression/Self-perception (4.21), and Embarrassment (4.00), with average total score of 16.19. The CCISS score of all patients was 0, indicating "perfect continence".

### **Conclusion**

LIFT is an upcoming technique for treating perianal fistulae with reproducible cure rates. Patients experience excellent post-operative quality of life, with no incontinence. Recurrence rates are comparable to other published literature.

**OP 41 - Jump test (Jump up test, J-up test); a simple clinical test to support the diagnosis of paediatric appendicitis.**

**P G P L Abhayarathna, A K Lamaheewage,  
R Mahagedara, D Lakruwan  
Lady Ridgeway Children's Hospital, Sri Lanka**

### **Introduction**

Paediatric acute appendicitis is a common condition with considerable diagnostic difficulty 1,2. Although, increased abdominal pain during hopping is a good indicator of peritonism, it is not frequently elicited.3,4

### **Method**

Institutional based descriptive, cross-sectional study was done at ward 11, LRH. All children 3 to 14 years with RIF pain >24-hours, were selected. Children with history of appendectomy, who are too ill for jump test, who are unable to follow instructions and who are refusing to jump, were excluded. Clinical examination by a paediatric surgeon, blood investigations(FBC, CRP), USS, macroscopy and histology were used to confirm the status of appendix. Before abdominal palpation, the patient was requested to Jump up and land back on both feet. The experience was assessed with Wong-Baker Faces Pain Scale. Score of 2 or more is considered as positive jump test. The surgical decision was made by an experience consultant paediatric surgeon who is blinded of jump test. Excised appendices were histologically confirmed. Non operated patients were reviewed in 1 week.

### **Results**

Seventy-seven patients were enrolled into the study (mean age 8.8 years, SD=2.9). Out of them 50.7% (n=35) were confirmed as appendicitis and 49.2% (n=34) were positive jump test. Positive jump test is statistically significant with appendicitis ( $\chi^2=50.49$ ,  $P<0.001$ ).

### **Discussion and conclusions**

Jump test is simple and easy to perform by any clinician. It can be instructed to children above >3 years and they rarely hesitate to perform it, since it is a playful act. Our suggestion is that jump test is a valid diagnostic step in pediatric.

**OP03 - Impact of concomitant COVID 19 infection on hip fracture care of the elderly in a sri lankan tertiary care center.**

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T G J D Munidasa, W N N Perera  
National Hospital of Sri Lanka (NHSL), Sri Lanka**

### **Introduction**

Elderly patients have worse outcome from COVID 19 infection and hip fracture. This study aims to assess the impact of concomitant COVID 19 infection in the treatment and outcome of hip fracture in the elderly.

### **Material and methods**

A retrospective study of elderly patients (age  $\geq 65$  years) who presented with hip fracture following low energy trauma to NHSL from January 2021 to June 2021 assessed demography, comorbidities, admission to surgery interval, length of hospital stay, treatment and outcome of COVID 19 positive (C+) and negative (C-) patients.

### **Results**

Of 241 patients with low energy hip fracture, 15 (6.22%) were C+. Only 7/15 were diagnosed on admission. In both groups females were  $\geq 80\%$  with mean age of >75 years. At least one comorbidity was found in 80% of C+ patients and 69% of C- patients. Preoperative in-hospital mortality was 5/15 in C+ patients and 2/241 in C- patients. Conservative management was done in 3/10 (30%) of C+ patients and 15/161 (9.3%) of C- patients. Mean admission to surgery intervals were 22 days and 6.4 days in C+ and C- patients respectively. Mean hospital stay was 22.8 days in C+ patients and 9.35 day in C- patients. Postoperative 30-day mortality was zero in both.

### **Discussion and conclusions**

Concomitant COVID 19 infection and hip fracture are associated with higher admission to surgery interval, length of hospital stays and in-hospital mortality which reflect the difficulty of maintaining normal workflow. Further resource allocation, routine PCR on admission and future studies regarding optimal surgical timing are recommended.

### **OP 13 - Early Free Tissue Transfer for Lower Limb Compound Fractures – A Single Unit Experience in a Tertiary Care Hospital.**

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#### **Introduction**

Compound fractures of the lower limb are common. Early soft tissue cover minimizes the risk of infection and improves fracture healing. The study describes outcomes of free tissue transfer/free flaps (FF) for lower limb compound fractures.

#### **Materials and Methods**

This is a prospective descriptive study. All patients referred to the plastic surgical unit at National Hospital of Sri Lanka with Gustilo 3B lower limb fractures requiring FF for the past 10 months were included in the study. Type of FF and associated complications were recorded.

#### **Results**

A total of 16 patients underwent FF. 73.3% (n=11) had lower 1/3 tibia fibula compound fractures. All patients obtained soft tissue cover at an average of 30 days (range 9-72 days) following injury. Types of FF composed of 56.25% (n=9) free anterolateral thigh (ALT) flap, n= 4 free gracilis flap, n= 2 medial sural artery perforator flap (MSAP) and n= 1 free groin flap. 56.25% (n=9) had uneventful recovery. A total of 43.75% (n=7) developed complications. 12.5% (n=2) had deep infections, 12.5% (n=2) had partial flap necrosis involving <10% surface area, 6.25% (n=1) developed temporary steal syndrome while 12.5% (n=2) had <15 % of skin graft failure.

#### **Discussion and Conclusion**

Despite lack of major flap complications, higher infection related complications could translate into long term chronic wounds with osteomyelitis thereby increasing the patient burden in surgical wards, emphasizing the importance of early soft tissue cover.

### **OP 15 - Does the type of flaps affect the post-operative hospital stay in patients who undergo below knee amputations (BKA)?**

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#### **Introduction**

Below knee amputations are done for un-reconstructable peripheral vascular disease (PVD,) diabetic ulcers with ascending sepsis and others. Long posterior flap, skew flap, fish mouth flap and guillotine type done with intention of primary, delayed primary or secondary closure.

#### **Methods**

This is a retrospective study carried out at the University surgical Unit of Teaching Hospital Peradeniya (THP). The patients with PVD, DM, and chronic wounds were included while acute trauma related amputations were excluded. The type of amputations were analyzed with the duration of post-operative hospital stay.

#### **Results**

There were 29 lower limb amputations at the THP during the study period. Twenty two were (75.9%) males and 7 (24.1%) were females. The mean age was 63.9 years (SD=11.2). PVD (n=14, 48.3%) and complicated diabetic foot ulcers (n=9, 31.0%) were the commonest indications. Mortality was 24.1% (7/29). Of the amputations 14 (51.7%) were below knee amputations (BKA). Of them, 13 (86.6%) was primarily closed. Among the BKAs, 9 (60 %), were long posterior flaps, 5 (33.3%) were Guillotine flaps and one (6.7%) was a fish mouth flap. Mean post-operative hospital stay in BKAs were 17.8, 13 and 20.8 days for long posterior, fish mouth and guillotine flaps respectively. The mean duration of post-operative hospital stay showed no significant difference between three flap types with one way ANOVA test (p=0.867).

#### **Conclusion**

PVD was the commonest cause for BKA in THP. The post op hospital stay is statistically not significant in different types of flaps used in BKA. However this needs to be further evaluated in studies involving large number of patients.



**OP 29 - Knowledge on initial management of traumatic brain injuries (TBI) among preliminary care unit (PCU) doctors in a secondary care hospital - Which areas need improvement.**

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Base Hospital – Wathupitiwala, Sri Lanka**

**Introduction**

Initial assessment and management play a key role in final outcome of TBI. TBI patients commonly present to secondary care hospitals in Sri Lanka and knowledge on initial assessment and management of TBI is vital for medical officers working in such units.

**Method**

A self administered multiple choice questionnaire ( based on NICE clinical guideline [CG 176] was given to PCU - medical officers and senior house officers (n=40) working in BH Wathupitiwala and responses noted. Knowledge on GCS and pupil assessment, indication for computed tomography of brain (CTB) , medical management of raised intracranial pressure, use of tranexamic acid, identifying signs of deterioration and indications for re-imaging and transfer were separately assessed. Score >70% was considered satisfactory knowledge.

**Results**

62.5% (n=25) had satisfactory knowledge on GCS and pupil assessment. 57.5 % (n= 23) had satisfactory knowledge on indications for performing CTB. Only 20% (n=8) had satisfactory knowledge on identifying clinical deterioration, indications for re-imaging and transfer of patients. 25% (n=10) had adequate knowledge on proper use of 20% mannitol or 3% NaCl. Only 27.5% (n=11) identified tranexamic acid as a drug with survival benefit. 75% (n=30) of the participants believed they need to improve their knowledge on TBI management.

**Discussion and conclusions**

Although knowledge on GCS and pupil assessment was satisfactory, deficiencies were seen regarding knowledge on proper use of tranexamic acid , 3%NaCl and 20% mannitol in TBI.

Knowledge on identifying clinical deterioration, indications for re-imaging and transfer need improvement.

**OP 21 - Prediction of ureteric length for prevention of ureteric stent morbidity in Sri Lankan population.**

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K Ilankovan, N D Perera  
Department of Urology & Transplantation, National  
Hospital of Sri Lanka**

**Introduction**

Ureteric stenting is the commonest urological intervention. Stent tolerability is variable, but in a majority they cause significant distressing symptoms. Trigonal irritation due the excess intra-vesical length is proven as an important determinant of stent morbidity. Although different length stents are available, the deficiency of predictive formulae for ureteric length (UL) limit their use. Long stents are used empirically to ensure that all ureters are addressed resulting in a large excess stent length with significant morbidity which is clearly preventable by customised stent usage.

**Methods**

Descriptive cross-sectional study of consenting adults done in a tertiary care centre. Patients with known anatomical abnormalities were excluded. A standardized measurement of the UL was taken using a calibrated ureteric catheter. UL was correlated with anthropometric and imaging measurements. Results were analysed with IBM SPSS v21 software.

**Results**

Total of 42 renal units in 40 patients were analysed. The mean UL was 22.6cm (range 17-26cm,SD 4.93). Only 3/42 ureters were more than 25cm. Multivariate regression analysis showed age, height, weight & BMI in combination significantly contributed to the variance of ureteric length by 34%(F(4,37)=4.7,p=0.004,R<sup>2</sup> 0.34). But univariate analysis using Pearson's correlation showed only BMI (R=0.37,p=0.016) and age(R=-0.39,p=0.011) to be significantly associated with ureteric length.

**Conclusions**

The currently used stent length is significantly excessive for Sri Lankan population resulting in preventable morbidity. No individual measure can adequately predict UL. However, a nomogram can be generated using a larger study which will accurately predict the ureteric length and minimize the stent morbidity by enabling individualized stent usage.

**OP 22 - Phase 1 trial: The use of prostaglandin E1 (PGE1) in patients with non-revascularizable Chronic Limb Threatening Ischaemia.**

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**University Vascular and Transplant unit NHSL, Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

**Introduction**

The outcome of non-revascularizable chronic limb threatening ischaemia (NR-CLTI) is dismal with overall survival and amputation free survival at 1 year of 50% and 36.8% respectively. Amongst the therapeutic options being researched for NR-CLTI prostaglandin E1 (PGE1) has shown potential. We present early and midterm outcomes on the use of PGE1 in NR-CLTI in the Sri Lankan population.

**Methodology**

Patients with NR-CLTI presenting to the university vascular unit were included to the study. PGE1 was administered as an intravenous infusion 500mcg two times a day for 5 consecutive days up to a maximum 5 cycles. Patients were followed up prospectively at 3 monthly intervals.

**Results**

44 consenting patients were included in the study. Majority of the patients were male (27/44; 61.4%), between 61-70 years (18/44; 41%), with multiple comorbidities. 93%(41/44) presented with tissue loss. Equal number of patients received PGE1 either as their primary treatment (n=24) or following a failed attempt at revascularization (open or endovascular) (n=20).

Patients were followed up for a median of 16 months (3-29) with no significant adverse effects recorded. 18(40.9%) out of 44 were given at least 3 cycles. Overall survival, Limb salvage and amputation free survival at 1 year was 76%, 73% and 54% respectively. Wound healing and resolution of rest pain (death uncensored) was 52% and 32% at 1 year.

**Conclusion**

PGE1 demonstrates safety and potential for use in patients with NR-CLTI in improving overall survival and limb survival when compared to palliation or major lower limb amputation.

**OP 26 - Should we continue to perform kidney transplantation during the COVID pandemic?**

**C Abeyrathne, S Udurawana, N J Jahan, C Samaraweera, Y Manikkage, J Vidanapathirana, C Hingalagoda, C Wickramsekera, J Rajasinghe, C Pilimalawwe, R Sirisena, L Piyarisi, C Herath, C Galahitiyawa, N Seneviratne**  
**Sri Jayawardenapura General Hospital, Sri Lanka**

**Introduction**

There is uncertainty regarding outcome and safety of renal transplants carried out during the Covid-19 pandemic as there may be an increased risk of morbidity and mortality due to the high doses of immunosuppressant's used and the presence of chronic comorbidities in the recipients.

**Method**

An observational study was carried out at the Sri Jayawardenapura Transplant center from February 2020 to the July 2021. All donors and recipients were screened with RT-PCR. The primary objectives were to investigate the incidence of Covid infection as well as its impact on graft and patient survival. All recipients received the standard strategy of immunosuppression.

**Results**

A total of 64 renal transplants (55 live donor, 9 deceased donor) took place in the given period. There was a male preponderance of 71.8%. Mean age was 46.8 years. Overall 59(92.1%) patients were vaccinated of whom 21(32.8%) prior to the transplantation and 62.5% had received both doses. The post-transplant graft survival was 62(96.8%) with a mean follow up of 5 months. Two patients were deferred due to Covid, but underwent successful transplant after a month. Out of the 9 patients who contracted covid-19 infection, 3 died due to severe Covid pneumonia and the rest had complete recovery. Of those infected seven had received both doses of vaccine including the deceased.

**Conclusion**

The clinical presentation of Covid-19 infection was similar to that of general population. The transplant outcome remained acceptable during the pandemic, however more data is required to draw a reliable conclusion.

**OP 27 - Do living donor renal transplant yield better outcome? Comparison of outcome between living donor and deceased donor renal transplantation.**

**Y Manikkage, C Abeyrathne, S Udurawana, N J Jahan, C Samaraweera, J Vidanapathirana, C Hingalagoda, C Wickramsekera, J Rajasinghe, C Pilimalawwe, R Sirisena, L Piyarisi, C Herath, C Galahitiyawa, N Seneviratne**  
**Sri Jayawardenapura General Hospital, Sri Lanka**

**Introduction**

The number of end-stage renal disease patients is rapidly growing in Sri Lanka. Although the best treatment option is renal transplantation, it is not a viable option for all due to the severe shortage of kidneys, especially from living donors. Our aim was to compare the survival rates between living donor (LD) and deceased donor (DD) transplants following establishment of the deceased donor programme at Sri Jayawardenapura transplant center.

**Methods**

This retrospective cohort study included 167 kidney transplants carried out from February 2016 to December 2020. All underwent standard triple-therapy immunosuppressant protocol. Five patients who underwent a second transplant and/or pre-transplant plasma exchange were excluded. Patient characteristics, perioperative outcomes, delayed graft function(DGF), graft rejection and survival rates were evaluated using cox regression model comparing LD and DD transplants.

**Results**

Study included 123(75.9%) LD and 39(24.1%) DD transplants. Age, sex, blood group, etiology was comparable in both groups. Despite a significant difference in the mean cold ischemic times (LD = 57 min, DD= 486 min) there was no significant difference in DGF. Clinical rejection was observed in LD=14(11.3%) and DD=7(17.9%) respectively. One month and one-year survival rates were 117(95.2%) in LD and 37(94.9%) in DD respectively. Overall patient survival at 26 months was 113(91.8%) in LD and 36(92.4%) in DD, showing no significant difference (P=0.02).

**Conclusions**

Short-term outcome in both groups was statistically similar; therefore, deceased donor transplantation must be encouraged. However, a long term follow up is required to compare with international survival rates.

**OP 30 - Anatomy of epigastric vessels in the Sri Lankan population.**

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**University Surgical Unit, National Hospital of Sri Lanka/ Department of Radiology National Hospital of Sri Lanka**

**Introduction**

Damage to the anterior abdominal wall vessels is a complication during laparoscopic port insertion, stoma creation and other surgery. Epigastric vessels are the most injured blood vessels during laparoscopic procedures.

Mapping the anatomy of the epigastric vessels in Sri Lankans would help identify safe zones for port insertion in our population and reduce the incidence of epigastric artery injury during laparoscopic access.

**Methods**

A cross sectional study was conducted among the patients who underwent contrast enhanced CT scans of abdomen at the department of radiology, National Hospital of Sri Lanka, to identify the position of the abdominal wall vessels in relation to anatomical landmarks.

**Results**

CT scan data of 100 consecutive patients were analyzed (males=52, 52%, mean age 49.28 (SD 16.35) years). The right inferior epigastric artery was found at following distances from the midline; 3cm above pubic symphysis (PS) - 5.23cm(SD 0.86), Anterior Superior Iliac Spine(ASIS) - 4.16cm(0.97), 2cm below umbilicus (BU) 4.31cm(1.10), at 2cm above umbilicus (AU) - 4.58cm(1.33), 3cm below Xiphoid process (XP) -2.35cm (SD 0.91). Left Inferior epigastric artery found at following distances from the midline; PS - 5.11cm(1.09), ASIS - 4.35cm(1.41), BU - 4.26cm(1.13), AU -4.75cm(1.59), XP -2.19cm(0.88)

**Conclusion**

Epigastric vessel injury could be prevented if suprapubic port inserted within 3cm from the midline, if lateral port are inserted more than 8cm from midline and if epigastric port inserted 4cm lateral to the midline in Sri Lankan Patients.

**OP 35 - Significance of amylase level measured in drain fluid on post-operative day 1 (DAD1) after pancreatic resection in predicting post operative pancreatic fistula:**

**A multi-centre, prospective observational study.**

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<sup>4</sup>Department of Surgery, Sri Lanka

**Introduction**

Early prediction of the development of pancreatic fistula (PF) is important to plan post-operative management following pancreatic resection.

**Methods**

A prospective observational study was conducted involving pancreatic resections performed at 3 tertiary hepatobiliary referral centers from January 2021 to July 2021. Surgery for pancreatic trauma and drainage procedures for chronic pancreatitis were excluded. Drain fluid amylase levels (highest if multiple drains were placed) were recorded on post-operative day 1 (DAD1) and day 3. Development of post-operative PF (according to the international study group on pancreatic fistula [ISGPF] criteria) was recorded.

**Results**

Out of 38 patients (50% females; mean age 56.5 years) who underwent pancreatic resections (pancreaticoduodenectomy – 11, distal pancreatectomy - 27), 10 patients (26.3%) developed PF (Grade A – 9, Grade B – 1). Soft consistency of pancreas was significantly associated with the development of PF ( $p = 0.02$ ). There was no association between the diameter of the pancreatic duct ( $<4$  mm) and PF ( $p = 0.62$ ). A significant difference of mean DAD1 level was observed ( $p = 0.004$ ) between those who developed a PF (mean – 1606.7 U/l; range 224 - 9902) and those who did not (mean – 550.5 U/l; range 13.8 - 3024). Receiver operator characteristic curve of DAD1 was 0.62 and a cutoff value of 252.8 U/l provided 80% sensitivity and 43.9% specificity to predict the development of PF.

**Discussion and Conclusions**

DAD1 level predicts the development of post-operative PF with an acceptable sensitivity, according to the preliminary results of this ongoing study.



## POSTER PRESENTATIONS

**PP 13 - Post operative pain assessment in laparoscopic cholecystectomy with end surgery intraperitoneal sodium bicarbonate versus normal saline irrigation.**

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**Introduction**

Post operative pain in laparoscopic cholecystectomy is caused from both somatic [ Port sites ] & Visceral [ Intra peritoneal ] origins. Aim of this study was to compare the effects of early post operative pain with end surgical peritoneal irrigation with Sodium bicarbonate & Normal saline.

**Methods**

Patients were assigned randomly to elective standard 4 ports laparoscopic cholecystectomy in this prospective, Single blinded trial. All of them were female patients in age between 30 – 50 yrs. Pneumoperitoneum was achieved through umbilical port using open technique & maintained at pressure of 15 mmHg. Surgery durations were < 3 Hrs & performed by the same surgeon. Post operative analgesics were Paracetamol & NSAIDs for both groups. Patients are assessed with Numerical rating scale in 24 Hrs & 48 Hrs for 8 locations of either side Port site , Each shoulder tip pain & Back.

**Results**

25 Patients were randomly assigned to each group. Pain was significantly low in Sodium bicarbonate group than Normal saline group. The Standard deviation of Numerical pain rating scale values in Sodium bicarbonate & Normal saline group are 5.666(1.445) and 6.75(1.259) respectively [ P = 0.000688].

**Discussion and conclusion**

Pain after laparoscopic cholecystectomy is multifactorial. Peritoneal insufflation with CO<sub>2</sub> is caused to acidic medium with dissolution in peritoneum. It is caused to peritoneal irritation & phrenic nerve irritation in peritoneal cavity. End surgery peritoneal wash with an alkaline solution in laparoscopic cholecystectomy is an effective way to decrease early post operative pain.

**PP 43 - Outcome of surgical treatment in patients with superior mesenteric artery syndrome (Wilkie's disease); 20-year experience.**

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**Sri Lanka**

**Introduction**

Superior mesenteric artery syndrome (Willkie's disease) is a rare cause of Gastric outlet obstruction (GOOB) resulting from compression of the third part of the duodenum by the superior mesenteric artery. In this study we analyzed the presentation, demographic data and their outcome of surgical treatment in patients with superior mesenteric artery syndrome (Willkie's disease)

**Material and methods**

Data from ten patients who underwent surgical treatment for Willkie's syndrome from January 2000 to November 2019 were analyzed. All surgeries were performed by a single consultant using open technique.

**Results**

Out of the ten patients seven (70%) were males. Mean age was 52 (range-30 to 84) years. Mean BMI was 19.2(range 16-24.6) All ten patients were presented with vomiting after meals (100%). Out of that two were acute presentations to the emergency department. Nine underwent barium meal and one patient CECT abdomen with oral contrast for the diagnosis. Duodenojejunostomy was offered to nine patients and gastrojejunostomy for one patient. Mean hospital stay was 7 days. Follow up period is 1 to 84 months. At the end of one month, vomiting was settled in all patients who underwent duodenojejunostomy (100%) and six patients had loss of appetite (LOA) (66.66% n=6). At six months LOA was present only in 3 patients. The patient who underwent gastrojejunostomy had vomiting for 6 months and persistent loss of appetite and hypo-proteinemia after 7 years.

**Conclusion**

Duodenojejunostomy is preferred over gastrojejunostomy for wilkies syndrome. Although the vomiting settles with the surgery LOA take time to settle.

**PP 61 - Patterns of Iatrogenic Bile Duct Injuries observed during Endoscopic Retrograde Cholangiography:**

**18 years of experience in a tertiary care referral center.**

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**R G M S Nandasena, A A Pathirana, T K Wijerathne**

**University Surgical Unit ,Faculty of Medical Sciences,  
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**Sri Lanka**

**Introduction**

Majority of bile duct injuries (BDI) are secondary to cholecystectomy. Endoscopic Retrograde Cholangio Pancreatography (ERCP) is both diagnostic and therapeutic. We present the patterns of BDI observed during ERCP in our center and the methods of management.

**Methods**

Retrospective analysis of the ERCP findings of patients with suspected BDI from 2003 to 2021 was done. Injuries were classified by Bismuth-Strasberg classification (A-E). E1 – E5 were considered major injuries. BDI causation was classified under laparoscopic (LC) Open (OC) Laparoscopic converted to open (LCOC) cholecystectomies and trauma.

**Results**

149 (83.2 %) BDI were confirmed out of 179-suspected referrals. 16 (8.9%) patients had no leaks and 14(7.8%) were inconclusive. Male: female ratio was 1:2. Mean age - 46 years (Range 10-81). Iatrogenic BDI was confirmed in 137(91.9%) and the rest were due to trauma. In IBDI group, LC-96 (70.1%), OC- 32 (23.1%) and LCOC-8 (5.8%) and 1 (0.7%) choledochal cyst excision. In IBDI group -The type of injuries found were: A-46 (28.2%), B-2 (1.2%), C-3 (1.8%), D-10 (6.1%) and E-76 (46.6%). 109 (79.6%) patients were stented. Stenting at the first ERCP has been possible in 56 (51%) of minor BDI and 53(49%) of major BDI (p=0.001). 22 (28 %) out of 76 major bile duct injury patients required surgery (p=0.001)

**Discussion and conclusion**

Commonest single type of injury was leaking from cystic duct. All the minor injuries were managed with stenting alone. ERCP has been diagnostic and therapeutic in majority of minor injuries in our cohort.

**PP 71 - Patients' opinion regarding surgical management of Anal Fistulas during COVID-19 outbreaks.**

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**D P Wickramasinghe**

**Department of Surgery, Faculty of Medicine, University  
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**Introduction**

This study is set in the backdrop of a COVID-19 outbreak when non-emergency surgeries were postponed. We studied patients' opinions about the delay in anal fistula management.

**Methods**

All consenting patients (from an ongoing study) with anal fistulas operated in 2019 and 2020 were followed up by phone using an interviewer-administered questionnaire. We collected data on fistula healing, time delays between surgeries and follow-up, and patients' attitude towards the delays and COVID-19 exposure risk during surgeries. We compared between 2019 and 2020 for any significant differences.

**Results**

A total of 40 patients (Females = 27.5%) were followed up (response rate = 58.8%), of whom 15 (37.5%) had their first surgery in 2019 and 25 (62.5%) in 2020. There were significantly more patients from 2020 than 2019 who reported of incomplete healing (Pearson Chi-square = 12.9, p = 0.001). However, there was no significant difference in the time taken for the fistula to heal after the final surgery (Log Rank Test: Chi-square= 0.447, p = 0.5). Most patients (82.5%) preferred early surgical management of fistula, despite COVID-19 exposure risk. Of the patients who underwent surgery during the pandemic, thirteen (32.5%) felt safe while only three (7.5%) reported fear of exposure to COVID-19.

**Conclusion**

Though there was a significant difference in patient report of fistula healing between 2019 and 2020, there was no significant difference in time taken for complete healing. The overall patient attitude towards the delay in surgery and follow-up was negative.

**PP 77 - Use of LRINEC score in Sri Lankan clinical context to aid early detection of necrotizing soft tissue infections.**

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P Balasundaram, T W K Gayan Indika  
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### **Introduction**

Skin and soft tissue infections (SSTI) are among the commonest presentations to the surgical casualty. Necrotizing soft tissue infections (NSTI) carry a high morbidity and mortality. Laboratory Risk Indicator for Necrotizing Fasciitis (LRINEC) score was introduced in 2004 to aid early diagnosis of NSTI.

### **Methods**

Descriptive cross sectional study was done on patients presenting to a surgical unit in a tertiary care hospital from 2020 July to 2020 August. Necrotizing and non-necrotising infections were differentiated clinically and LRINEC score was calculated. Two groups' mean LRINEC score, Its specificity, sensitivity, positive and negative predictive values were calculated by taking 6 as the cut-off value.

### **Results**

Of 70 patients studied 45(64%) were males. Mean age was 53.93 years (10-86 years). 25(36%) patients had diabetes mellitus and 27(39%) had other medical co-morbidities. 51(73%) had lower limb SSTI, 9(12.9%) perineal and perianal infections, 8(11.4%) upper limb infections and 2(2.9%) head and neck SSTI.

55(78.6%) patients had predisposing factors such as altered skin integrity, venous drainage, lymphatic drainage and impaired host defences.

Thirteen patients (18.6%) had NSTI with mean LRINEC score of 7.31(SD+/- 2.057) and 57(81.4%) patients had non NSTI with a mean LRINEC score of 5.35(SD+/- 2.424). When 6 was taken as cut off value for diagnosis of NSTI, the sensitivity, specificity, negative predictive value, positive predictive value were 92.3%, 59.6%, 97.14% and 34.28% respectively.

### **Conclusion**

LRINEC score which uses commonly performed laboratory indices can be adopted easily as a screening tool to diagnose NSTI in surgical casualty setup in Sri Lanka.

**PP 11 - Descriptive study on lower limb necrotizing fasciitis and the causative organisms in a single surgical unit at NHSL.**

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National Hospital of Sri Lanka, Sri Lanka**

### **Introduction**

Necrotizing fasciitis is a rapidly progressing infection involving skin and subcutaneous tissues. It is one of the surgical emergencies with inevitable threat on limb and life if not managed promptly.

### **Methods**

Details of all patients with lower limb necrotizing fasciitis admitted to ward 27 and 38 at NHSL over a period of six months (October 2020 – March 2021) was analyzed with regards to sex, associated comorbidities, responsible organisms and antibiotic sensitivity.

### **Results**

Out of total 13 cases of lower limb necrotizing fasciitis studied; a female preponderance was noted with a ratio of 1.6 :1. Diabetes mellitus was a comorbidity in 69.2% of the total study population. Commonest organism found in tissue cultures was coliform bacilli. Commonest organism in diabetic patients too was the same. Out of 7 samples with coliform bacilli, 3 were sensitive for cefotaxime, 1 for piperacillin-tazobactam and 2 were multidrug resistance. Tissue culture with streptococcus was sensitive for penicillin. Among two cultures with acinetobacter, one was sensitive for ceftazidime and the other was multidrug resistance.

### **Discussion and conclusion**

Necrotizing fasciitis is common in patients with diabetes mellitus with a female predominance and is often caused by coliform bacilli, majority of are sensitive for cefotaxime. This is compatible with the type 1 as the commonest type as described in literatures.



## **PP 22 - Occupational injuries of patients admitted to General Hospital Matara 2020.**

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RMLW Rajapaksha, SJ Jayawickrama  
Unit A District General Hospital Matara, Sri Lanka**

### **Introduction**

Occupational injuries result in significant morbidity and mortality. Identification of causes for injuries enable making strategies for injury prevention and severity reduction.

### **Method**

We analysed all consecutive patients with occupational injuries admitted to Unit A General Hospital Matara from 01 July 2020 to 31 December 2020.

### **Results**

There were 110 patients. All were males. Age range 18-78 years. 37% of patients were between 31-40 years of age. There were carpenters 27(25%), Manual labourers 27(25%), masons 17(16%), mechanics 15(14%), fisherman 07(06%), farmers 05(05%), metal workers 04(03%), garment workers 04(03%) and drivers 04(03%). Mechanism of injuries were , fall from height 26(23%), saw injury 21(19%), weight fall 14(14%), mechanical type 15(14%), machines 10(9%), grinders 10(09%), hand held instruments 08(07%), vehicles 03(03%) and burns 02(02%).

Fingers were involved in 37(34%), foot 18(16%) and head/neck 18(16%).

There were cuts 26(24%), fractures 34(24%), lacerations 09(08%), contusions 13(12%), crush 06(05%), other 03(03%). Possible causes were own error 39(36%), poor light 13(12%), machinery failure 08(07%), poor training 16(15%), over work 08(07%), failure of assistant 04(04%) and alcohol 02(02%). 39(58%) were without safety equipments. 57(52%) of injuries happened between 6 am -12 noon.

### **Discussion and conclusion**

This is a male dominant process. Carpenters and labourers were 50% of victims . Fall from height is the main injury mechanism(23%). 50% of victims had hands and feet injuries. 58 % of them were not using safety equipments. Safety equipment to hands and feet reduce injury incidence/severity. Proper work training , proper lighting and avoiding over work reduce injury incidence.

## **PP 31 - Would bone scan prior to MRI pelvis in newly diagnosed prostate cancer patients be helpful to avoid unnecessary investigations?**

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Munipriya Willaraarachchi, WDMC Gunawardene  
Department of Urology, Colombo South Teaching  
Hospital, Kalubowila, Sri Lanka**

### **Introduction**

Prostate cancer (PCa) is the 5th commonest cancer among Sri Lankan males. The majority are diagnosed at an advanced stage. For staging of PCa, magnetic resonance imaging (MRI) and bone scan (BS) are routinely done. We aimed to determine whether by doing the two tests sequentially, how many unnecessary tests could have been avoided.

### **Methods**

A retrospectively analysis of 173 PCa patients(mean age:71 years, range:51-92) who underwent biopsy, MRI, prostate specific antigen (PSA) and BS from July 2018-March 2021 was performed. Non-parametric tests were used for statistical analyses.

### **Results**

Overall, 46.8%(n=81) were metastatic PCa with positive BS. The majority had features of high grade disease such as PSA > 20 ng/ml (69.4%) and International Society of Urological Pathology (ISUP) grading of  $\geq 4$  (53.2%). When PSA was above 20 ng/ml, 57.5% (n=69) of patients with PCA had a positive BS and further MRI was unnecessary. Whereas in those with a PSA  $\leq 20$  ng/ml, 22.6% (n=12) had a positive bone scan ( $p < 0.001$ ). When ISUP was  $\geq 4$ , 58.7% (n=54) of patients with PCa had a positive BS and further MRI was unnecessary. Whereas in those with an ISUP  $\leq 3$ , 28.4% (n=19) had a positive bone scan ( $p < 0.001$ ).

### **Conclusion**

In our cohort, by doing BS first in patients with a PSA >20 ng/ml or ISUP  $\geq 4$ , MRI scan could have been avoided in 57.5% and 58.7% respectively. This would reduce the inconvenience to the patients of having cumbersome tests in addition to cost saving, especially in a resource constrained setting.

## **PP 68 - The Course of Recovery: Carpal Tunnel Syndrome with Shoulder Symptoms, Is It a Different Entity?**

**G N S Ekanayake, S R Manilgama**

**National Hospital Sri Lanka**

### **Introduction**

What we call Carpal tunnel syndrome now was recognised initially as acroparasthesia. A confusion occurs when the atypical symptoms present together with median nerve compression symptoms.

Shoulder symptoms are the commonest at the presentation and more clinically relevant. (6.3 to 19%). The clinical challenge was to give an exact answer how the shoulder symptoms recover following surgical decompression at wrist.

### **Method**

We analysed symptoms of CTS and recovery pattern after decompression. Consented patients who underwent surgery during August to December 2017 were interviewed pre and post op (Day 7,14,21). We mapped recovery patterns of hand symptoms among CTS patients with and without shoulder symptoms.

### **Results**

Our population (N=89) consists of 81% female, right handed 83% ,bilaterally at presentation 83%, affected the dominant hand in 73%.

Symptom analysis shows hand numbness affecting 95% pain 85.4% and tingling 66.3%. All three symptoms in 57.3%. Hand symptoms only group recovery rate on day 7 is 41.2% whilst hand symptoms of the group with shoulder symptoms is (41.8%). On day 14 these are 70.6% and 70.9%. day 21 85.3% and 85.5%. Shoulder symptoms complete recovery rates are 38.2%, 65.4%, 78.2% on day 7, 14 and 21 days respectively.

### **Conclusion**

The data shows identical complete recovery rates of hand symptoms after surgery and slower yet similar recovery of shoulder symptoms.

The patients presenting with shoulder symptoms does not appear to have a different pathology. However, needs further study model to find the cause for atypical presentation.

## **PP 86 - A descriptive study on thyroidectomy: a single unit experience.**

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### **Introduction**

Thyroid nodules are common clinical entity and warrant a lineage of investigations, because of the increasing prevalence of thyroid malignancies. Ultrasound scan and fine needle aspiration cytology are used as the initial tool for diagnosis and treatment in thyroid nodules. But certain cases, surgery and histological diagnosis are necessary for a complete diagnosis. Here surgery is used as diagnostic and therapeutic tool.

### **Objective**

The primary objective of the study is to determine the correlation between the FNAC and ultimate histopathology in the local hospital.

### **Methodology**

It is a retrospective descriptive study done by analysing the clinic records, operative notes and histopathology report of patients who had undergone thyroidectomy in ward 11 and 12 of Teaching Hospital Batticaloa, from January 2016 to December 2018.

### **Results**

Among 93 patients 86 were female and seven males. Histology revealed 22 patients had malignant disease and papillary thyroid carcinoma is the most common. The incidence of malignant thyroid disease is highest in the 3rd and 4th decades females. Thyroidectomy done for 61 patients with Thy 2 FNAC. The histological assessment revealed 2 of these patients had papillary thyroid carcinoma and the rest were benign histology. In patients with Thy 3 group 10 were found to have benign disease and 4 had malignant thyroid disease. The sensitivity and specificity of initial FNAC were 90.9% and 87.3%.

### **Conclusion**

The results of the study were correlated with the contemporary epidemiological statistics of thyroid diseases worldwide. And the sensitivity and specificity of the FNAC in this institution were also similar to the results obtained in the meta analysis. It is concluded that FNAC is a reliable diagnostic tool in the assessment of the thyroid nodules in our institution.

## **PP 91 - Lessons learnt from first hundred hepato-pancreatobiliary (HPB) surgeries- Descriptive study.**

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### **Introduction**

Hepatobiliary procedures are technically demanding. Detailed patient assessment, systematic planning and intense post-operative management is needed to achieve a favourable outcome. This study analyses immediate surgical outcome of first 100 HPB cases done by a single surgeon.

### **Material and methods**

This retrospective descriptive analysis done using the data base from 2020 January to 2021 June. All the surgeries were done by a single consultant. Consecutive patients who underwent surgical treatment for HPB pathologies were analyzed. Post-operative complications were graded in Clavien-dindo (CD) classification. Liver transplants were excluded.

### **Results**

Hundred cases were done with in 18 months duration. Median age was 56 years (range 13-80). 51% were males. Majority were liver resections(n=50). Out which 64% were major liver resections including (n=11) right hepatectomies, (n=10) left hepatectomies (n=2) ALPPS procedures (n=2) and hemi-hepatectomy

## **PP 131 - Rolling V to Y pulp advancement for short finger tips with deformed curved nails- A modified novel technique**

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### **Introduction**

Partial amputation and surgical refashioning of fingertips creates aesthetically inferior short fingertips with unsupported, deformed curved nails. Secondary procedures to reconstruct this is challenging. This article attempts to share a modified surgical technique to improve the aesthetic outcome of short finger tips with short nails.

### **Method**

Four patients with short finger tips with curved deformed nails underwent this procedure. In the first step of the surgery, partial crescentic excision of nail fold was done to improve the show of the nail. Secondly, the nail plate was removed. Thirdly, V shape incision was made facing the apex just

proximal to distal interphalangeal joint crease preserving its blood supply on the volar aspect and the flap is mobilized and advanced such a way that the distal end rolls up. Finally an artificial nail is inserted to the nail fold.

### **Results**

Average lengthening of the tip is 3.5mm. Increase of the nail plate show was 18% at the end of six months. All patients were satisfied with amount of nail show gain and the contour of the pulp.

## **PP 141 - A comparative analysis of factors influencing and outcomes of trauma and non-trauma emergency laparotomy using NELA scoring tool in District General Hospital Gampaha (DGHG)**

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### **Introduction**

Emergency laparotomy covers a wide range of abdominal surgical procedures performed for both trauma and non-trauma related conditions. Though the underlying mechanisms are different, they share a common pathway for perioperative care. This study aims to compare the outcome of both groups using National Emergency Laparotomy Audit (NELA) tool.

### **Method**

A retrospective analytical study performed comparing demographic, physiological parameters & operative details. All adult patients undergoing midline emergency laparotomy at DGHG between 1 June 2020 and 31 May 2021 were included. Statistical analysis was performed using SPSS-22.

### **Results**

The study included 102 patients (Males-70, Females-32). Mean age of trauma group is 33.98 and of non-trauma is 57.85. There were 43 trauma (RTA-31, Blunt trauma-8 & Penetrating/stab injury-4) and 59 Non-Trauma (Intestinal obstruction-27, Intra-abdominal abscess-9, Ischaemic bowel-8, Bowel perforation-8, Complicated hernia-4 & Peritonitis-3) laparotomies. Trauma group had lower ASA grades ( $p=0.012$ ), more often went to theatre within six hours ( $p<0.001$ ), prolonged length of stay  $>14$  days ( $p<0.001$ ), shorter duration of surgery  $<2$  hours ( $p<0.001$ ) and sustained more complications ( $p=0.001$ ) than non-trauma group. However the mortality rate ( $p=0.23$ ) & level of care ( $p=0.77$ ) were not significantly different between two groups. Non-trauma group had a higher mean NELA score (3.22 vs 1.64,  $t=-2.215$ ,  $P<0.01$ ). Higher NELA score was significantly correlated with observed mortality in both trauma & non-trauma groups ( $t=-2.494$ ,  $P=0.014<0.05$ ).

## Conclusion

Patients undergoing trauma laparotomy sustained higher morbidity. The 30 day mortality rate is similar in both groups. High NELA score predicts mortality in both trauma and non-trauma.

## PP 144 - The role of urinary stone density in predicting stone composition in a cohort of Sri Lankan patients: a preliminary study.

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## Introduction

This study analyzes the accuracy of stone density in predicting composition of upper urinary tract stones and evaluates other factors which may refine such predictions.

## Methods

This cross-sectional analytical study assessed 216 urinary stones. Basic sociodemographic medical data and blood parameters were obtained from digitalized records. Stone density, measured in Hounsfield's units, was categorized into >1000 high-density(HD) and <1000HU low-density(LD). Stones were analyzed using FTIR method. Descriptive statistics and multivariate regression were performed to predict association of density and other factors in predicting composition. Compositions were categorized as calcium oxalate, pure uric acid(UA), mixed and infection-related. Multinomial logistic regression was performed for composition with gender, age, serum creatinine, UA and stone density as predictors.

## Results

Overall, 69.0%(149) of all stones were HD and 31%(67) LD. 70.4%(152) were oxalate, 13.9%(30) pure UA, 8.3% mixed stones and 7.4% infection-related. In multivariate analysis controlled for gender, age, comorbidities and blood parameters, HD stone was 5 times(OR=4.7; 95%CI=1.1-19.8) more likely to predict oxalate stone and LD stone 11 times(OR=11.9; 95%CI =1.6-88.7) likely to predict a pure UA stone. Mixed and infection categories did not have statistically significant correlation in predicting composition according to density(Mixed: OR=0.53; 95%CI=0.2-1.4,

## Infection

OR=1.4; 95%CI=0.4-4.4). Stone size, gender, renal function and comorbidities did not correlate significantly as additional factors to density for such predictions(p=0.67).

## Conclusions

Stone density measurement is a useful adjunct to predict stone composition regardless of stone size and comorbidities.

## PP01 - Descriptive study on oesophageal cancer identified in upper gastrointestinal endoscopy examination & biopsy, in a single surgical unit

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## Introduction

Progressive dysphagia with weight loss despite of good appetite & reflux are the typical presentation of oesophageal cancer. Conventional endoscopy is the principal diagnostic tool to diagnose oesophageal cancer. Forth common cause of cancer death in developing countries. At time of diagnosis more than 50% of cases will have extending beyond locoregional confines.

## Methodology

Retrospectively studied on 53 patients who had positive UGIE for oesophageal cancer in Professorial unit TH Jaffna during the period of April 2019 to April 2020. UGIE findings and histopathological reports were analyzed by using SPSS.

## Results

53 patients diagnosed to have oesophageal cancer. Out of 53 patients 42(79.2%) were diagnosed to have squamous cell CA of Oesophagus with mean age of 63.86 years and 11 (20.8%) were diagnosed to have adenoma CA of Oesophagus with mean age of 59.55 years. Out of 42 squamous cell CA 24(57.1%) were male & 18(42.8%) were female. Out of 11 adeno CA 9(81.8%) were male & 2(18.2%) were female. Out of 53 oesophageal CA 4(7.5%) were in upper oesophagus, 26(49%) located in mid oesophagus & 23(12 squamous CA & 11 adeno CA) located in lower oesophagus. Out of 53, 36(67.9%) show an exophytic growth pattern & 17(32.1%) ulcerated.

## Conclusion

Oesophageal cancer common in patients over 60 years with male predominance. Squamous cells CA common in mid oesophagus while adeno CA mainly in lower oesophagus. Factors that influence treatment decisions include the stage and histology type of cancer along with the persons general condition and any other diseases that are present.



**PP 02 - Histopathological evaluation of Thyroid carcinoma in thyroidectomy specimens in Surgical units of Teaching Hospital Jaffna.**

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**Teaching Hospital Jaffna, Sri Lanka**

**Introduction**

Thyroid carcinoma (CA) is fairly common in Sri Lanka currently third most common CA among Sri Lankan women. The incidence of thyroid CA has doubled over last two to three decades and also one of the major burdens as a health sector expenses. Thyroid CA display various histological features, different behaviour patterns and necessitate different treatment options.

**Methodology**

All cases underwent thyroidectomy (Total & Hemithyroidectomy) for thyroid CA in TH Jaffna in 2019 were retrospectively analysed. Histopathological reports were analysed using SPSS.

**Results**

44 thyroid CA were detected in THJ in 2019 with mean age of 41.11 years and age ranged from 20 to 71 years. There was significant female predominance of 93.2% females and 6.2% were males. Out of 44 thyroid CA, Papillary CA were 36 (81.8%) which included 12 follicular variant of papillary CA, Follicular CA were 7 (15.9%) and one Lymphoma was detected. Histopathological evaluation revealed, 18 (40.9%) multifocal, 21 (47.7%) Stage pT1, 20 (45.6%) stage pT2 and 2 (4.6%) stage pT3 cancers. Out of 44 thyroid CA, only 4 were positive for Nodal metastasis and 22 specimens were not containing any nodes to comment on nodal involvement.

**Conclusion**

Papillary thyroid CA was the most common thyroid cancer with significant female predominance and most tumours were found with stage pT1. Factors affecting the outcome of thyroid cancers are age, gender, family history, histological type, primary tumour size, lymph node metastasis, extrathyroidal invasion and distant metastasis. Thyroid cancers are primarily treated with surgery while radioactive iodine also play a key role in management.

**PP03 - Histopathological evaluation of Breast cancers and adequacy of yield in Axillary lymph node dissection (ALND) at Surgical units of Teaching Hospital Jaffna**

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**Introduction**

Breast cancer is the commonest cancer among women globally. ALND is done for T3 and T4 cancers and which has significant short as well as long term comorbidities. At least 16 lymph nodes are needed to confidently ensure nodal negativity. ALND is routinely practiced at THJ with unavailability of Sentinel lymph node biopsy.

**Methods**

91 histopathological reports of Mastectomy and ALND in surgical units of THJ during years of 2018 and 2019 were analysed retrospectively on cancer morphology, pathological stage and grade, receptor status and nodal status.

**Results**

All 91 reports analysed were of females with mean age of 56.1 years. 80 (87.9%) reports revealed Invasive breast carcinoma of No Special Type (NST), 4 showed Invasive lobular and 2 had medullary carcinomas. Among 91 samples, there were In-situ components present in 35 (38.5%), 2 had Paget's disease, 66 had normal as well as 17 had fibrocystic background breast morphologies, 28 (30.8%) had lymphatic invasion and 6 had skin infiltration. Out of 91 reports, 14 (15.4%) Grade I, 40 (44%) Grade II, 30 (33%) Grade III and 86 (94.5%) were with free deep margin. Mean of 14.4 lymph nodes harvested and 46 (50.5%) had metastasis. 53 (58.2%) reports were T2 lesions and receptor studies available in 65 cases of which Oestrogen receptor positive in 32 (49.2%), Progesterone receptor positive in 28 (43%), HER2 positive in 26 (40%) and triple positive in 5 (7.6%).

**Conclusion**

Advanced Invasive breast carcinoma of NST were the commonest type, yield of ALND is suboptimal and needs improvement to determine nodal metastasis.

**PP 04 - Laparoscopic vesicolithotomy can it replace open procedure for bladder calculus surgery in children? Our institutional experience.**

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**Introduction**

To compare the outcomes of laparoscopic vesicolithotomy (LV) and open vesicolithotomy (OV) in children

**Method**

Patients who underwent laparoscopic and open vesicolithotomy, between June 2017 and November 2019 at our Institute were included in this retrospective study. Parameters which were studied were age at presentation, gender, calculus size, duration of intravenous antibiotics, duration of catheterization, post-operative complications, and length of hospital stay (LoHS).

**Results**

During the study duration, fifteen patients were included in this study out of which nine patients had complete clinical data. Four patients underwent LV and eleven underwent OV. Mean (SD) age at presentation was 2.25 ( $\pm 0.9$ ) years and 5.36 ( $\pm 1.5$ ) years respectively for LV and OV. Male to female ratio overall was 13:2.

Mean (SD) calculus size was 12 ( $\pm 3.57$ ) mm and 12.8 ( $\pm 5$ ) mm respectively for LV and OV ( $p=0.01$ ). Mean (SD) days of intravenous antibiotics were 1 ( $\pm 0.5$ ) day and 3 ( $\pm 1$ ) days respectively for LV and OV ( $p=0.011$ ). Mean (SD) duration of catheterization was 1 ( $\pm 1$ ) day and 3 ( $\pm 1.14$ ) days respectively for LV and OV ( $p=0.017$ ). Mean LoHS was 2 ( $\pm 0.5$ ) days and 4 ( $\pm 0.69$ ) days respectively for LV and OV ( $p=0.013$ ).

None of the patients in the study had post-operative complications.

**Conclusion**

Laparoscopic vesicolithotomy is a better alternative for bladder calculus surgery in children. It is associated with significantly shorter duration of catheterization, antibiotics and LoHS compared to open vesicolithotomy.

**PP05 - A comparison of the predictive value of white blood cell count (WBC) and the C- reactive protein (CRP) level in identifying patients with complicated appendicitis.**

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**Introduction**

A subset of patients with appendicitis may have complicated disease at presentation, due to gangrene and perforation leading to localized or widespread peritonitis. White blood cell count and CRP tend to be markedly elevated in complicated disease making them useful markers of complicated appendicitis. Objective of this study is to find out which parameter correlates best with the operative finding of complicated appendicitis.

**Methods**

A total of 18 appendicectomies were evaluated over a period of two months. Uncomplicated disease characterized by macroscopically visible serosal inflammation were noted in 9 patients. Complicated disease characterized by gangrene, perforation and in one case generalized peritonitis were noted in 7 patients. Mean CRP and WBC values of uncomplicated and complicated disease were compared separately using the two-sample unequal variance one tail t – test.

**Results**

Mean CRP value of uncomplicated appendicitis was 14.47 mg/dl, whereas in complicated cases it was 176.81 mg/dl. Mean WBC value of uncomplicated disease was 13681/ $\mu$ L, whereas in complicated cases it was 17608/ $\mu$ L. P value for mean CRP was 0.0059. P value for mean WBC was 0.0653.

**Discussion and conclusion**

There is a statistically significant ( $0.0059 < 0.05$ ) difference between mean CRP values of uncomplicated and complicated appendicitis, whereas in the case of WBC count such a difference cannot be seen ( $0.0653 > 0.05$ ). This study proves there is a correlation between the CRP values and disease severity, and CRP value is a better predictor of complicated disease.

**PP 06 - Ureteric colic presentation and associated risk factors in a tertiary health care center.**

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**District General Hospital Chilaw, Sri Lanka**

**Introduction**

Ureteric colic is a common urological condition summons general surgical admission. Prevention of stone formation will alleviate stone-related morbidity, disability, and obstructive uropathy.

**Methods**

A descriptive study conducted at DGH-Chilaw six months periods since November 2020. 48 patients responded. A pre-tested interviewer-administered questionnaire used to assess the details.

**Results**

Total samples were 48 and 35(72.9%) males and 13(27.1%) females. Age range was 19 years – 69 years. Mean age was 37.73 years (SD 12.935). Their common jobs were farming (n=12), manual (n=7), office (n=9). Right side pain was common- n=27(56.3%). 26(54.2%) patients had first episode. Another 33.4% (n=16) had second episode. Others had more than 3 episodes. 39(81.3%) patients drank less than 2 L water per day. Only 9 patients drank more than 2 L per day and most of them experienced more than one episode of colic. 18 urine full reports (UFR) showed occasional red cells and only 5 reports showed field full of red cells. 77.1% of the UFR reports showed crystals. Only 21(43.8%) patients had dysuria and others were not. Pyrexia experienced by 13 patients due to urinary tract infection and their UFR inveterate it. 41 patients had a normal renal function. 6 patients had stage 2 and one patient had stage 3A failure.

**Conclusion**

Most of the patient's daily water intake was inadequate and they drank less than 2 liters per day. Increase intake of water may prevent further episodes and can be used as a preventive measure for stone formation since childhood.

**PP07 - Impact of COVID 19 pandemic on trauma victims: experience at accident service of Colombo South Teaching Hospital.**

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**Accident service unit , Colombo South teaching hospital, Sri Lanka**

**Introduction**

The healthcare system has faced many challenges with the COVID 19 pandemic. This study aims to assess its impact on accident service admissions and management at Csth.

**Methods**

A retrospective study was conducted on patients admitted to accident service during pre-COVID period (March 2019- Feb 2020) and COVID period (March 2020 – Feb 2021). Data was collected on basic demography, mode of injury and surgical management.

**Results**

Pre-COVID period had 11690 and COVID period had 10319 admissions with an 11.7% reduction on admissions. Mean age of patients were 39.9 years (pre-COVID) and 40.4 years (COVID). There was a significant decrease in male admissions [58.8% vs 60.5% (p = 0.013)] in COVID times.

The percentages for mode of injury on admissions in pre-COVID and COVID periods were respectively, RTA (24.1% vs 23.4% ), assaults (11.2% vs 11.6% ), accidental falls (45% vs 39.3%), cut injuries ( 8% vs 9%), fallen from height (1.7% vs 3.5%), animal bites (1.5% vs 6.4%) , suicidal attempts (0.7% vs 0.9%), burns (1.7% vs 1%) , Foreign body ingestion (0.8% vs 1%) , crush (4.6% vs 3.2%) and prick (0.7% vs 0.7%) injuries.

There was a reduction of 19.7% in surgeries performed during COVID (n=4450) compare to pre-COVID (n=5541) period. 25.08 % (pre-COVID) and 25.62% (COVID) of surgeries were conducted under general anesthesia.

**Discussion and conclusion**

There was an 11.7% reduction with a significant (p = 0.013) gender difference of admissions during COVID.

There was significant (p <0.001) difference in mode of injury, resulting in an increase of animal bites, fallen from heights and reduction of accidental falls with COVID.

There was a 19.7% reduction in surgeries without significant difference in percentage of surgeries conducted under general anesthesia during COVID.

**PP 08 - Patterns of Burns among hospitalized patients in three districts of Sri Lanka- Polonnaruwa, Anuradhapura and Matara.**

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**Introduction**

Burn injury (BI) causes local and systemic morbidity to patients. It represents economic and social burden due to its intensive treatment and rehabilitation methods.

**Methods**

We retrospectively analyzed total 118 patients with BI admitted to Surgical unit B at General Hospital- Polonnaruwa (GHP)(29 patients)(08/02/2008-09/09/2009), Surgical unit B at Teaching Hospital, Anuradhapura (THA)(42 patients)(20/05/2010-28/05/2011) and Surgical unit A at District General Hospital- Matara (DGHM)(47 patients)(3/9/2020- 27/5/2021). We noted patient's demographic data, mechanism of burn, characteristics of burn wound and outcome between different districts.

**Results**

Among the BI admitted to GHP, THA and DGHM male patients were 15(52%), 23(55%) and 27(58%) respectively. Children were more prone for BI which were 19(65%), 25(60%) and 40(85%) respectively. Hot water scaled burns were the commonest cause for BI of all three districts and figures were 14(48%), 18(43%) and 36(77%) of which most of them were occurred accidentally. Electricity burn, hot oil burn and kerosene oil burn (30%) were reported less frequently. Mean burn surface area affected was 12%, 11% and 9% while mean duration of hospital admission was 8.5days, 7days and 4.5days noted among respective districts. 10 patients at GHP developed scar related complications and one patient at DGHM had minor hand contractures. There were two adult deaths at GHP and THA.

**Discussion and conclusion**

Scalds were the main cause of BI of children. With the availability of electricity and safe lamps, kerosene oil lamps BI were reduced. Preventive and education of first aid program is important to reduce household scald burns among children.

**PP 09 - Diagnostic yield and outcomes of transrectal ultrasound-guided prostate biopsy in biopsy naive men from Sri Lanka.**

**Umesh Jayarajah, Nishanthan Shanthanayagam, Anuruddha M Abeygunasekera, Kapila Edirisinghe, Madura Ambegoda, Sanjeewa Vidanapathirana, Saranga Wijayagunawardane, Shinthujaa Mahadeva, Velayuthan Senthana**

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**Introduction**

Prostate cancer (PCa) is the 9th commonest cancer among Sri Lankan men. Data regarding the diagnostic yield and outcome of transrectal ultrasound (TRUS)-guided biopsy is limited in Sri Lanka. The study was aimed to determine the diagnostic yield and outcome of TRUS-guided prostate biopsy in a cohort of Sri Lankan men

**Methods**

A retrospective analysis of 333 (median age: 70 years, range:48-88) men from a single urology unit was conducted. All patients underwent TRUS-guided prostate biopsy for serum prostate specific antigen (PSA) >4.00 ng/mL or suspicious digital rectal examination (DRE) findings. The yield of PCa was compared with PSA levels and DRE. Statistical analysis: Non-parametric tests such as Chi-square and McNemars tests were used.

**Results**

The PCa detection rate was 57.7% (n=196). The cancer detection rate for PSA levels of <4, 4.00 to <10, 10.00 to <20, 20.00 to <40, 40.00 to <100 and  $\geq 100.00$  ng/mL were 2/2 (100.0%), 15/43 (34.9%), 23/88 (26.1%), 41/72 (56.9%), 51/63 (81.0%) and 60/62 (96.8%) respectively. The median prostate volume in PCa was significantly lower (37 vs. 50 ml,  $p=0.002$ ), and the PSA density was significantly higher (1.26 vs. 0.34 ng/ml<sup>2</sup>,  $p<0.001$ ) among malignant prostates compared to the benign group. Clinical findings were not reliable in predicting PCa in all PSA categories. Twenty-three (6.9%) patients had complications.

**Conclusion**

Overall PCa detection rate was 57.7% which is considerably higher than previous studies in the region. DRE was not a reliable finding to detect PCa.



**PP 10 - Management of renal malignancies in Von Hippel Lindau (VHL) syndrome: Lessons learnt from a series of six patients from Sri Lanka.**

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### **Introduction**

Management of renal malignancies in VHL is challenging due to its multifocal nature, bilateral involvement and high tendency to develop new malignancies. Here we present a case series of six patients with VHL syndrome.

### **Methods**

We present six patients (mean age= 35.1 years (range:24-54), males=5) with VHL syndrome with multiple bilateral renal malignancies and the lessons learnt during their management.

### **Results**

Average age was 35.1 years and five were men. Number of tumours at the time of presentation ranged from 1 to 6, while number of recurrences varied from 1 to 3. Different combinations of radical nephrectomy for multiple large tumours (n=2), partial nephrectomy (n=7) and focal ablative therapy (n=6) were utilised. Two of them developed new lesions which were managed with focal ablative therapy. All patients had clear cell renal cell carcinoma (RCC) without any poor prognostic histopathological characteristics like rhabdoid or sarcomatoid differentiation. Patients faced significant psychosocial distress due to fear of renal replacement therapy and social stigma. At the end of a median follow up of 36 months, all six patients were alive with normal or near-normal and stable renal functions and were free of any renal malignancies.

### **Discussion and conclusions**

Nephron sparing approaches were successful even in bilateral, multifocal, large and recurring renal tumours associated with VHL. Awareness about availability of efficacious surgical and minimally invasive measures would reduce psychosocial problems faced by patients and their families due to the social stigma associated with hereditary malignancies and burden of renal replacement therapy.

**PP 12 - Laparoscopic Ureterocalicostomy- A feasible option for pediatric patients.**

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**All India Institute of Medical Sciences, Jodhpur, India**

### **Introduction**

Ureterocalicostomy is reserved for reconstruction of recurrent, recalcitrant ureteropelvic junction obstruction associated with postoperative fibrosis, completely intrarenal pelvis or a relatively inaccessible renal pelvis. We demonstrate a case of fibrosed pelviureteric junction managed by laparoscopic ureterocalicostomy.

### **Method**

A 9-year-old female patient was referred to our hospital with complaints of recurrent episodes of urinary tract infections for last 2 years. Patient had evidence of right renal calculi on previous ultrasound. On repeat ultrasound and MRI right kidney was found to be smaller in size measuring ~ 8x4.5cm with maintained corticomedullary differentiation. There was gross dilation of calyceal system and thinning of renal parenchyma with narrowing of the pelvis. (maximum cortical thickness upper pole ~ 9mm, mid pole ~ 5.8mm, lower pole ~ 6mm). Surrounding perirenal fat stranding was seen. The APD of right pelvis was 16mm. The pelvis appeared inconspicuous and cicatrized. Left kidney appeared normal. On diuretic renogram, SRF of right kidney was 28 % with delayed clearance.

### **Result**

Laparoscopic ureterocalicostomy was planned because of the completely cicatrized pelvis with thinning of the cortex. A transperitoneal approach was implemented in a lateral flank position with four trocars. The, the ureter was transected, and the renal pelvis was closed. A 2.5-cm incision was made at the lower

### **Conclusions**

Even though most patients are diagnosed in the early stage of the disease it is important to develop measures that can detect the diseases in pre invasive phase

**PP 14 - variations of prognostic factor of breast cancer among the patients who were followed up in Teaching Hospital Karapitiya.**

**LH Madhawa, PR Goonawardana**

**Department of Oncosurgery, Teaching Hospital Karapitiya, Sri Lanka**

**Introduction**

Breast cancer is the most common cancer in women. A number of Tumor and host characteristics have been found useful in predicting the risk of recurrence and chance of death from breast cancer following primary surgery.

**Objective**

To study the variations of prognostic factors of breast cancers and to identify the importance of early detection of breast cancer via screening program.

**Method**

This is a retrospective quantitative study based on the analysis of medical record of patients undergoing treatment in Teaching Hospital Karapitiya from January 2020 to December 2020.

**Results**

Total of one hundred patients were analyzed in this study and their age ranged from thirty two to eighty five. 55% of patient had left side breast cancer. About 90% of tumors were more than 2cm in size at the time of diagnosis. 94% of patients had Invasive ductal Carcinoma. Majority (54%) had stage II lesion and 83% had lymph node involvement at the presentation. 56% had Nottingham grade II lesion. 88% of cancers were positive for hormone receptors during immunohistochemical assessment. 13% of Tumors were Her 2 enrich type and luminal subtype B was present in 63% of the patients.

**Conclusion**

Even though most patients are diagnosed in the early stage of the disease it is important to develop measures that can detect the diseases in pre invasive phase.

**PP 15 - Clinicopathological variation of prostate cancer treated in Teaching Hospital Karapitiya**

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**Department of Oncosurgery, Teaching Hospital Karapitiya, Sri Lanka**

**Introduction**

Prostate cancer represents the second most common cancer in men worldwide and the fifth most common cause of cancer death in men. The clinicopathological features of prostate cancer are varying from patient to patient.

**Objectives**

This study was aimed to analyze those clinicopathological variations among the patients who are treated in Teaching Hospital Karapitiya.

**Methodology**

A retrospective study of 75 prostate cancer patients who were treated in Teaching Hospital Karapitiya was done within the period of April 2020 to December 2020. The data were analyzed using SPSS.

**Results**

The mean age at the time of diagnosis is 71yrs. Majority of patients (78%) had lower urinary tract symptoms as a presenting complain. About thirteen (17.5%) had back pain and 7% have developed acute urine retention. Twelve patients had T3 lesion and eighteen patients had T4 lesion according to DRE. Twenty five patients had PSA value more than 100ng/dl and twelve patients had PSA value less than 10 ng/dl. All the patients had adenocarcinoma of the prostate. There were thirty five (47%) patients who had Gleason score more than seven among them sixteen had T3 and T4 lesion and twenty two had PSA value more than one hundred.

**Conclusion**

Lower urinary tract symptoms were the most common presenting complains of prostate cancer patients. High PSA value is strongly related with clinically and pathologically advanced disease.

**PP 16 - Total extra peritoneal repair as the new standard for inguinal hernia repair; single unit experience.**

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**General Surgical Unit, National Hospital of Sri Lanka**

**Introduction**

Even though there are various methods available for inguinal hernia repair the most ideal method for the repair has not been defined yet. This is descriptive study about Laparoscopic total extra peritoneal (TEP) hernia repair which was carried out in single surgical unit of NHSL from 12/2019 to 08/2020.

**Objectives**

Assess the benefits of TEP hernia repair.

**Methodology**

All patients with uncomplicated inguinal hernia who are fit for General anesthesia were included to the study. The data was collected prospectively to find out operative time, postoperative pain on D0, postoperative complication and time required to return to normal activities. Pain was assessed using Visual Analog Scale.

**Results**

Total of 40 patients were participated to the study, seventeen out of forty (42%) had bilateral hernias. There were 12 indirect and 45 direct hernias. Mean age of participant was 55.6yrs.

Mean time for unilateral repair was 63min and for bilateral repair was 88min. Two surgeries were converted to open. Average pain score on the day of surgery was 2. Three patients developed acute urine retention (7.5%) and only one had surgical site infection (2.5%). Only one got recurrence during follow up. No one had chronic pain. Most of them return to their normal activities within three days.

**Conclusion**

TEP have excellent early post operative results and it should be provided as an option for patients undergoing inguinal hernia repair.

**PP 18 - An anatomical study of the Jugular Foramen and its variations in dried adult human skulls in Sri Lanka.**

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**AAMMS L Perera, E D P S Fernando, KA Salvin,**

**WMRD Wijesundara**

**Department of Anatomy, Faculty of Medicine, Ragama, University of Kelaniya, Sri Lanka**

**Introduction**

The jugular foramen has a wide ethnic variation in the anatomy and is a well known area for pathological lesions such as glomus tumors, Schwannomas etc, where such lesions are approached by drilling the bone around the jugular foramen. The authors intended to describe the morphometry and anatomical variations of the jugular foramen and the possible dimensional distinction between the jugular foramen and the jugular fossa.

**Methods**

A descriptive study of 24 skulls was done regardless of the gender, to describe the morphometry of jugular foramen and jugular fossa along with scaled photographs. Comparisons between the right & left jugular foramen/ jugular fossa and comparison of jugular foramen & jugular fossa on the same side were done using the student t-test.

**Results**

We found that the jugular foramen was present bilaterally in all the skulls studied. The mean ML diameter of the jugular foramen was larger in the right 16.02( $\pm$ 2.46) mm than in the left 15.46( $\pm$ 2.68) mm, which is compatible with previous studies; the mean AP diameters of jugular foramen were 8.28( $\pm$ 1.70) mm on left side and 6.84( $\pm$ 1.76) mm on right side.

**Conclusion**

Therefore the jugular foramen is morphometrically different from jugular fossa at least from the AP diameter ( $t < 0.05$  bilaterally) and should be considered as two distinct anatomical structures rather than fossa as a section of foramen. The rest of the variations are possibly due to constitutional, racial, gender related or genetic factors and supports previous established data on Jugular foramen.

**PP19 - Paramount, yet often neglected; Fear for surgery.**  
**PK B S C Bandara, A P Pathirana, B A N P Balasooriya,**  
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**University Surgical Unit, Sri Jayawardenapura,**  
**Sri Lanka**

### **Introduction**

Psychological aspect of patients awaiting surgery is an area often overlooked by surgical professionals. Fear for surgery is a common yet neglected aspect which is often associated with dire consequences like increased post-operative pain, increased use of analgesia, poor post-operative recovery etc. This study describes the fear amongst patients who underwent major and minor surgeries in a tertiary care unit from 2020 to 2021.

### **Method**

Patients awaiting selected major and minor surgeries were interviewed upon an internationally validated standard questionnaire (Eight item instrument of surgical fear: Surgical Fear Questionnaire) on their fear for surgery. The prospective descriptive data on the fear for surgery were analyzed with regards to variables such as demographic data, surgery, type of anesthesia etc.

### **Results**

130 patients were interviewed. A significant association was identified between fear for surgery and age, employment state, educational level, ASA grading, previous history of surgery, duration of hospital stay, type of surgery, type of anesthesia. Gender, smoking and alcohol use, pre-operative pain had no significance with fear for surgery. In view of an intervention to alleviate fear for surgery 64% opted for no intervention/treatment, 13.8% appreciated some sort of treatment. 65% stated more information about the surgery would be helpful.

### **Discussion and Conclusion**

Fear for surgery in patients is associated with many factors. Preoperative identification of certain factors is helpful to predict and intervene to mitigate fear of surgery. Informing the patients regarding surgery is important to reduce the surgery related fear.

**PP 20 - An Audit of Percutaneous Endoscopic Gastrostomy (PEG) in Neurosurgical patients in a tertiary care centre**  
**A N Chrishan, K U A Dalpatadu**  
**Gastroenterological Surgical Unit, National Hospital of Sri Lanka**

### **Introduction**

PEG is the preferred method for long term enteral feeding since its description in early 80's. Neuro trauma and surgery is associated with altered consciousness, risk of aspiration and prolonged debility and rehabilitation. Being the commonest indication for referrals for PEG insertion to our unit, we endeavoured to assess its feasibility in our setting.

This descriptive study was done from August 2020 to June 2021 on consecutive neurosurgical referrals to the gastroenterological surgical unit of National hospital of Sri Lanka. Data was collected from Endoscopic, ward and clinic archives and in-person and phone interviews.

### **Results**

Out of 40 referrals 34 had PEG insertions (61.7% males, age range 16-74). The commonest cause was neurotrauma-53% (road traffic accidents 61%, assaults 11.1% and fall from height 33.4%); whilst rest were following neurosurgical procedures. Early complications included skin infections and leaks (14.7%), accidental tube removal (8.8%) and tube occlusion (3%). One needed laparotomy for reinsertion. 12 were lost to follow up after discharge. Later two underwent PEG reinsertions and one had buried bumper syndrome. There were no PEG related mortality. Mortality due to non-PEG related causes at 1 month was 11.7% and by end of the study period was 35%. Tubes were removed in 20.6% after oral feeding was restored.

### **Discussion and Conclusion**

PEG is a safe and acceptable mode of long term enteral feeding considering the low complication rates. It should be made available to those patients who are orally compromised, but proper patient selection is paramount.



**PP 21 - injury patterns of motorcycle riders admitted to accident service unit, Colombo South Teaching Hospital, Kalubowila**

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Sri Lanka

**Introduction**

Injured motorcyclists constitute a large portion of emergency admissions. This is a considerable burden to the health care system and victims' families. This study aims to characterize the injury patterns and analyze the demographics of injured motorcyclists.

**Methods**

A cross-sectional study was conducted including injured motorcyclists admitted to the accident service unit, Kalubowila. Data were collected on demographics of driver/pillion rider, road condition, helmet wearing, speed, time of the day, and injury patterns.

**Results**

A total of 93 victims were admitted during 1 month. Drivers accounted for 82.8% of injured, 17.2% were pillion riders. Male: female ratio was 5.2: 1. Mean age of the injured was 34.5 years. 47.3% of victims were under age 30. Two peaks of prevalence were noticed in accident times, 7.00 a.m. – 9.00 a.m. and 4.00 p.m. – 5.00 p.m. correlating with highest traffic activity on roads. 36.6% had head or facial injuries, 79.6% sustained injuries to an extremity. Crashes involving another vehicle represented the commonest (50.5%) type of mechanism. Majority (26.9%) claimed that their speed was 40-50 km/h when accident happened. 80% of accidents have happened on carpeted roads. 5.4% of cases did not wear a helmet. 9.7% of riders were under the influence of alcohol. There was no significant difference in number of injuries between riders aged less than 30 years and those older than 30 ( $p > 0.05$ ).

**Discussion and Conclusions**

Despite the common perception, young motorcyclists are not shown to be injured in accidents more than older population. Continuous injury surveillance is recommended to identify factors affecting motorcycle accidents.

**PP 23 - Risk factors of Hospitalization due to assaults: Retrospective observational study**

**V M Wedagedara, N D Masakorala, S J Jayasinghe**  
Colombo South Teaching Hospital, Sri Lanka

**Introduction**

An assault is an intentional act to harm another person using violence or force. Because of repetitive admissions due to assaults, they are becoming a huge health burden. Study was to find the risk factors to improve the quality of care by avoiding readmission due to assaults.

**Method**

All patients admitted following assault to the accident service, Colombo South teaching hospital during a period of two months were included. Patients following sexual assault and child abuse were excluded.

**Results**

Eighty one patients were included of which 48 (59.2%) were males. Majority of the patients (74%) were between 20-40 years. 85% patients had occupations while only 10 patients had higher education. In most of the assaults (94%), the assailant was known. Out of all males, 74% were admitted following a history of alcohol use. Majority of patients (59%) had a previous history of assault either by the same person (62%  $n=30$ ) or another. 59% assaults were due to miscommunication and 22% were due to morbid jealousy.

**Conclusion**

Majority of patients were middle aged male patients following alcohol intake. Although most of the patients had low educational status, they had occupations. Previous assault was an ignored risk factor which can be addressed at primary care level. Thus knowing these risk factors enables the primary health care provider to avoid unnecessary hospital admissions due to assaults.

## **PP 24 - Evaluation of the quality of colonoscopy procedures at a tertiary care centre in Sri Lanka**

**Nishan Perera, Umesh Jayarajah, D N Samarasekera, Sohan Anjana**

**Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

### **Introduction**

Colonoscopy is a method of visualizing and sampling the colon which is also used to perform therapeutic interventions. We evaluated the quality of screening colonoscopy procedures in a tertiary care setting.

### **Methods**

A retrospective analysis of the 1949 reports of colonoscopy procedures carried out at the University Surgical Unit, National Hospital of Sri Lanka from February-2006 to July-2018 is presented. All had no previous diagnosis. The reports were maintained in a standardized computerized database which recorded clinical and procedural details.

### **Results**

The majority were males (51.1%) with a mean age of 53.7(SD:29) years. The common indications were alteration of bowel habits (27.7%), lower abdominal pain (17.3%) and (34.8%) had no documented indication. Caecal intubation was achieved in 91.4% and terminal ileum was visualized in 74.4%. Procedure was abandoned in 7.9% (n=153). Commonest reasons included poor bowel preparation (n=84, 55%) and patient discomfort (n=34, 22.2%).

Correct documentation was seen in the majority in relation to proper indication (66.5%), sedation (90.7%), bowel preparation (88.6%) and findings (99%). Bowel preparation was adequate in (82.4%). Common complications encountered were pain (0.8%) and bradycardia (0.6%). Technical difficulties were present in (0.9%).

The majority were normal studies (56.3%). Common findings included polyps (9.4%), hemorrhoids (4.9%), diverticulae (4.4%) and malignant-looking growths (2.7%). Polypectomy was attempted in (n=90) and was successful in (n=88, 97.8%). Polyp retrieval was successful in 91.1% (n=82).

### **Discussion and Conclusions**

Proper quality standards need to be improved in terms of documentation. Routine quality control measures with specific standards are needed especially in resource limited settings.

## **PP 25 - Predictive factors of axillary spread in breast carcinoma**

**PG N Dhanushka, A De Silva, Nadun Danushka NHSL, Sri Lanka**

### **Predictive factors of axillary spread in breast carcinoma**

#### **Introduction**

Axillary lymph node status is a critical staging factor in primary breast cancer. Recent studies have shown that tumour size, lymphovascular invasion can predict the axillary nodal metastasis. The objective of this study to identify the predictive factors of axillary spread in patients with breast carcinoma in the Sri Lankan setting.

#### **Methods**

Case control study was done using secondary data. Consecutive T1 and T2 ductal carcinoma patients were included. The age of the patient, tumour size, tumour location, multifocality, receptor status, luminal subtype, Ki 67 index, lymphovascular and perineural invasion were recorded along with axillary status. Axillary status was assessed using clinical and radiological imaging modalities. Adjusted odds ratios were calculated and binary logistic regression model was created.

#### **Results**

Mean age was 55.62±12.43 years and average tumour size was 26.68±11.13 mm. Out of 256 patients included in the study, 119 had positive axilla while rest had a normal axilla. Upper outer quadrant lesions were observed in 61.1% of individuals.

Univariate analysis showed, presence of skin tethering (OR=12.72) and BIRADS >3 (OR=2.18) have statistically significance (p<0.05). Rest of the variables were not significant. Multivariate analysis did not show any significant factors.

#### **Conclusion**

Skin tethering and BIRADS >3 might have an association on axillary lymph node metastasis. However, further evaluation has to be carried out in order to provide strong recommendations.

**PP 26 - Clinical spectrum of the breast malignancy in Sri Lanka: A single center study**  
**PG N Dhanushka, A De Silva, Nadun Danushka**  
**NHSL, Sri Lanka**

**Introduction**

Breast cancer is the most common malignancy among females in Sri Lanka. Advances in therapeutic and diagnostic aspects have substantially improved survival. The objective of this study is to find out associated factors in patients with breast cancer.

**Methodology**

Descriptive cross sectional analysis was carried out using secondary data which was collected over five years. The common risk factors, clinical presentation, radiological and histological findings were filtered in patients with breast malignancies. Convenient sampling method was used. Mann-Whitney U test, Chi square tests were used.

**Results**

Mean age is  $54 \pm 12.171$  years and 377 of them were females. Majority (81.1%) were Sinhalese and more than 65% had secondary education. Ten percent of women were nulliparous, others had their 1st child at mean age of  $28.03 \pm 6.02$  years. From the sample, 1.3% were on hormone replacement therapy, 12.5% were on oral contraceptive pills (OCP) and 16.8% had positive family history of breast carcinoma.

On presentation, 93.0% presented with a lump, 25.7% had mastalgia, and only 2.1% were detected during routine screening. Significant associations were noted in age of presentation  $>60$  years with early menopause ( $p < .001$ ), number of children ( $p = .001$ ) and duration of OCP ( $p = .03$ ). No significant difference among ethnic groups ( $P > .05$ ).

**Conclusion**

Most patients may present with palpable breast lump with no significant risk factors. However, there are significant associations with menopause, number of children, OCP usage in age  $>60$  year on presentation.

**PP 27 - Quality Assurance of Upper and Lower Gastrointestinal Endoscopy with a Pro-forma in Sri Lanka: Prospective Observational Study.**

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**Introduction**

Upper gastrointestinal endoscopy (UGIE) and Lower Gastrointestinal Endoscopy (LGIE) are minimally invasive diagnostic modalities which are used widely in Sri Lanka, with heavy workloads in most centres. Two previous pilot studies were conducted in our unit to assess the quality standards of UGIE and LGIE based on selected criteria for quality standards of the British Society of Gastroenterology (BSG) and American Society of Gastrointestinal Endoscopy (ASGE). Of the criteria assessed 8/16 of UGIE and 8/14 of LGIE were found to be unsatisfactory (graded below moderate). This study aimed to assess the feasibility of improving quality standards of UGIE and LGIE by using a pro-forma based on the same criteria.

**Material and Method**

The study was performed in a single surgical unit, at a tertiary referral Centre. Data of 130 patient's UGIE, 127 patient's LGIE were assessed prospectively using a pro-forma during a period of 6 months. The quality is graded as poor, fair, moderate, good or excellent in agreement relative to the BSG/ASGE standards, using kappa values. Duration taken to fill the pro-forma was noted.

**Results**

13/16 (UGIE) and 13/14 (LGIE) standards were found to be moderate or above. This improvement was statistically significant. (UGIE  $p = 0.003$ , LGIE  $p = 0.033$ ). The average duration to fill the pro-forma was 2 minutes.

**Conclusion**

The quality of UGIE and LGIE was improved by using a pro-forma, which is a feasible option, for centers with heavy workloads.

**PP 28 - Nodal Assessment in Invasive Lobular Breast Cancer – Is it safe to leave clinically negative axilla without a core? Experience in a District General Hospital**

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Breast Unit, Newham University Hospital, Barts Health NHS trust, London, United Kingdom

**Introduction**

Characteristic absence of E-cadherin in Invasive Lobular Carcinoma (ILC) leads to small discohesive neoplastic cell invasion. A diffuse morphological pattern of lymph node involvement is frequently found. These make physical examination and diagnostic imaging often less precise in determining the extent of disease.

NICE guidelines suggest ultrasound guided needle sampling of abnormal lymph nodes (LN). However, a significant rate of surgical upstaging of pre-operative node negative disease is reported. We analysed our axillary upstaging rate.

**Methodology**

Retrospective analysis of the Electronic Patient Records of all ILC discussed in MDT in 2019 and 2020.

**Results**

Thirteen women with a median age of 58 were identified from a multiethnic population. All were Grade 2 ILC and one was bilateral. Her2 was negative except for one. The rate of node positivity was 10/13 (76%). Of 14 axillary assessments, 7 had normal US axilla and 7 had abnormal features, which were subjected for FNA or core biopsy. There were 2 positive FNAs (LNC5) and 3 positive core biopsies, (LNB5). Pre-operative N0 had SLNB with the breast procedure and 5/14 (35%) were surgically upstaged. Of these, 4 proceeded to ANC, one had radiotherapy. Preoperative US of all the upstaged axillae reported normal looking lymph nodes.

**Conclusion**

We report a higher LN positive burden in inner city multiethnic population. Of 9 SLNB, 5 were positive, much higher than reported rates. Preoperative diagnosis may have changed treatment and avoided unnecessary second operation. We propose that a LN core biopsy is performed in all lobular cancers.

**PP 29 - A retrospective descriptive study on the characteristics of chronic kidney disease in a cohort of hospitalized patients with peripheral vascular disease in a specialized vascular unit at National hospital Sri Lanka (NHSL).**

**N D Masakorala, Joel Arudchelvam**  
National Hospital Colombo, Sri Lanka

**Introduction**

Chronic kidney disease (CKD) is a risk factor for peripheral vascular disease (PVD). The progressive nature of CKD complicates the management of PVD, and studies show end stage kidney disease is associated with high mortality in patients undergoing vascular intervention for PVD. This study aims to identify the characteristics of CKD in a cohort of patients with PVD.

**Method**

Study was done over a period of one month. Study participants (32) were inward patients admitted to a vascular surgery unit. Patient selection and data collection was done retrospectively by going through clinical assessment notes and duplex/CT angiograms.

**Results**

Majority of the patients admitted with PVD were in the range of 60-70 y of age (43%). Except for one, all had Fontaine stage 4 disease. Diabetes prevalence in the cohort was 84% and of hypertension 53%. Calculated eGFR using MDRD equation revealed 81% as having impaired renal functions (< 90 ml/min/1.73m<sup>2</sup>). Only 18% of the patients with reduced eGFR had a prior diagnosis of chronic kidney disease. In 15 % of the patients the serum creatinine value had risen > 25% from its baseline value.

**Discussion and conclusion**

There is a high prevalence of CKD among patients with advanced PVD. Diabetes and hypertension, being common etiological factors for both disease entities, may have contributed to this finding. Majority of inward PVD patients having undiagnosed CKD (62%) is a matter of concern. Acute kidney injury was noted in 15% of the patients and further studies are needed to identify causative factors for acute decline in renal function in hospitalized patients.



**PP 30 - assessing the adherence to national guideline in ordering a non- contrast CT brain in patients with head injury and its accuracy in predicting traumatic brain injury - a retrospective study done at accident service of Teaching Hospital Kalubowila**  
ND Masakorala, S J Jayasinghe  
Teaching hospital Kalubowila, Sri Lanka

### **Introduction**

Non contrast computed tomography (NCCT) of the brain is an invaluable tool in diagnosing traumatic brain injury. Yet NCCT brain is expensive and poses a risk in terms of higher radiation exposure. Indications for a NCCT brain have been laid out in the national guideline on the management of a patient with head injury to identify patients who will benefit from a NCCT brain while limiting its injudicious use.

### **Objectives**

This study aims to understand the adherence by medical officers to national guideline indications for a NCCT brain in a trauma situation and accuracy of national guidelines in predicting traumatic brain injury.

### **Method**

Data from 28 patients admitted over a one-month period (August/2020) were analyzed. All were suspected to have traumatic brain injury and NCCT brain was ordered by the attending medical officer. Bed head tickets were used to trace the indications and findings of the NCCTs.

### **Results**

The proportion of NCCTs compliant with national guideline was 57%. There were 4 patients with traumatic brain injury as confirmed by NCCT. The positive NCCTs as a proportion of the NCCTs done in accordance with the national guidelines was 25% (positive predictive value 25%). All NCCTs of patients outside the criteria in the guideline were negative.

### **Conclusion**

The NCCTs outside the national guidelines were 42%, which could further be reduced by educating the medical officers on the indications for NCCT brain as given in the national guideline. This would be cost-effective and eliminate unnecessary radiation exposure of patients. The national guideline has a sensitivity of 100%, but its specificity is 25%.

**PP 32 - Characteristics and outcome of traumatic popliteal artery injuries in Teaching Hospital Karapitiya.**  
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KAN Chanaka, PM Lambiyas, RA Ubayasiri,  
Umesh Jayarajah  
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Karapitiya, Sri Lanka

### **Introduction**

Traumatic popliteal arterial injury (TPAI) is associated with limb loss and morbidity. We aimed to study the characteristics and outcome of TPAI.

### **Materials and methods**

All patients (n=38, median age=33yrs, range(16-66yrs), males 32, underwent surgery for TPAI presented to THK from January 2019 to December 2020 included in the study.

### **Results**

The majority were due to motor bike related RTAs (n=24, 63.1%), other mechanisms were trap gun injuries, fall from height, cut (7.9% each) stabs (5.3%). Majority had an associated fracture (73%, n=27; close: 9.9%, open 63.1%). Median ISS was 27 (range: 21-51) and MESS score was 6 (range: 4-8). Mean ischemia time was 7.72 hours (range: 3-18hrs). Five (13.5%) had compartment syndrome at presentation.

EF done in (n=23, 62.2%) and closed reduction (n=4, 8.1%). Majority 86.5% (n=32) underwent fasciotomy. (n=25, 67.6%) TPAI were complete transections. RSVG was the commonest vascular intervention (56.8%, n=21). One third (67.6%, n=25) had an uneventful recovery. Two (5.4%) had postoperative thrombosis. One (2.7%) had postoperative compartment syndrome, 13.5% (n=5) had rhabdomyolysis, 10.8% (n=4) had acute kidney injury and wound infection. Another three (8.1%) needed postoperative ICU care and AKA due to post operative complications.

The median LoS 21 days (range: 4-45). Median duration of return to work was 45 days (range: 21-120). No correlation between ISS, MESS score, ischemia time, with limb salvage, LoS and time to return to work. Fasciotomy significantly prolonged the return to work (p=0.040).

### **Conclusion**

TPAI is commoner in motor bike related RTAs. No significant relationship in the ischemia time and the outcome noted. Concomitant fractures, soft tissue injuries increase the morbidity and hospital stay.

**PP 33 - COVID-19 pandemic restrictions and problems faced by patients due to difficult hearing.**

**Chamal Fernando, Umesh Jayarajah, Anuruddha**

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**Introduction**

The impact of COVID-19 is considerable in patients with hearing impairment who are faced with difficulties in communication due to masks and social distancing. We aimed to provide a preliminary description about difficulties faced by a group of patients due to hearing impairment.

**Methods**

We collected data from 300 consecutive patients from a tertiary care urology clinic at Colombo South Teaching Hospital, Sri Lanka. A self-administered questionnaire was used. Chi-Square test was used for statistical analysis.

**Results**

The mean age of the patients was 55.9 (range:11-85). Eight patients (2.7%) had previous known hearing impairment. Repetition of instructions were required at least once due to hearing impairment in 27.3% (once:14.3%; twice:7.0%; three times:3.3%; >three times:2.7%). However, around 81.7% reported that they had no hearing problems while others reported some difficulty (18.3%: mild-10.3%, n=31; moderate-4.3%,n=13 and severe-3.7%,n=11). Nine patients (3.0%) required lowering of the mask to enable lip reading in order to understand the instructions and all reported moderate/severe hearing impairment (moderate: n=1, severe: n=8). Patient reported hearing impairment was significantly higher in those aged  $\geq 65$  years (31% vs. 11%,  $p < 0.001$ ).

**Discussion and conclusions**

Around 18% of our cohort experienced some form of hearing difficulty. Thus, awareness among the healthcare providers and general public should be improved. Further studies on the impact of this problem with special focus on possible solutions are necessary.

**PP 34 - Patterns of injury severity among patients admitted to the Accident Service, National Hospital of Sri Lanka**

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**Akila Wimalasundara, Bhishman Thevarajah,**

**Heshan Siriwardena, Oshan Basnayake,**

**Shanthamoorthy Gishanthan, Umesh Jayarajah**

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**Introduction**

Trauma is an increasing global health concern and a leading cause of morbidity and mortality in developing countries. In this study, we aimed to analyze the patterns of injury severity among adult patients admitted to the accident service, National Hospital of Sri Lanka (NHSL).

**Methods**

A retrospective observational study was conducted at the Accident Service, NHSL. Data on basic demography and injury severity recorded in a computerized database were retrieved and analysed. Parametric tests were used for statistical analyses.

**Results**

Data available from 18317 patients were analysed. The majority were males ( $n=12060, 65.8\%$ ; mean age= $39.9 \pm$  standard deviation(SD)18.3 years) and 60.6% were aged between 15-45 years. Mean injury severity score and revised trauma scores were  $3.23 \pm$ SD 5.9 and  $4.09 \pm$ SD 3.9 respectively. The mean probability of survival score (PSS) was  $57.4 \pm$ SD 36.0. The majority of the patients had extremity injuries ( $n=11228, 61.2\%$ ) severe head injuries (GCS $<9$ ) were observed in 654(0.035%) patients. Only 68 patients (0.004%) had severe abdominal injuries (Abbreviated Injury Scale(AIS):3 or more). Severe chest injuries (AIS:3 or more) were observed in 110(0.006%)patients. Major trauma ISS $>15$  were observed only in 682(0.037%).The mean ISS scores were higher among males ( $3.53 \pm$ SD 6.5 vs.  $2.66 \pm$ SD 4.5,  $p < 0.001$ ). A significant positive and negative correlations were detected with age and ISS(Pearson's coefficient: 0.070,  $p < 0.001$ ) and PSS (Pearson's coefficient:-0.027,  $p < 0.001$ ) respectively.

**Conclusion**

The majority of patients were males aged between 15-45 years. Age and male sex were associated with higher severity. Knowledge on patterns of injury severity is important for prevention and improvement of facilities.

### **PP 35 - Surgery for Inflammatory Bowel Disease: experience over 22 years**

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#### **Introduction**

Inflammatory bowel disease (IBD) progresses through periods of remission and relapses and sometimes requires surgical interventions.

#### **Objective**

To determine the indications and number of patients requiring surgery during long term follow up for IBD.

#### **Methods**

Data from a cohort of patients attending clinics at two selected teaching hospitals of Sri Lanka, over 22 years were analyzed retrospectively.

#### **Results**

There were 160 patients managed in our clinics from 1999-2021 [Ulcerative colitis (UC) =129; Chrons disease (CD)=28; Undetermined=03]. They were between 15 and 79 (mean= 41.2) years and there were 81 males and 79 females. Out of them 17.5% (28/160) underwent surgery (32.1% CD and 14.7% UC patients). Three patients with CD (33.3%) and 06 patients with UC (31.5%) underwent emergency procedures mainly for intestinal perforation, peritonitis and toxic megacolon and post-operative mortality among them were 0% and 66.6% respectively. Elective surgery was performed among 06 patients with CD (21.4%) mainly for small bowel fistulae and strictures whereas 04 out of 13 (30.7%) elective procedures for UC were for colorectal cancer.

#### **Discussion and conclusion**

Studies show wide variation in indications, rate of surgery (UC 30-40% to 10% and CD 70-80% to 9.1%) and post-op mortality among patients undergoing surgery for IBD. Our experience over 22 years reveals that patients with CD are significantly more likely ( $p= 0.03$ ) to undergo surgery. Though patients with UC have higher post-op mortality after an emergency procedures it is not statistically significant ( $p = 0.17$ ). The incidence of bowel malignancy is higher among UC patients.

### **PP 36 - A survey on inter-hospital transfer handover practices in head trauma patients admitted to a single neurotrauma unit in National Hospital of Sri Lanka (NHSL).**

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#### **Introduction**

Controlled safe transfer of head trauma patients minimises secondary brain injury. Improper inter-hospital transfer handover hinders patient care. We describe the inter-hospital transfer handover practices of head trauma patients transferred from Local Hospitals (LH) to NHSL.

#### **Method**

We conducted a retrospective study by analysing transfer documents and bed-head tickets of all the inter-hospital transfers received by a single neurotrauma unit in NHSL over two months.

#### **Results**

Forty transfers were included. The mean age was 47 years (SD=17.3). Majority (90%, n=36) were males. Road traffic accidents (50%, n=20) and fall-from-a-height (37.5%, n=15) were leading causes for head trauma. Zero transfer documents mentioned the airway assessment during LH primary survey. Pulse Rate (PR) and Systolic Blood Pressure (SBP) were documented in all. GCS was mentioned in 32 (80%), which included 16 (50%), 9 (28%) and 7 (22%) patients with mild, moderate, severe traumatic brain injury (TBI), respectively. Peripheral saturation and pupillary examination were documented in 14 (35%) and 22 (55%), respectively. Nineteen patients (47.5%) underwent Computed-Tomography (CT) head scans at LH. Only 8 (42.1%) of those were communicated to the neurosurgical team ahead of transfer. None of the cases transferred for CT-head scans (n=21) was communicated beforehand. Six severe TBI patients, two moderate TBI patients and one mild TBI patient were intubated before transfer. Only the intubated patients were accompanied by a doctor and monitored during the transfer. On admission to NHSL, 3 (7.5%) had threatened airway. All but one (97.5%, n=39) maintained SBP >100mmHg.

#### **Discussion and conclusion**

Interhospital transfer handover of head trauma patients is disorderly and suboptimal. We suggest introducing a national transfer protocol for head trauma patients and upgrading the existing transfer document to systematise the inter-hospital transfers.

### **PP 37 - Five Year Survey on Renal Neoplasms in a Tertiary Urology Center**

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**Department of Urology, National Hospital Kandy, Sri Lanka**

#### **Introduction**

Renal cell cancer represents 2-3% of all cancers and incident is increasing over last two decades. Since there is no national survey in urological malignancies in Sri Lanka, it is consistently underestimated. The study aims to present a five-year audit in renal malignancies from a high-volume urology center.

#### **Methods**

The data was collected from histology reports of renal cancers diagnosed between January 2016 to January 2021 at the department of urology, National Hospital Kandy. The demographic and pathological details were recorded and analyzed.

#### **Results**

There were 214 renal cancers diagnosed with a mean annual incidence of 42.5. The mean age at diagnosis was 58 years. The male to female ratio was 3:1. The right side to left side ratio was 1:1. Most, (72%) had undergone radical nephrectomy and the rest had undergone partial nephrectomy. Mean tumor sizes of above surgeries were 68mm and 36mm, respectively. Majority were clear cell carcinomas (80.8%), followed by papillary renal cell cancers (13.5%, including 8.8% type 1, 3.3% type 2 and 1.4% mixed papillary) and chromophobe renal cancer (3.7%). WHO and ISUP grading showed 36.5%, 51.7%, 8.9% and 2.8% of carcinomas in grades 1 to 4, respectively. The tumor sizes were not significantly differed with gender, grade, and age.

#### **Discussion and conclusion**

Except male to female ratio of 1.5:1 all other demographic and pathological information were closely similar to international data. This study validates the need of national survey in urological malignancies.

### **PP 38 - Association of International Society of Urological Pathology (ISUP) Grade Group with Age of Patients and Percentage Core Area Involved in Prostate Cancer**

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**Department of Urology, National Hospital Kandy, Sri Lanka**

#### **Introduction**

Prostate cancer is the commonest malignancy in males over 65 years. The International Society of Urological Pathology (ISUP) has suggested grade groups of prostate carcinomas according to the Gleason scores, considering prognosis. This study evaluates the age at diagnosis and percentage core area involved by prostate carcinoma in relation to grade groups.

#### **Methods**

Trans rectal ultrasound guided (TRUS) biopsy reports of patients presented to Urology Clinic, National Hospital Kandy since 2016 to 2020 with diagnosed prostate carcinoma, were studied. ISUP grade groups were calculated according to Gleason scores and statistically analyzed with other parameters.

#### **Results**

There were 312 biopsy reports of patients diagnosed with prostate cancer, with mean age of 71 years. The percentage of patients in each grade group of 1 to 5 were 17.9, 29.6, 16.0, 17.6 and 18.9, respectively. Spearman's rank correlation test showed statistically significant inverse correlation of the age with ISUP grading ( $P=0.01$ ). The mean percentage core area involved by the tumor was 54% and it positively correlated with the ISUP grade groups according to the Spearman's rank correlation test ( $P<0.001$ ). Means of percentage core area involved by tumor according to ISUP grade groups 1 to 5 were 34.5%, 58.5%, 57.3%, 55.8 and 61%, respectively.

#### **Discussion and conclusion**

ISUP prostate carcinoma grade groups correlate with age at diagnosis and the percentage core area involved. Similar observations were reported in international studies. Higher grade group prostate carcinomas were diagnosed at lower age and had higher percentage TRUS biopsy core area involvement.



**PP 39 - Efficacy of epidural steroid usage for lumbar radiculopathy: a single unit experience**

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**Registrar in orthopedic surgery, Teaching hospital Jaffna, Sri Lanka**

**Introduction**

Lower back pain is a common musculoskeletal disorder that results in activity limitation and work absence. Epidural steroid injections are commonly used to alleviate the pain. This study aims to assess the effectiveness of epidural steroids in lumbar radiculopathy in Sri Lankan population.

**Method**

This retrospective study was conducted at Orthopedic Unit II, Teaching Hospital-Jaffna, between January 2018 to December 2020. We collected the data from clinical assessment, clinic records, and telephone interviews. 8 out of 68 defaulted to the follow-up. We analyzed the data using IBM SPSS 20 software package.

**Results**

39 females and 21 males participated in this study with a mean age of 53.5. The main complaint is back pain radiation to bilateral lower limb (43.3%) with a mean time of 2.5 years. 4 out of 60 people clinically had neurogenic claudication on presentation. Findings were noted in radiographs of lumbosacral spine in 17 patients. Among them degenerative changes in 10 and L5/S1 Spondylolisthesis in 4 patients. MRI studies have shown spinal canal stenosis in 83.33% of the population. Among them, 45% are multilevel involvement. Pre-Epidural VAS 7.5 (SD±1.4) and 3 months follow-up VAS is 3.733 (SD±1.66). 39 out of 60 patients have shown good response at the end of 3 months. there is no statistically significant correlation between the response and the level of lesion ( $p < 0.005$ ).

**Conclusion**

Epidural steroid injection is a safe and effective method in managing LBP which reduces the VAS effectively. This modality has no correlation between the level of lesion and response to the treatment.

**PP 41 - Outcome of Brachio basilic Arteriovenous Fistula. Is tunneling better than flap creation. A single unit experience.**

**J M S Karunarathna, J Arudhelvam**  
**NHSL, Sri Lanka**

**Introduction**

Hemodialysis and peritoneal dialysis are the options for renal replacement therapy for end-stage renal failure. Brachio basilic arteriovenous fistula with transposition/translocation is done in patients who does not have any other suitable veins in the upper Limbs. This study describes a series of Basilic vein transposition/translocation (BVT).

**Method**

Consecutive BVT done in vascular and transplant unit B at the National hospital of Sri Lanka from January 2020 to March 2021 were included. Incomplete records and patients loss to follow-up were excluded. All surgeries were done by a single surgeon. In patients undergoing transposition the vein was mobilized and it was tunneled subcutaneously after detaching and it was anastomosed. In patients undergoing translocation, the vein was only mobilized and a subcutaneous flap was created and the vein was placed under the subcutaneous flap.

**Results**

There were 15 BVT during this period. 09 included. 77.77% ( $n=07$ ) were males. Mean age was 49.88 (30-79). 55.55% ( $n=05$ ) underwent tunneling and 44.44% ( $n=04$ ) underwent flap creation. Among transpositioned patients, one developed venous hypertension of the relevant upper limb and one passed away six months after the procedure. Lymph discharge noted in a patient underwent translocation. At Mean follow-up of 10.11 months, 07 were undergoing HD (Success rate was 77.77%).

**Conclusion**

The success rate in this series is 77.77%. There is no difference in the rate of complications between flap creation and tunneling. This is probably due to the low numbers in the series.

**PP 42 - Femoral fractures pattern and associated injuries presenting to a tertiary care trauma center**

**Ganesarajah Niruban, Aadil Faleel**  
Accident service-NHSL, Sri Lanka

**Introduction**

The femur is one of the most frequently fractured bones in the body. It needs high-energy trauma for it to fracture unless there is an ongoing pathology that weakens the bone. The aim of this study was to describe the pattern of femoral fractures and the associated injuries.

**Method**

Patients with Femur fractures presented to the National hospital of Srilanka between January 2020 and July 2020 were included. The demographic data, etiology, the part of femur affected and associated injuries were collated from the hospital records.

**Results**

A total of 156 cases were reviewed, 65.4% of all the patients were females (n=102). The most common etiological factor was minor falls (n=82, 52.6%). The site of fracture varied with age and etiology. Neck of femur (n=112, 71.7%) fractures occurred, more in the elderly (mean age of 74.2 years), following minor falls and trips (80.3%). Mid-shaft fractures (n=28, 17.9%) occurred commonly in young males (mean age of 32.2 years) following mostly Road traffic accidents (53.5%). The most common associated injury was soft tissue injury requiring secondary wound closure (n=72, 46.2%).

**Conclusion**

The neck of femur fractures often occurs in the elderly as a result of low energy trauma while shaft fractures are commoner in the younger age group and often follow RTAs. Falling, slipping, or tripping around the house is a serious concern for seniors which is needs to be addressed to reduce fragility fracture in the elderly. Effective road safety protocol should be implemented to reduce accidents among the younger age group.

**PP 44 - Barrett's esophagus among patients undergoing Endoscopy in a tertiary care center.**

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Department Of Surgical gastroenterology, Colombo South Teaching Hospital, Sri Lanka

**Introduction**

Barrett's esophagus is a complication of Gastro-esophageal reflux disease (GERD) and may lead to adenocarcinoma of the gastro-esophageal junction. This study analyses demography and presentation of Barrett's esophagus and also compare the endoscopic vs. pathological diagnosis .

**Materials and methods**

In a retrospective study, data from consecutive patients who underwent UGIE over three years in our unit were analyzed. All the endoscopic findings had been supervised by a single consultant. Those which were suggestive of Barrett's had been subjected to multiple biopsies. Pathological analysis of biopsies had been carried out by two pathologist's over three-year period.

**Results**

There were 1140 patients [631 male and 509 females (M:FM =1.2:1)]. Mean age was 62 y (19 - 87 years). Endoscopic diagnosis was made in 56 (4.9%). Pathological evidence of Barrett's, after special stain for acid mucin to show intestinal metaplasia was seen in 1.4%(n=16)(p=0.03). Mean age of the biopsy proven Barrett's population was 65 years and 87.5% were more than 60 years of age(n=14). Out of that 68.75 % were male(n=11.) Dysplasia was present in 12.5% of the pathologically positive Barrett's patients (n=2). One patient had adenocarcinoma in the background of Barrett's 6.25%(n=1) and underwent Endoscopic mucosal resection. Epigastric pain (50%) was the commonest presentation followed by abdominal distension (19%) dysphagia (19%), regurgitation (6%) and melena (6%). Median duration of the presenting symptom was 12 months.

**Conclusion**

Barrett's esophagus is common among males over 60 years of age. Endoscopic Barrett's esophagus has a low accuracy in our setup.

**PP 45 - Is it worth doing bilateral percutaneous nephrolithotomy (PCNL) in a single surgical setting?**

**M Sivashankar, K Edirisinghe, A S M G B Agalawatta, M G S P M Marasinghe, M HERATH**

**Department of urology, National Hospital Kandy, Sri Lanka**

**Introduction**

PCNL is the standard treatment of choice for renal stone management and It is not usual to do this surgery to bilateral renal stones in a single sitting as disturbing both renal systems. However, we started to do bilateral surgeries in one sitting because of long waiting list for these surgeries.

**Methods**

The data were collected prospectively from the bilateral PCNL patients between November 2020 to May 2021. Patients' demographics, radiological findings of stone features, operative findings, and postoperative complications and outcomes were recorded and analyzed.

**Results**

17 patients underwent B/L PCNL during this time frame, and the mean age of study group was 58.94. The male: female ratio was 1.8:1. Six patients had Guys Stone Score (GSS) 2 stones (GSS 1 – 23.52%, GSS 3 – 29.41%, GSS 4- 11.76%). The average operative duration was 58.82 minutes. All patients underwent prone PCNL except one. Six (35.29%) needed two punctures on each side. We put nephrostomy tubes to eleven patients (64.7%) and tubeless PCNL for two patients. Stone clearance rate was 99%. Only one patient needed a perioperative blood transfusion. 16 (94.11 %) developed Clavien-Dindo 1 or 2 complications. 12 (70.58%) were discharged on postoperative day one.

**Discussion and conclusion**

Bilateral PCNL for GSS 1 to 3 stones is associated with a complete stone clearance rate and uneventful recovery. B/L PCNL has advantage of complete clearance of stone in one surgery, avoids the recurrent admission related to stone complications and reduce burden on waiting list.

**PP46 - Follow up blood testing post-bariatric surgery: A service evaluation.**

**Manuk Wijeyaratne, Matthew Mason**

**Musgrove Park Hospital, Taunton, United Kingdom**

**Introduction**

Bariatric surgery is proven to significantly reduce morbidity and mortality associated with extreme obesity. Regular monitoring of biochemistry post-bariatric surgery is recommended to identify potential nutritional deficiencies.

**Aim**

of this service evaluation is to retrospectively assess adherence to local guidelines regarding follow up serial blood testing of post-intervention bariatric patients between January 2017 and October 2018.

**Methods**

A data collecting proforma was created to facilitate standardised data capture. Operation databases were used to identify all eligible cases. The electronic biochemistry records system was used to gather data on whether blood testing was performed as per guidance.

**Results**

Seventy-three patients were included, having undergone gastric bypass (45%), sleeve gastrectomy (36%), gastric banding (18%), and gastric balloon insertion (1%) in the catchment period. 95% of patients had pre-operative blood tests (33% performed by primary care). Post-operatively, at 3 months, 6 months, 9 months, 12 months, and 12-24 months, 77% (62% by primary care), 80% (73% by primary care), 83% (83% by primary care), 70% (74% by primary care), and 56% (93% by primary care) had follow up blood tests respectively. None of the patients had all the recommended blood tests done at any time point.

**Discussion**

There is significant variation in adherence to biochemistry monitoring follow up post-bariatric surgery. The shared care model between primary and secondary care may lead to lack of clarity around which service would arrange testing. Interventions being put into place include bariatric surgery patient passports and bariatric blood test request sets to standardise collection.

**PP 47 - Acute intestinal obstruction due to obturator hernia.**

**Niladri Banerjee, Althea Vency Cardoz, Ravi Ranjan, Satyaprakash Meena, Tauna Yadav**  
**All India Institute of Medical Sciences, Jodhpur, India**

**Introduction**

Obturator hernias are rare and often difficult to diagnose, due to their vague signs and symptoms. More than 60 percent of these cases are diagnosed at laparotomy/ laparoscopy with a high mortality rate of 8-40 percent, mostly attributable to the patients' comorbidities. Our article reiterates the fact that a prompt diagnosis and management of this condition will lead to good postoperative recovery, irrespective of the age and comorbid status of the patients.

**Methods**

We identified three cases of obturator hernia presented to our Emergency Department with signs of obstruction and/or strangulation in the last one year. The patients' charts, operative notes, outcome, and follow-up data were reviewed. Patient demographics, management, morbidity, and mortality were analyzed.

**Results**

Out of the three cases described, 2/3 were females. The age group was 70-90 years with 2/3 of patients having uncontrolled comorbidities. 1/3 patients had gangrenous bowel, for which resection and stoma was done. All the patients underwent open surgery with anatomical repair of the hernial defect with or without resection of any gangrenous bowel. All of them were discharged from the hospital and during the limited follow-up period there has been no recurrence yet.

**Conclusion**

Obturator hernia should be considered in the differential diagnosis when an elderly, thinly built woman presents with acute intestinal obstruction. Though the outcome in such cases depends on the clinical status and comorbidities of the patient, an early diagnosis and treatment can help in reducing postoperative morbidity and mortality.

**PP 48 - Determinants of self-perceived anxiety during upper gastrointestinal endoscopy procedures.**

**D R Samarathunga, Y Mathangasinghe, NW Halpegamage**  
**Base Hospital Wathupitiwala, Sri Lanka**

**Introduction**

We intended to assess the factors associated with patient anxiety in Upper gastrointestinal endoscopy (UGIE).

**Methods**

Patients who underwent UGIE at Base hospital Wathupitiwala were interviewed after the procedure. All UGIEs were performed under local anaesthesia by a single surgical registrar. Self-perceived anxiety level was assessed using a 10-point Likert scale with higher scores representing higher anxiety. Factors associated with higher anxiety scores were explored using non-parametric analyses.

**Results**

We analyzed 53 patients (male: female=1.7:1) with a median age of 58 (q1=51; q3=70) years. Median anxiety score during procedure was 5/10 (q1=3/10, q3=7/10). Age, sex, education level or having undergone an UGIE previously, did not significantly associate with the self-perceived anxiety level. There was a positive correlation between the level of anxiety and the self-perceived adequacy of information received regarding the procedure ( $r_s = 0.336$ ,  $p = 0.014$ ). Those who experienced higher anxiety levels wished if they had a family member accompanying them during the procedure ( $r_s = 0.450$ ,  $p = 0.001$ ) and the staff was more considerate ( $r_s = .549$ ,  $p = .000$ ). 11% of the participants suggested the procedure was done under general anaesthesia.

**Discussion and conclusions**

Providing adequate information regarding the procedure by the healthcare staff and allowing a family member to accompany the patients during UGIE may help reduce patient anxiety. The causality and effectiveness of these interventions need to be established through randomized controlled clinical trials.



**PP 49 - Sub unit reconstruction of nose using Susrutha's forehead flap; Modifications to a 2600 year old flap.**

**Gayan Ekanayake, Dulip Perera**  
**National Hospital, Sri Lanka**

**Introduction**

World's first described flap that stood the test of time was discovered by father of plastic surgery (Susrutha) in India. Advantages of this flap include.

Colour match

Minimal donor site morbidity

Comparable thickness

The flap has been a stable method for total reconstruction the nose. However, partial injuries has forced the surgeons to use the same flap to be modified. These modifications are refined to provide better functional and cosmetic outcome. This case series will provide a better understanding of reconstruction using forehead flap to general surgical trainees.

**Method**

We analysed the recognised modification that are present in our forehead reconstruction series from the database. All the described technical modifications have been mapped with our data to identify common modifications.

**Results**

Total nasal reconstruction 4

Tip reconstruction 4

Ala reconstruction 4

Ala and tip 2

Ala, tip and columella 1

Complications

Total flap loss 0

Venous congestion 1

Partial loss 1

Average number of stages per patient 2.1

Recovery from total nasal obstruction 1 patient (100%)

**Conclusion**

The commonest modification is the tip reconstruction followed by ala reconstruction. Nasal bridge reconstruction remains the least.

**PP 50 - High end hand reconstruction; are we finding better use for toes?**

**Gayan Ekanayake, Ashan Fernando**  
**National Hospital Sri Lanka, Sri Lanka**

**Introduction**

Toe transfer has become an internationally accepted method of thumb and finger reconstruction at world class centres. So far Sri Lanka has done 13 toe transfers with varying complexity. Being a very high end reconstruction the outcome need to be convincing to both patients and the health staff when taking the consent. This paper highlights the single surgeon's experience of toe transfer (12 toe transfers) in Sri Lanka and introduces a new treatment option to patients via general surgical colleagues.

**Method**

All consented patient details were analysed to identify success rate, Complications, Donor site morbidity, type of reconstruction needed for finger reconstruction, Thumb reconstruction, nail bed reconstruction.

Total number of cases - 11 (12 toes) - 100% success rate

Second toe transfers only to fingers 3

Second toe transfers to thumb 2

Big toe wrap only 2

Nail bed transfer 2

Big toe wrap (big toe preserving) to finger 1

Big toe wrap ( big toe preserving) and second toe combined 1

Complications : delayed donor site healing 2.

Partial skin graft rejection 3

**Conclusion**

Toe transfer in Sri Lanka has a very high success rate with an acceptable donor site morbidity. despite varying complexity of reconstruction.

## **PP 51 - Idiopathic nipple inversion - can we help them during pregnancy?**

**Gayan Ekanayake**  
**National Hospital Sri Lanka**

### **Introduction**

Nipple inversion is a common nipple deformity in females. The problem becomes a concern when pregnancy makes the breast larger and the inversion more severe. However, only few are offered corrective surgery. Standard technique of nipple inversion correction is a cosmetic procedure that results in division of lactiferous ducts. The new modified technique and medical nipple piercing was combined with weights applied on the device was analysed for success, complications.

### **Method**

Preoperative the nipple was evaluated to decide if the nipple is could be physically everted back. The confirmed permanently inverted nipples underwent intra areolar exploration of the lactiferous ducts and division of inter ductal fibrous stands. The nipple is gradually brought above the skin and two small triangular flaps were removed to reconstruct the stalk of the nipple to a narrow cylinder. Once the new nipple is formed the 24 karat gold nipple piercing was placed under direct vision avoiding duct injury. Intra areolar incision was closed with absorbable sutures and the attachment of the piercing was fixed. Different weights from 50g to 100g were applied depending on the amount of eversion it produced. The device was kept for three weeks.

### **Results**

A total of 6 breasts had the surgery and all patients reported correction of nipple inversion permanently. None of the patients reported infections One patient did not tolerate the weight after one week.

### **Conclusion**

The new modified nipple inversion technique has a good potential to be a permanent solution for idiopathic nipple inversion.

## **PP52 - Intravenous Cannula fractures, Cannulas inserted at mobile sites result in more complications**

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**Vascular and Transplant Unit, National Hospital of Sri Lanka, Colombo, Sri Lanka**

### **Introduction**

Peripheral intravenous (PIV) cannulation is a commonly done procedure but can result in complications like infection, cannula fracture (CF) and cannula fragment embolism (CE). This study describes a series of CF referred to the vascular units.

### **Method**

This retrospective study was done from February 2019 to March 2021. Patients referred after CF to the Vascular and Transplant units I and II at the National Hospital of Sri Lanka Colombo (NHSL) were included. Data on demography, site of cannula insertion and complications were collected. Incomplete records were excluded.

### **Results**

31 were included. 19 (61.29%) were females and 12 (38.71%) were males. The mean age was 52.76 years (23-81). 16 (51.61%) cannulas were inserted into the External Jugular Vein (EJV) and 6 (19.35%) at the elbow level and 8 (25.81%) to the forearm veins. 3 (9.67%) patients who had EJV cannula, the fractured segment migrated from the local site. In one (3.22%) the migrated segment embolised to a segmental branch of the pulmonary artery. In the other two it migrated to the retro-mandibular vein.

### **Conclusions**

Complications (migration (2/16), pulmonary embolism (1/16)) developed in 3 (9.67%) with EJV cannula. This association between EJV cannula fracture and complications (migration, embolisation) were statistically significant ( $p < 0.05$ ). Therefore when a cannula is inserted into the EJV it should be removed as soon as possible. And cannula insertion at mobile sites should be avoided.

**PP 53 - Outcome of upper limb arterial injuries. Experience from two tertiary care centres**  
**S Tharshan, G Kapilan, J Arudchelvam**  
**Vascular and Transplant Unit, National Hospital of Sri Lanka. Colombo and Teaching Hospital Anuradhapura, Sri Lanka**

#### **Introduction**

Upper Limb vascular injuries (ULVI) result in significant morbidity and loss of function. This study is on patients presenting with ULVI to two tertiary care hospitals in Sri Lanka.

#### **Methods**

This is a retrospective study done on ULVI presented to both the Teaching Hospital Anuradhapura (THA - for 3 years) and the National hospital of Sri Lanka Colombo (NHSL - for 5 months). Data on patient's demography, cause of injury, treatment delay, vascular intervention (VI) and outcome were analysed. Mangled, non-viable limbs and unfit patients were excluded.

#### **Results**

63 were included. Mean age was 36.2 years (2.5 - 81). 48 (76.1%) were males. Causes were cut and stabs in 33 (52.4%), fractures or Road Traffic Accidents (RTA) in 17(27.0%) and iatrogenic in 9 (14.3%). At the THA 17/22 ULVI were due to cut injuries. 14/17 were due to accidental cut at work place. This was statistically significant ( $p=0.0074$ ). All the iatrogenic arterial injuries were at NHSL. Arteries injured were, two (3.2%) subclavian, seven (11.1%) axillary, 23 (36.5%) brachial and 31 (49.2%) forearm arteries. 51(81.0%) underwent interventions. VI done were end - end repair in 22 (34.9%), interposition graft repair in 15 (29.4%) and thrombectomy in six (11.8%). One patient died in the perioperative period. Therefore limb salvage rate was 98.4%.

#### **Conclusions**

Cuts and stabs are the main cause (52.4%) for ULVI. Work place related cut injuries were a significant cause for ULVI at THA ( $p=0.0074$ ). This fact elaborates the need for preventive measures at these places.

**PP54 - Video Assisted Anal Fistula Treatment (VAAFT): A single centre experience**  
**T W K G Indika, M Suren, N Wijesundera**  
**Teaching Hospital Karapitiya, Sri Lanka**

#### **Introduction**

Video Assisted Anal Fistula Treatment (VAAFT) is claimed to be the only method that allows the surgeon to visualise the interior of the anal fistula tract and locate the internal opening using an endoscope. Technic in VAAFT is designed so that it affects only the fistula tract, thereby preserving the sphincter function and faecal continence.

#### **Methods**

36 patients were selected between 04/2019 to 02/2020 and followed up for six months. 12 were female and 24 were males. Twenty of them was treated for the first time, 10 of them had previous single intervention. Six patients had more than two previous interventions. MRI was done for patients with recurrent fistulae.

#### **Results**

Internal fistula opening could not be found in 10 patients (27%). Discharge from the external fistula opening was found in 82% of patients after one week. By one month this had reduced to 38%. At six month follow-up primary healing of the fistula was seen in 25 patients (69%). 11 people had recurrence (31%); none of the patient had anal incontinence.

#### **Discussion and Conclusions**

VAAFT could lead to improved healing rates of perianal fistula compared with other technics. Our data shows 69% healing rate at six months period. The potential patient benefits includes better understanding of fistula anatomy, no loss of sphincter muscle functions resulting in reduced risk of faecal incontinence.

**PP 55 - Evaluation of the UGIE(Upper Gastrointestinal Endoscopy) procedure carried out in a peripheral hospital**  
**M N M Hiflan, G K S P Premarathne, A B S Maimoona**  
**Base Hospital Balapitiya, Sri Lanka**

### **Introduction**

UGIE is one of the commonest, safe and reliable procedure use to assess various upper gastrointestinal symptoms and to diagnose certain benign and malignant conditions. Wide availability made surgeon easy to treat patients without delay.

### **Methods**

Retrospective analysis of reports of UGIE done at base hospital Balapitiya for 18 months (from 2019/07/01 to 2021/01/30). Data retrieved from the reports of 260 patients undergone UGIE.

### **Results**

Majority were females(65%). Mean age was 58.96years (SD=17.17years). Commonest indication was dyspepsia(55%). Other indications include persisting Gastroesophageal reflux symptoms(24.6%), dysphagia(10%), upper Gastrointestinal bleeding(3.8%), Loss of appetite/Weight(6.5%). Normal study found in 40% of patients. Common abnormal findings include Gastritis(43%), Reflux esophagitis(23%), Hiatus hernia(6%), esophageal candidiasis(3%), duodenitis(3.8%), esophageal varices(4.6%). Malignant esophageal growth found in 5.3% of patients and all of them above 65 years with female predominance(85%). Positive endoscopic findings for any upper gastrointestinal symptoms in patients aged 40years or below was 70%(n=40) showed no significant difference compared to patients aged 40-60 years 54.16%(n=96) and aged above 60 years 61.3%(n=124).( $\chi^2=3.11$ ,  $p=0.21$ ). No major complications related to procedure.

### **Conclusion and recommendation**

Varieties of upper gastrointestinal conditions can be diagnosed by UGIE. Although presentation of patients aged 40years or below less compared to above 40years significant proportion of patients have positive endoscopic findings suggest to consider younger population with symptoms as candidate for procedure.

**PP 56 - Endoscopic findings in relation to symptoms in patients undergoing elective oesophago-gastro-duodenoscopy (OGD).**

**D R Samarathunga, Y Mathangasinghe,**  
**N W Halpegamage**

**Base Hospital Wathupitiwala, Sri Lanka**

### **Introduction**

We analysed endoscopic findings of patients undergoing elective OGD for common upper gastrointestinal symptoms.

### **Methods**

Clinical symptoms of patients undergoing OGD at Base hospital Wathupitiwala were recorded by interview and analysed with endoscopic appearances. Symptom analysis and OGDs were performed by a surgical registrar.

### **Results**

53 patients (M:F = 1.7:1) with a median age of 58 were analysed. 32% (n=17) had epigastric pain/discomfort or bloating (category -1). 13.2% (n=7) had vomiting, regurgitation or heartburn (category-2) and 18.8% (n=10) had both categories of symptoms. 21.1% (n=11) had progressive dysphagia/loss of appetite or weight (category -3) and 15.0% (n=8) had haematemesis/melaena.

16.9% (n=9) endoscopies were normal. 26.41% (n=14) had mucosal inflammation only (antral gastritis=8, pan gastritis=4, duodenitis=2). 20% (n=11) had benign looking peptic ulcers (gastric ulcers n=7, D1 n= 3, D2 n=1). Of patients with category 1 and 2 symptoms 35.2%, 23.5% and 17.6% had mucosal inflammation, peptic ulcers and hiatal herniae respectively. One had a malignant oesophageal growth. Of 9 patients who had hiatal herniae, 5 had regurgitation and 4 had dysphagia. 62.5 % of haematemesis patients had oesophageal varices. Rest had peptic ulcers. Of category-3 patients, 27 %(n=3) had malignant oesophageal growths.

### **Discussion and conclusions**

Commonest cause for dyspeptic symptoms were mucosal inflammation and benign peptic ulcers. Oesophageal varices were the commonest cause of haematemesis. Malignancies presented with category-3 symptoms. Hiatal hernia present with category 2 and 3 symptoms.



**PP57 - Practices of pain management in trauma setting**  
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**Colombo South Teaching Hospital, Sri Lanka**

**Introduction**

Early treatment of pain assumed effective in reducing pain in trauma patients. it prompts healing, reduce Stress response, hospital stay, costs, risk of chronic pain, and ultimately reduces morbidity and mortality

**Method**

Descriptive cross sectional study carried out patients admitted to Accident and Emergency unit, Teaching hospital kalubovila from 2021/03/01 to 2021/03/31. Data collected from patients and BHT. Pain assessed using numerical rating scale. Age < 14 years, low GCS, unstable patients excluded.

**Results**

Among 350 patients 72% were males. Mean age 37.84 years (SD=19.06). Mean time duration from incidence to hospital admission was 81.4 minutes and no one had taken analgesics before admission. 70% had no change in pain score. 14% had increased pain score and 75% of them had come by three wheelers. 16% had reduced pain and 62.5% of them had come by ambulance. Analgesics given 98.5% of patients on admission. Mean time of providing analgesics after admission was 16 minutes. Most patients (64%) had severe pain (pain score > 6) on admission and mean reduction of pain score highest in patients treated with combined Intravenous/Subcutaneous + oral analgesics (in 2 hours 5.3 and 4 hours 7.0) compared to oral (in 2 hours 3.2 and 4 hours 4.3) or Intravenous/Subcutaneous (in 2 hours 4.25 and 4 hours 5.3) analgesics given alone. Patients with pain score < 6 treated with oral analgesics only and mean pain reduction in 2 & 4 hours were 1.55 and 2.5 respectively.

**Conclusion**

Pre hospital care should be improved on pain management such as administration of analgesics and use of efficient transport facilities. Hospital guidelines should be maintained in providing analgesics and multimodal analgesics encouraged in severe pain.

**PP58 - Is CT angiogram essential for free tissue transfer in lower limb following trauma?**

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**A R Fernando, D Dissanayake, G Ekanayake,**  
**T S Beneregama**  
**Plastic Surgical Unit, National Hospital, Colombo,**  
**Sri Lanka**

**Introduction**

Preoperative CT angiogram (CTA) is commonly done prior to free tissue transfer in patients following trauma to identify suitable recipient vessels (arteries and veins) for anastomosis. We describe the outcomes of free tissue transfer (FTT) for lower limb wounds following trauma without routine preoperative CTA.

**Methods**

All patients referred over a 10-month period to plastic surgical unit National Hospital Sri Lanka for FTT for lower limbs following trauma were included. A suitable vessel for anastomosis was evaluated using peripheral pulse examination and an exploratory incision. Early flap related outcomes (necrosis, infection etc.) were documented.

**Results**

19 patients were recruited. N=16 had Gustilo 3B fractures and while n=3 had degloving injuries.

A patient who had segmental lower limb fractures, underwent a pre-operative CT angiogram. Recipient vessel territories included anterior tibial artery 52.6% (n=10) posterior tibial artery 42.1% (n=8) and dorsalis pedis artery 5.2% (n=1).

57.8% (n=11) had an uneventful recovery while 42.2% (n=11) had minor flap related complications (infection and partial flap necrosis < 10%). One patient had temporary steal syndrome. None of the FTT were abandoned due to lack of recipient vessels. None of the patients had complete flap necrosis due to arterial or venous failure.

**Conclusion**

Clinical assessment and intra-op vessel exploration appear to be sufficient in identifying suitable quality vessels (arteries and veins) for anastomosis. This is beneficial in a resource limited setting without free access to CTA.

**PP 59 - Audit on evaluation of content and records of emergency trolleys in general surgical wards of National Hospital of Sri Lanka.**

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**The National Hospital of Sri Lanka, Colombo 10, Sri Lanka**

**Introduction**

Well-equipped, properly arranged emergency trolley is a must for efficient management of cardiac arrest and other emergencies in clinical settings. Regular checking, maintaining equipment, and restocking of drugs are essential to effective management of an emergency trolley. This study aims to assess and evaluate records and content of emergency trolleys in general surgical wards at National Hospital of Sri Lanka (NHSL).

**Methods**

This was a descriptive, cross-sectional study, that carried out in general surgical wards at NHSL in first two weeks of August 2021. All 12-wards that were functioning as general surgical wards during the study, were included to the study. Data was analyzed using Microsoft Excel 365.

**Results**

All 12 (100%) wards had a portable emergency trolley with 4 drawers, but only 4 (33.33%) had clear labeling of drawers and instrument arrangement in drawers had no uniformity. Working self-inflating bag with reservoir (Ambu) was available all except one (91.67%). All 12(100%) had at least one defibrillator each, but none had pads. Checking charts were available for defibrillator, drugs, and instruments in all 12 (100%), but on manual checking of last test date of defibrillator, only 3 (25%) was up to date. Larger variability was noted in available drugs and instruments inside the emergency trolley.

**Discussion**

Even though a standard emergency trolley is available in all studied wards, absence of a generalized standard guideline to manage emergency trolley has made wide variation on its organization.

**Conclusion**

We recommend developing an updated standardized local guideline, regular audits, and healthcare worker awareness programs to manage emergency trolley.

**PP 60 - Awareness about donning and doffing of personal protective equipment among intern medical officers working in DGH Negombo.**

**Niruban Ganesarajah, Ranjith Perera**  
**DGH Negombo, Sri Lanka**

**Introduction**

Sri Lanka is facing the heat of the pandemic COVID-19 currently. Intern medical officers are fighting the battle against COVID-19 from the front. Putting their own lives at risk with selfless determination for the sake of saving lives. They are provided with personal protective equipment (PPE) for their protection during this pandemic. Improper use of these equipment may result in infection.

**Objective**

is to assess the awareness of intern medical officers posted at DGH Negombo regarding donning and doffing of PPE.

**Methods**

A cross-sectional descriptive study was carried out from June 20 to July 26, 2021 over a period of one month on Intern medical officers posted at DGH Negombo by using predesigned, questionnaire.

**Results**

Out of 21 total respondents, 13(61.9%) were female and the age of participant's lies between 28 - 31. Almost half of the participants (47.6%) did not have proper training about donning and doffing of personal protective equipment previously. 33.3% intern medical officers did not know the correct steps of maintaining hand hygiene. 76.1% intern medical officers did not have adequate knowledge regarding steps of donning and doffing of PPE. Still the percentage of participants with a satisfactory attitude regarding PPE was 95.2%.

**Conclusions**

This study suggests that there is a need for active training of the study population in order to effectively protect them from COVID-19. Provision of a checklist along with display of a poster showing sequence of donning and doffing of PPE would help in reinforcing their present knowledge.

**PP 62 - Referral patterns and timing of surgery in children with inguinal hernia.**

**Suren Madawanarachchi, Malik Samarasinghe, Lahiru Gamage, Naveen Wijekoon**

**Department of Surgery, University of Colombo, Sri Lanka**

**Introduction**

Inguinal hernia is one of the commonest childhood conditions requiring surgery. Timely surgical intervention may prevent complications associated with it. An efficient referral pathway is crucial in reducing the delays associated with timing of surgery

**Methods.**

Descriptive cross sectional study of children who underwent inguinal herniotomy at the Professorial surgical unit of Lady Ridgeway Hospital for Children from January 2021 to July 2021

**Results**

Out of the total of 37 children 24(64.9%) were males. There were 3 (8.1%) neonates. Seventeen (45.9%) patients had right sided hernias and 6 (16.2%) were bilateral. The mean age at detection was 26.1 months (1-102 months). Two children had emergency presentations due to incarceration and intestinal obstruction. The majority of patients (83.8%) were referred by medical practitioners while others (16.2%) were self referred by parents. Mean time duration from the detection of hernia to the first paediatric surgical consultation was 26.5 days(1-90 days) in the self referred group compared to 57.6 days (1- 276 days) in the group referred by other medical practioners. The average waiting time for surgery was 69.8 days (1day to 272 days). Intra-operatively, 29 (78.4%) hernia sacs were empty, 5 (13.5%) had omentum and bowel, 3(8.1%) had ovaries.

**Discussion and conclusion**

There is considerable delay in referral of paediatric inguinal hernia to surgical care. Efficient referral policy is necessary to minimise the high risk of complications associated with paediatric inguinal hernia.

**PP 63 - Delays associated with surgical management of children with undescended testes; Experience of a single paediatric surgical unit.**

**Suren Madawanarachchi, Malik Samarasinghe, Lahiru Gamage, Naveen Wijekoon**

**Department of Surgery, University of Colombo, Sri Lanka**

**Introduction**

Undescended testis is a common condition affecting 1% of term, male infants. Early detection and surgical correction by 18 months of age is recommended for optimum long term outcomes.

**Method**

Descriptive cross sectional study of children who underwent orchidopexy at the Professorial surgical unit of Lady Ridgeway Hospital for Children from January 2021 to July 2021.

**Results**

Of 28 children 7(25%) were born preterm ; 9(32.1%) had low birth weight. Thirteen (46.4%) had other structural anomalies or associated syndromes. Nine (32.9%) were missed at initial postnatal neonatal examination. The mean age at detection in this group was 239.6 days (13- 834 days). The majority (85.7%) were referred to paediatric surgical care by a specialist Paediatrician. Two (7.1%) were self referred by parents. Nine (32.1%) patients made their first surgical clinic visit by 6 months of age, 8(28.6%) between 6months to 1year, 11(39.3%) after 1year. The mean waiting time for surgery was 286 days. Seventeen(60.7%) patients had orchidopexy after 18 months of age. Out of the children who were missed at neonatal examination 6(66.7%) had their surgery after 18months with mean age of 24.2months at surgery. Intra-operatively, 11(39.3%) of undescended testes were intra-abdominal and 17(60.7%) had normal testicular volume.

**Discussion**

There is considerable delay in diagnosis & referral of children with undescended testes. Missed diagnosis at initial neonatal examination may contribute to the delay.

**PP 64 - Diabetic foot sepsis – Common organisms and their antibiotic sensitivity.**

**C K Nagodavithane, L P S D Iddamalgoda,  
D Wickramasekera, J Arudchelvam**  
Post Graduate Institute of Medicine, Sri Lanka

**Introduction**

Diabetes Mellitus (DM) is a progressive disease with chronic complications. Diabetic foot sepsis is a major complication which may lead to extremity amputation, and death if not treated promptly. This study describes common organisms isolated from infected diabetic foot wounds and their antibiotic sensitivity as a guide to empirical antibiotic therapy.

**Methods**

This is a prospective study done at Surgical Unit B, Base hospital, Homagama, from September- October, 2020. Patients with Type 2 DM presenting with acute infected foot wounds requiring surgical debridement (PEDIS 3, 4) were included in the study. Patients who received oral or topical antibiotics 2 weeks prior to admission were excluded. Deep tissue samples from wounds were cultured using standard aerobic microbiological techniques. Antibiotic sensitivity testing was carried out using the disk diffusion method.

**Results**

92 patients were included. 52.7% (48) were males. Mean age was 65 years (45-80). 7 types of pathogens were isolated. *Staphylococcus aureus* in 32.6% (30), *Pseudomonas aeruginosa* in 26% (24), *Streptococcus* spp. in 10.7% (10), Methicillin resistant *Staphylococcus aureus* in 9.8% (9), *Coliform* spp. in 9.8% (9), *Acinetobacter* spp. in 4.3% (4), *Klebsiella* spp. in 3.2% (3) and a mixed growth in 3.2% (3).

Antibiotic sensitivity results revealed, Gram negative bacterial isolates to be sensitive to Ceftriaxone, Imipenem and Meropenem while Gram positive bacterial isolates were sensitive to Vancomycin, Clindamycin, Imipenem and Meropenem.

**Conclusion**

This study reveals *Staphylococcus aureus* and *Pseudomonas aeruginosa* as the most common cause of diabetic foot sepsis. We suggest Imipenem and Meropenem as empirical antibiotic therapy.

**PP 65 - Invasive ductal carcinoma with co-existing ductal carcinoma in situ versus pure invasive ductal carcinoma of breast: a comparison of clinicopathological characteristics.**

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**Introduction**

Invasive Ductal carcinoma (IDC) is the commonest histological type of breast cancer worldwide. Ductal carcinoma in situ (DCIS) is an established precursor of IDC and often accompanies IDC. When compared to pure IDC, patients with co existing DCIS with IDC (IDC-DCIS) are considered to have less aggressive disease with better prognosis.

**Methods**

A retrospective study was done using 240 patents with IDC who underwent surgery in Teaching Hospital Kurunegala from October 2018 to June 2020. Data collected from clinic notes and histopathology reports.

**Results**

In this cohort, 14.2% (n= 34) patients were young (age<40 years) and 85.8% (n=206) patient were old (age>40years). 74.2% (n=178) had pure IDC and 25.8% (n=62) had IDC-DCIS. The prevalence of IDC-DCIS among young and old groups were 41.2% and 28.2% respectively. Mean tumor size in IDC-DCIS group was 3.09cm, while it was 3.2cm in the pure IDC group. Out of patients who had IDC-DCIS, 38.7% showed ER positivity and 61.3% (n=38) were ER negative. Among patients with pure IDC, 43.2% (n=77) were ER positive and 56.8 (n=101) were ER negative. 37 patients had triple negative breast cancers and among them, 18.9% (n=7) had IDC-DCIS and 81.1% (n=30) were pure IDC.

**Conclusion**

The findings in this study were comparable with global literature. Further studies will be helpful to evaluate their prognostic importance.



**PP 66 - Hybrid ZOOM ward classes for clinical learning using mobile phones during COVID 19 pandemic; is it feasible?**

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University of Sri Jayawardenepura, Sri Lanka

**Introduction**

With the rising numbers of COVID – 19 patients, universities are moving for virtual teaching platforms. However, feasibility of virtual ward classes are debatable. We initiated hybrid ZOOM ward classes at the University Surgical Unit of Colombo South Teaching Hospital.

Ten students were present at the ward and 20 would join online. Zoom link was set up. Two mobile phones at the ward end were connected via ZOOM with the online students. . Tutors phone was used as the main connector for both audio and video transmissions. Tutor captured the video of the student examining the patient while sharing it with all online students.

One ward student's phone was used as the second active phone to connect them with the online group via ZOOM.

**Student's responses**

Agree Disagree

Audio and video quality of the mobile phones  
were satisfactory 100 %

Background noise at the ward setting was bearable 100 % “I  
had been actively participated for the class” 100%

86.7 % were satisfied with overall experience of  
hybrid ZOOM classes.

Following responses were recorded in qualitative assessment.

“Could not gain the 3D experience, but this was excellent”

“With two active mobile phones better experience was gained  
as we heard the students' responses clearly”

“Please cover all short cases in this manner”

Clinical teaching using hybrid ZOOM is feasible. Mobile  
phones provide a satisfactory audio and video experience.  
Using two mobile phones at the ward end – one for the lecturer  
and the other for the students to respond – bring a better  
involvement.

**PP 67 - Pattern of care and resource utilization in early-stage breast cancer patients.**

**Chandan Kumar Jha, Prashant Kumar Singh,  
Lahiru Gamage, Malik Samarasinghe, Manoj Kumar,  
Naveen Wijekoon, Ramesh Nataraja**  
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**Introduction**

Therapy of early-stage breast cancer (EBC) has evolved a lot during the last three decades. Surgical options and adjuvant therapies that were non-existent three decades ago are now considered to be the standard of care. We conducted this study to assess the pattern of care that is being offered to our patients and the utilization of such services by them.

**Methods**

This is a retrospective analysis of a prospectively maintained database at a tertiary care institute in a developing country. All cases of EBC treated in our department between January 2018 and December 2020 were included. Data regarding the clinicopathological parameters, treatment options offered/accepted by the patients [breast conserving surgery (BCS), options of breast reconstruction, sentinel lymph node biopsy, chemotherapy, radiotherapy, hormone therapy, and anti-HER-2 therapy] were collected and analyzed.

**Results**

84 patients of EBC with a mean age of 47.3+11.6 years, mean tumor size of 2.9+1.4 were included. 14(17%) patients received neoadjuvant chemotherapy (NACT) to facilitate BCS. 31(37%) patients underwent oncoplastic BCS. One (2%) patient underwent post-mastectomy autologous reconstruction, none underwent implant-based reconstruction. Three patients (10% of eligible) underwent sentinel lymph node biopsy (SLNB). Among the eligible patients, 59 (98%) patients took adjuvant endocrine therapy (ET), 57 (84)% took adjuvant radiotherapy, 63 (76%) completed neo/adjuvant chemotherapy, and only 2(9%) received anti-HER-2 therapy.

**Discussion and Conclusions**

Standard surgical treatment, especially SLNB and implant-based post-mastectomy reconstruction is not offered to/accepted by most of the patients. Adjuvant therapies, other than hormone therapy are also not utilized universally.

**PP 69 - Giant adrenal pseudocysts: An enigma for surgeons.**

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**Introduction**

Adrenal pseudocysts are cystic lesions arising within the adrenal gland enclosed by a fibrous connective tissue wall that lacks lining cells. They can attain a huge size and pose a diagnostic challenge with a broad range of differentials including benign and malignant neoplasms. This study aimed at analysing our experience with adrenal pseudocysts.

**Methods**

This was a retrospective review of a prospectively maintained database. Patients who presented with “indeterminate” abdominal masses and were found to have adrenal pseudocyst on histopathology between May 2018 and July 2020 were included.

**Results**

Nine patients with a mean age of 42.4 years (range: 26-65), male: female = 2:1, were identified. All except one presented with non-specific abdominal symptoms. One patient presented with symptoms suggestive of a functional adrenal tumor, but the hormonal evaluation ruled out a secretory tumor. The size of these tumors ranged from 6 to 30 cm. They had variable radiological features and in two cases even a percutaneous biopsy could not establish the diagnosis. Surgical excision provided a resolution of symptoms, ruled out malignancy, and clinched the diagnosis.

**Discussion and conclusions**

Giant adrenal pseudocysts are rare lesions presenting between the third and sixth decade of life. They have a non-specific clinical presentation and variable radiological appearance. Surgical excision of large, symptomatic adrenal pseudocysts is required to rule out malignancy, arrive at a definitive diagnosis, and cure the patient.

**PP 70 - Hirschsprung disease – A clinicopathological descriptive study in a tertiary care referral centre.**

**Jithmal Meegoda, KWSM Wijayawardhana, Malik Samarasinghe<sup>5</sup>, Naveen Wijekoon<sup>5</sup>, Sandini Gunaratne<sup>4</sup>, UI Wickramarachchi<sup>3</sup>**

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**Introduction**

Hirschsprung disease (HD) occurs due to the absence of ganglion cells in the enteric nervous system resulting in functional intestinal obstruction in children. The definitive treatment is a pull through operation.

**Method**

A retrospective analysis was performed using patient records and histopathological reports of patients with HD who underwent pull through surgery at Lady Ridgeway Hospital from 2016 to 2021.

**Results**

Out of the total of 68 patients, the majority (76.5%) were males. The mean age at presentation was 1.5 months. Associated abnormalities were present in 10% (n=7). The most common presentations were constipation (n=35, 51.5%), delayed passage of meconium (n=22, 32.4%), abdominal distension (n=18, 26.47%) and bilious vomiting (n=5, 7.3%). Preoperative barium enema was suggestive of HD in 95.6% (n=65). The mean age at rectal biopsy was 7.4 months and the pull through surgery was 23.94 months. The mean delay between the rectal biopsy and pull through surgery was 9 months (1- 24 months). A defunctioning stoma was created among 14 patients (20.6%) prior to definitive surgery. Majority (n= 66, 97.1%) had short segment HD with recto-sigmoid HD being the commonest type (n=30, 44.1%). The mean length of the aganglionic segment was 98.3mm (4–1000mm). The proximal resection margin was involved with HD in 6%.

**Discussion and conclusions**

Clinicopathological findings are in keeping with other studies on HD. Studies looking at the long-term functional outcomes of these children are essential.

**PP 72 - Quality of Life of Bangladeshi Doctors in the COVID-19 era: Are We Taking Good Care of Our Carers?**  
**Faridul Islam, Noshin Saiyara, Md Mahmudul Islam**  
**Bedford Hospital NHS trust, United Kingdom**

**Introduction**

The coronavirus pandemic has been affecting our healthcare professionals physically as well as psychologically since March 2020. Whilst various measures have been taken to protect their physical health, their mental wellbeing has not been brought into attention. We aimed to assess the well-being of Bangladeshi doctors and identify the high-risk group using a core-10 validated form.

**Method**

We did an observational cross-sectional survey among Bangladeshi doctors. 101 doctors filled out the core-10 form. We collected data over a 1-month-period during the first peak of COVID-19.

**Result**

According to our data, majority of the participants (49%) felt anxious or nervous at some point. 31% felt hopeless, unhappy even panic attacks but most significant finding was that 21% participants had at least once thought about ending their lives. This is a matter of concern and the workplaces should identify the vulnerable professionals so that they can be supported better mentally and socially.

**Discussion**

There can be various causes behind this depression among the doctors in Bangladesh which needs to be detected as a priority. Spreading 'Kindness' is as important as providing clinical treatment to defeat this virus.

**Conclusion**

The pandemic is not over yet; more waves are coming. Therefore, it is really important that we address this issue before it is too late and ensure regular counselling, better childcare for working parents, safety measures to protect their families and financial security. Otherwise, we might exhaust our carers to a level where even they cannot help us survive this global challenge.

**PP 73 - Quality and readability of information on the internet regarding umbilical hernia in adults.**  
**C S Xavier, T Murugiah, D N Samarasekera,**  
**D P Wickramasinghe, F S Saleem**  
**Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

**Introduction**

According to Google search trends, patients are increasingly using the internet for health-related information, including umbilical hernias. We aim to evaluate the quality and readability of information on the internet regarding umbilical hernia in adults.

**Methods**

We searched Google, Yahoo and Bing using the keywords "umbilical hernia" AND "adults". Results from the first two pages were included. Webpages with restricted access, non-text media, exclusive pediatric content and duplicates were excluded. Quality of webpages was evaluated independently by two co-authors using 3 standard criteria: the DISCERN tool, JAMA benchmarks, and the HON seal. Their readability was assessed using Flesch Reading Ease (FRE), Flesch-Kincaid Grade Level (FKGL) and Automated Readability Index (ARI).

**Results**

Twenty-seven unique webpages were included. Inter-rater agreement for DISCERN scores was good (Weighted Kappa =  $0.63 \pm 4.6\%$ , CI=95%). The average DISCERN score was 43 (53.8%). The average JAMA score was 2.2, with eight (30%) webpages scoring the maximum (4 points). The HON seal was present on 8 webpages (30%). The median FRE, FKGL, and ARI scores were 50.0 (IQR= 14), 10.2 (IQR = 2.2), and 9.3 (IQR = 2.6) respectively. Six (23%) webpages met the minimum FRE standard of 60 and ARI standard of 8, and five (19%) met the FKGL standard of 8. There was a strong correlation between FKGL and ARI (Spearman rho = 0.947,  $p < 0.001$ ).

**Conclusion**

Though some webpages provide good quality and easily readable information regarding umbilical hernias, the overall quality and readability is far from ideal, and needs to be improved. Further study taking search algorithms into account is recommended.

**PP 74 - Endo vascular laser ablation therapy- A novel technique to treat varicose veins.**

**Chanuka Wijesundara, Lalitha Piyarisi, Sasindu de Silva, Sathiesha Padmasiri**  
**Sri Jayewardenepura General Hospital, Sri Lanka**

**Introduction**

Lower limb varicose veins are among the most commonly encountered surgical problem in Sri Lanka.

Surgical options for lower limb varicose veins have evolved greatly within last few decades. Sapheno-femoral ligation, stripping of saphenous vein and cryotherapy has been used initially. Newly introduced Endo-vascular laser ablation (EVLA) is less invasive to treat lower limb varicose veins.

Purpose of this study is to study the complications and suitability of EVLA in local setting.

**Methods**

A retrospective descriptive study was done including all the patients who underwent lower limb varicose veins treatment at ward 15 of Sri Jayewardenepura General Hospital, from 1st of January 2018 to 31st of July 2020. (n=46)

**Results**

Mean age was 56.93 years (Range 33-77). There were 11(23.91%) male patients and 35 (76.08%) female patients. Out of 46 patients 35 (76.08 %) underwent EVLA. 3 (6.5%) underwent high tie and foam injections, 8 (17.39%) were given only below knee foam injections with STD. Out of the patients who underwent EVLA, itching, bruising, and lower limb oedema were found in 8 (22.8%), 3 (8.57%) and 1 (2.85%) respectively. None of the patients had surgical site infection, deep vein thrombosis or pulmonary embolism. Out of 35 patients who underwent EVLA, 4 (11.42%) had recurrence in one year. 31 (88.57%) returned to work within 1st week after surgery. 33 patients (94.28%) were satisfied with the outcome of the surgery.

**PP 75 - Microbiology of Lower Limb Ulcers in Patients with Critical Limb threatening Ischemia in a single vascular and Transplant unit at the National hospital of Sri Lanka, Colombo.**

**S Janarththan, K V Gunasekara, A A Nishanthan, J Arudchelvam, K A N Chanaka, M H P Godakandage, M Wijarathne, R Cassim, T Gooneratne**  
**National Hospital of Sri Lanka, Sri Lanka**

**Introduction**

Management of ulcers in patients with critical limb threatening ischemia is a major challenge. Ulcer healing is often delayed by infection; Hence appropriate antibiotic usage is imperative in successful treatment and curtailing morbidity and mortality rates.

**Methods**

Details of all patients with lower limb ulcers admitted to ward 28 and 30C of the National hospital of Sri Lanka Colombo NHSL over a period of three months (May 2021 – July 2021) were included. Details on patient demography, first line antibiotic treatment, associated comorbidities, responsible organisms and antibiotic sensitivity were collected.

**Results**

63 patients included with a mean age of 57.6 years (36-87). Diabetes mellitus and Hypertension were found in 52 (83.9%) and 27(43.5%) respectively. Commonest organisms found in tissue cultures were coliform bacilli 37.5% (n=21) followed by pseudomonas 19.64% (n=11) and Staphylococcus aureus 8.9% (n=9)..Commonest organism in diabetic patients too was coliform bacilli (37.5%). 66.67% (n=14) of coliform bacilli and 90.91% (n= 10) of pseudomonas were sensitive for Piperacillin Tazobactam. 47.89% of patients were treated with Piperacillin Tazobactam as the first line antibiotic.

**Conclusion**

Coliforms were the commonest organism followed by pseudomonas in this study population. This number is significantly higher compared to other studies done (p=0.00452). Coliforms and pseudomonas are most sensitive to piperacillin and tazobactam. This indicates that when starting first line antibiotic treatment we should always consider the local culture and sensitivity pattern.



## **PP 76 - Assessment of burnout among surgical trainees in Sri Lanka.**

**Varun Sriskandarajah, M A C Lakmal, Deepaka Weerasekara, R G M S Nandasena**  
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### **Introduction**

Burnout is a psychological syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that occurs related to working environment. We assessed the burnout prevalence among surgical trainees in Sri Lanka.

### **Methodology**

Surgical trainees of Post Graduate Institute of Medicine were invited for this cross sectional study. The study tool was Maslach Burnout Inventory (MBI) questionnaire. Based on the MBI score Burnout was categorized under following subscales: Emotional Exhaustion (EE) [ $> 27$  high, 19-26 moderate,  $<18$  low] Personal Accomplishment (PA) [ $<33$  high, 34-39 moderate,  $>40$  low], and Depersonalization (DP) [ $>10$  high, 6-9 moderate,  $<5$  low] Burnout defined as trainees with high EE and DP.

### **Results**

Fifty six out of 110 participants responded (response rate 50.9%) Eighteen percent ( $n=10$ ) had high EE (Mean = 21.50), none had low PA ( $n=0$  Mean = 15.93) and 85.7 % ( $n=48$ ) had high DP. (Mean = 13.23) Overall burnout rate was 16.07 % ( $n=9$ ).seventy one percentage of cohort was ( $n=40$ ) registrars and the rest were senior registrars. Seven registrars and two senior registrars were burnt out ( $p>0.05$ ). Forty-eight trainees (86%) were married. .Married surgical trainees have 20.8% ( $n=10$ ,  $p<0.05$ ) of EE compared to the non-married. Only 9 % ( $n=5$ ) of trainees carry out private medical practice.

### **Discussion and conclusion**

The prevalence of burnout among surgical trainees in our cohort was low compared to regional studies. Married trainees have high EE compared to counterpart .No significant associations noted with burnout. Low response rate was a limitation to our study.

## **PP 77 - Use of LRINEC score in Sri Lankan clinical context to aid early detection of necrotizing soft tissue infections.**

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### **Introduction**

Skin and soft tissue infections (SSTI) are among the commonest presentations to the surgical casualty. Necrotizing soft tissue infections (NSTI) carry a high morbidity and mortality. Laboratory Risk Indicator for Necrotizing Fasciitis (LRINEC) score was introduced in 2004 to aid early diagnosis of NSTI.

### **Methods**

Descriptive cross sectional study was done on patients presenting to a surgical unit in a tertiary care hospital from 2020 July to 2020 August. Necrotizing and non-necrotising infections were differentiated clinically and LRINEC score was calculated. Two groups' mean LRINEC score, Its specificity, sensitivity, positive and negative predictive values were calculated by taking 6 as the cut-off value.

### **Results**

Of 70 patients studied 45(64%) were males. Mean age was 53.93 years (10-86 years). 25(36%) patients had diabetes mellitus and 27(39%) had other medical co-morbidities. 51(73%) had lower limb SSTI , 9(12.9%) perineal and perianal infections, 8(11.4%) upper limb infections and 2(2.9%) head and neck SSTI.

55(78.6%) patients had predisposing factors such as altered skin integrity, venous drainage , lymphatic drainage and impaired host defences.

Thirteen patients (18.6%) had NSTI with mean LRINEC score of 7.31(SD+/- 2.057) and 57(81.4%) patients had non NSTI with a mean LRINEC score of 5.35(SD+/- 2.424). When 6 was taken as cut off value for diagnosis of NSTI, the sensitivity , specificity, negative predictive value, positive predictive value were 92.3%, 59.6%, 97.14% and 34.28% respectively.

### **Conclusion**

LRINEC score which uses commonly performed laboratory indices can be adopted easily as a screening tool to diagnose NSTI in surgical casualty setup in Sri Lanka.

## **PP 78 - A study of quality of life and complications following closed reduction of nasal bone fracture under anaesthesia**

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**Colombo South teaching hospital, Sri Lanka**

### **Introduction**

Closed reduction of nasal bone fracture under anaesthesia is the surgical treatment of choice for correction of deformities associated with nasal bone fractures. Study was designed to assess the surgical outcome in relation to complications and its effect on quality of life.

### **Methods**

A retrospective descriptive and analytical study was carried out among patients who underwent closed reduction of nasal bone fractures at Colombo South teaching hospital from 01.05. 2019 to 31.03.2021. Interviewer administered questionnaire via telephone conversations and nasal image assessment via smart phone were used to collect data. Details on pre and post-operative quality of life and post-operative complications were obtained and analyzed.

### **Results**

50 patients responded to the questionnaire. Male to female ratio is 4:1. Mean age was 26.94(range,6-71) years. Mean quality of life measured using visual analog scale at pre-operative, one-month post-operative and three months post-operative were 7.14, 9.24 and 9.36 respectively. Statistically significant improvement of quality of life was observed between pre-operative score and post-operative one month and three-month scores ( $p < 0.001$ ,  $p < 0.001$ ). Pre-operative pain score against pain scores of post-operative one and three months indicate statistically significant improvement ( $p < 0.001$ ,  $p < 0.001$ ). 18 patients had mild nasal deformity but were satisfied cosmetically. Deformities were corrected completely in 32 patients (32%, 68%). Nasal blockage, difficulty of breathing through nose, snoring, anosmia were other observed complications (20%, 16%, 8%, 6%).

### **Conclusion**

Closed reduction of nasal bone fracture under anaesthesia significantly improves quality of life and pain scores. Persistence of mild but cosmetically acceptable nasal deformity is commonly observed while minority remains symptomatic following surgery.

## **PP 79 - Outcomes of children undergoing appendicectomy at the Lady Ridgeway Hospital**

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### **Introduction**

Appendicectomy is one of the commonest emergency abdominal surgeries done in children. In this study, we aim to assess the post-surgical outcomes of paediatric open (OA) and laparoscopic appendicectomies(LA).

### **Methods**

A prospective study was conducted among children underwent appendicectomy at the Lady Ridgeway Hospital from May 2020 to July 2021. Histologically proven cases of appendicitis were categorised into complicated appendicitis (CA) and uncomplicated appendicitis (UA) based on intraoperative findings. Patients were followed up at 6 weeks, 6 months and 1 year. Data was analyzed using independent sample t-test and  $p < 0.05$  was considered significant.

### **Results**

A total of 122 patients underwent appendicectomy. Ninety nine (81%) underwent LA [UA = 66.7%, CA = 23.2%, Not appendicitis (NA) = 10.1%] while 18.6% (n=23) underwent OA [UA= 39.1%, CA= 56.5%, NA= 4.4%]. The conversion rate to open surgery was 6.6% and all had CA. LA group achieved full mobilization [LA=  $1.1 \pm 0.66$  days, OA=  $1.83 \pm 0.65$  days] and normal diet earlier than OA group [LA=  $1.26 \pm 0.93$  days, OA=  $2.04 \pm 0.93$  days] [ $p = 0.001$ ]. Postoperative analgesic duration was not significantly different [LA=  $3.93 \pm 1.87$  and OA=  $3.61 \pm 1.37$ ]. Three patients (2.5%) had surgical site infections and 1 patient (0.8%) a post-operative intra-abdominal abscess and all were managed with antibiotics alone. All 4 patients were in the LA group. Seven patients (5.7%) [LA=6/7, OA=1/7] had re-admissions due to ongoing abdominal pain. No patients had persisting symptoms at 6 months (n=92) and 1 year (n=48) follow up.

### **Discussion and conclusions**

Eventhough LA and OA groups had similar long term outcomes, LA has better post-operative recovery.

**PP 80 - Effectiveness of saline reduction for the management of paediatric intussusception; Experience from a tertiary care referral center.**

**Gayathri Fernando, Iman Salgado, J M Wijerathne, Lahiru Gamage, M M Senarathna, Malik Samarasinghe, Naveen Wijekoon, Ramesh Nataraja**  
**Department of Surgery, University of Colombo, Sri Lanka**

**Introduction**

Intussusception is the commonest cause of bowel obstruction in early childhood. The non-operative management modalities include hydrostatic and pneumatic reduction techniques. In Sri Lanka, saline reduction is the most commonly practiced technique and the results are largely unknown.

**Methods**

A prospective study was conducted on children with intussusception undergoing saline reduction at Lady Ridgeway Hospital from May 2020 to July 2021. Comparison between the successful and non-successful hydrostatic reduction was assessed using SPSS 21 and  $p < 0.05$  was deemed significant.

**Results**

A total of 32 children underwent saline reduction as initial treatment. The mean age was 20.54 months [2-79 months]. Classic symptoms triad was present in 9.7% [3/32]. Successful saline reduction was achieved in 84.4% [27/32] with a mean saline volume of 83 ml/kg body weight. Five patients [15.63%] required laparotomy for failed saline reductions. Non ileocolic type and longer duration of symptoms were associated with failed saline reductions [ $p=0.01$ ]. However, age, ultrasonographic screening, presence of mass or red currant jelly stools were not associated with an increase in unsuccessful reductions [ $p=0.07$ ,  $p=0.06$ ,  $p=0.45$ ,  $p=0.75$ ]. There were no recurrences on follow-up [6 weeks (27/30, 90%), 3 months (22/28, 78.6%) and 1 year (14/19, 73.7%)].

**Discussion and conclusions**

The success rate of saline reduction in this setting is comparable to other published series (85-95%) and can be considered an effective treatment modality for paediatric intussusceptions in resource poor settings.

**PP81 - Dr. Google - Quality of information on the internet regarding inguinal hernia.**

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**Introduction**

Access to information seems to be within the reach of our fingertips. This study aims to assess the quality of information and the degree of readability on the internet regarding inguinal hernia in adults.

**Methodology**

We used 'Google' as our primary search engine and ran a search for the term 'INGUINAL HERNIA'. The analysis was confined to the first 20 searches aimed at adult patients.

Each website was then analyzed with the JAMA benchmark, DISCERN tool, the presence or absence of the health on the internet seal (HON).

The pages were also scored using the Flesch Kincaid Grade Level (FKGL), Flesch Reading Ease (FRE) score, and automated readability index (ARI).

**Results**

The average JAMA score was 2.84 with seven of the twenty webpages reaching a maximum of four points (35%). The majority scored two or below. The average DISCERN score was 53.2% with only one website achieving a maximum of 80 (5%). A fifth of the pages scored less than 50% of the total. The HON seal was present only in four of the twenty webpages (20%). The median FRE value for the pages was 43.9 (IQR 42.8-58.4). Four (21%) of the 19 pages read above the minimum readability standard of 60. The FKGL score gave a median of 11.25 (IQR 9.05-12.0) with seven pages (36.8%) reaching a standard of eight. The median for ARI was 16.8 (IQR 15.2-16.8) with 16 pages that read above standard. A Spearman bivariate analysis of FKGL against FRE showed a significant negative correlation ( $-0.933$ ,  $p=0.01$ ) and a bivariate analysis of FKGL against ARI showed a positive correlation ( $0.342$ ,  $p=0.01$ ).

All the pages were in English and free.

**Conclusion**

These need to be addressed to ensure the patients' accessibility to reliable information.

**PP 82 - Knowledge, Attitude & Practices of Intern Doctors on Nutrition Risk Screening of Patients Awaiting Major surgery ; A Clinical Audit at Surgical Units of National Hospital of Sri Lanka.**

**Udara Abeywarne, Prabodha Amarasinghe,  
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Post Graduate Institute of Medicine, University of  
Colombo, Sri Lanka**

**Introduction**

Nutritional Risk Screening (NRS) is indicated in all surgical patients to identify those in need of Medical Nutrition Therapy (MNT) to augment post-surgical outcome. This audit assesses knowledge, attitude & practices of surgical intern doctors regarding NRS.

**Methods**

Investigator administered questionnaire used for the assessment of all intern doctors attached to NHSL surgical units during July, 2021.

**Results**

Twenty six (92.9 %) participants consented for audit. All agreed that nutrition status has positive impact on post-operative outcome. Only 19.2 % check patient's weight. Height is checked by 3.8 %. Two participants (0.07%) practice BMI interpretation. None checks Mid Upper Arm Circumference (MUAC). Predisposing factors are lack of time (8.1%), uncertainty regarding the importance of NRS (19.2%) and lack of request from senior surgical colleagues (72.7%). None use validated NRS tools for identification of at risk patients due to unavailability (100%). Nutrition Physician referral done by 46.2% . Lack of request from senior colleagues is emphasized by 76.9%

**Discussion**

This audit recommends (1) Surgeons should routinely request and supervise interns to conduct NRS (2) Availability of NRS data in BHT should be checked by surgeon during daily ward rounds (3) Surgeons should promote Nutrition Physician referral of identified patients for MNT (4) Promote nursing staff to attach a printed NRS tool to BHT during patient admission

**Conclusions**

NRS is still not considered a priority in surgical units. Surgical intern doctors lack adequate knowledge, attitude and practices for steering an appropriate NRS. This audit endorses above discussed recommendations to overcome the identified deficits and challenges faced.

**PP 83 - Complications of central venous catheterization in hemodialysis patients. A retrospective study.**

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**Introduction**

The use of a central line is often critical for hemodialysis until a surgically created vascular access ( arteriovenous fistula - AVF) is created and matured. Complications associated with Central venous Line results in morbidity and mortality.

**Design and Setting**

A retrospective analysis of early complications of patients having central line insertion at the dialysis unit of the National hospital of Sri Lanka Colombo (NHSL) from February 2019 to October 2020 was done.

**Results**

Randomized 210 were included. 70.9% were male 29.1% were females. Hemodialysis indications were 62.86% for CKD, 29.56% is AKI & 7.58% was AKI on CKD. 28.09% were femoral lines (67.79% Right, 32.21% Left ) 70.95% were Internal jugular vein (IJV) lines ( 85.90% Right ,14.1% Left ) 0.96% were right side subclavian lines . 57.61% of central lines were inserted on day time (8am – 4pm). 48.09% of lines were inserted by DU medical officers, 18.09% by registrars in anesthesiology, 27.61% by registrars in medicine. 2.38% by registrars in emergency medicine while 0.95% was inserted by senior registrars in anesthesiology & 0.47% were by senior registrars in Emergency Medicine, 2.38% were inserted by senior registrars in nephrology. 6.19% patients had arterial punctures (69.23% were noted in IJV lines 30.76% were in femoral lines). No pneumothoraxes were recorded. 4.76% had hematomas (70% at IJV lines 30% at femoral lines). Double puncture of vein noted in 1.90% .

**Conclusion**

Above early complication rates of 6.19% & 4.76% may be further reduced by supervision and use of ultrasonography.



**PP 84 - An audit on preoperative fasting practices in general surgical department – National Hospital Kandy.**  
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**National Hospital Kandy, Sri Lanka**

**Background**

European Society of Parenteral Enteral Nutrition (ESPEN) recommends preoperative fasting from solids for 6 hours and from fluids for 2 hours to minimize metabolic complications following surgery. The study aimed to assess the preoperative fasting practices in elective surgical patients in a tertiary care hospital.

**Methods**

A cross-sectional study was performed from May 1 to May 31, 2021 at the General Surgery Department, National Hospital, Kandy. Twenty-nine patients who were under general anesthesia while operated on during the study period were included and interviewed 24 h after surgery.

**Results**

Of the 29 patients included in the study, 12 were males and 17 were females. The minimum, maximum, and mean fasting hours for solid food were 7, 72, and 17.17, respectively. The minimum, maximum, and mean fasting hours for fluids were 2, 18.5, and 8.78, respectively.

Fasting instructions were given verbally to all and recorded at the bed head ticket in 72.2% (n=21) patients, as 6 hours for solids and 2 hours for fluids 30.8% patients (n=7), as 6 hours 61.5% (n=12) and fasting from 10pm 7.7% (n=2). However, 55.6% (n=16) were given verbal instructions to be fasting from 10.00 p.m.

**Conclusion**

Preoperative fasting duration in elective surgical patients is longer than the standard recommendation. There are discrepancies between recorded instructions and verbal instructions compared to the standard. A preoperative fasting guideline should be developed and implemented in the institution.

**PP85 - Long-term outcome of ruptured Abdominal Aortic Aneurysm: A case series by single vascular surgical unit.**  
**Sanjaya Iddamal goda, Gurusamy Kapilan,**  
**Joel Arudchelvam**  
**Registrar in surgery, Sri Lanka**

**Introduction**

Ruptured Abdominal Aortic Aneurysms (RAAA) is associated with high mortality. Studies on long term outcomes of survivors are not commonly found.

**Method**

This is a long term followup of patients with RAAA who survived in the perioperative period after open repair at the the vascular and Transplant surgery unit B of the National Hospital of Sri Lanka. Data on age, gender, presentation, operative findings, duration of follow-up and short and long term outcome were collected. patients lost follow-up were excluded.

**Results**

9 patients with mean age of 63.7 years (42-73) underwent open repair for RAAA. 8 (88.9%) were males. diabetes mellitus, hypertension and ischemic heart disease were present in 22.2%, 55.5% and 22.2% respectively.

Most 6/9 (66.7%) had retroperitoneal leak, Two (22.2%) had aortoenteric fistula (AEF), one had intraperitoneal rupture. Three (33.3%) patients died perioperatively of whom two had AEF. One died seven weeks after surgery due to sepsis following pneumonia and pressure ulcers. One was lost to Follow up. at mean follow-up of 21.5 months there are 4 survivors. therefore the long term survival is 50%.

**Discussion and conclusions**

Perioperative mortality following RAAA repair in this series is 33.3%. Long-term mortality is 50%. but this study also shows that if the patient survives the perioperative period there is a 80% chance of long term survival (at 21.5 months). This indicated that perioperative period is the most crucial part which determines long term survival.

**PP 87 - Clinico-pathological characteristics of adrenal masses referred to a tertiary care unit.**

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**Introduction**

Adrenal masses are relatively low in prevalence, which can be symptomatic or incidentalomas. Surgical treatment is indicated in most of the cases.

**Methodology**

This is a retrospective analysis of 22 patients with adrenal masses who were referred to the University Surgical Unit, Colombo South Teaching Hospital over 5 years. Demographic details, radiological and biochemical reports and the management details were analysed.

**Results**

Mean age at the diagnosis was 45 years (range 20 - 76 years) with a male : female ratio of 9:13. Sixty-eight percent (n=15) were symptomatic. Out of that, 53% (n=8) had hormonal symptoms and 46% (n=7) had pressure symptoms. All the patients had undergone CECT scan of the abdomen to characterize the masses. Out of the 16 Pre-operative hormonal assessments 10 (62.5%) were functional masses. Ninety-one percent (n=20) needed surgical management where 95% (n=19) of them underwent Laparoscopic adrenalectomy. Histology showed adrenocortical adenomas, adrenocortical carcinomas, pheochromocytomas and ganglioneuromas. One familial case of VHL was reported.

**Discussion and conclusion**

Majority of the patients in our cohort were symptomatic. Imaging and hormonal studies are helpful in characterising the tumour. Almost all the cases in our cohort were treated with laparoscopic adrenalectomy.

**PP 88 - Outcomes of bilio-enteric anastomoses in a single, low volume HPB surgery unit.**

**Sathika Gunarathna, Sarith Ranawaka, Duminda Subasinghe, Harshima Wijesinghe, Rajah Mowshica, Ravindri Jayasinghe, Sarah Haputantri, S Sivaganesh, Vihara Dassanayake**  
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**Introduction**

Hepaticojejunostomies (HJ) establish bilio-enteric continuity after resections for malignant and benign HPB disorders. The leak rates of HJs range from 2.2-12.4% and contribute to morbidity and mortality.

**Methodology**

This is a retrospective study of HJs done at a single HPB surgical unit from 2011-21. HJs were performed with a retro-colic Roux loop or single jejunal loop using single layer interrupted 4-0 or 5-0 polydioxanone. Right subhepatic drains were placed.

**Results**

Of the 97 patients, mean age was 51.86 years with a M:F ratio of 1:1.4. 64.9% (n=63) of HJs were for malignancies while 35.1% (n=34) were benign conditions. 56.7% (n=55) had a HJ during a pancreaticoduodenectomy, 12.4% (n=12) after extrahepatic bile duct resection and hepatectomy, 11.3% (n=11) after choledochal cyst excision, 4.1% (n=4) as palliative bypass procedures and 4.1% (n=4) for repair of iatrogenic bile duct injuries. Bile leaks occurred in 3.1% (n=3). Two occurred in HJs after hilar cholangiocarcinoma resections, where one persisted for 3 months – and the other led to mortality on the 15th postoperative day. The 3rd leak following choledochal cyst excision resolved in a day.

**Discussion and conclusions**

Bile leaks after HJs in this series is comparable to published data. Though rare, it contributes to morbidity and mortality especially in malignant disease. Adoption of meticulous techniques keep leak rates to a minimum even in low volume centres.

**PP 89 - Outcome of angioplasty for occlusive arterial disease, Patients with chronic kidney disease has poor outcome.**

**AM Alabadaarachchi, J Arudchelvam, AA Nishanthan, KAN Chanaka, MHP Godakandage, MRN Cassim, RMPD Kularathne, SM Wijeyaratne, TD Gooneratne**  
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Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka

### **Introduction**

The treatment options for Critical limb threatening ischaemia (CLIT- rest pain (RP)/Tissue loss) includes, surgery and endovascular (for unfit patients). This study is on the outcome of such patients undergoing angioplasty.

### **Methods**

This study was done from May 2019 to June 2021. Consecutive patients undergoing angioplasty were included. All angioplasties were done by a single surgeon. Incomplete records and patients lost to follow-up were excluded.

### **Results**

72 were included. 47 (65.28%) were males. Mean age was 65.99 years (38-86). RP and tissue loss were present in 37(51.39%) and 68 (94.44%). Diabetes mellitus, Hypertension, Ischemic heart disease (IHD) and Chronic kidney disease (CKD) were present in 93.04%, 60.56%, 47.89%, and 28.17%. All patients had multi segmental disease with involvement of Superficial Femoral artery in 26(36.62%), Popliteal in 28(39.44%), Distal Anterior/Posterior Tibial in 64(90.14%)/62(87.32%). At a mean follow-up of 7.82 (1-25) months, 45(62.50%) had healing wounds or reduced rest pain. 11(15.28%) underwent major amputations. 11(15.28%) died. The overall survival (OS) and amputation free survival (AFS) are 84.72% and 69.44% respectively. Patients with CKD had significantly poor outcomes (Death, major amputation) ( $p < 0.05$ ).

### **Conclusion**

At a mean follow-up of 7.82 months, AFS is 69.44%. This is highly acceptable in this cohort considering the fact that 47.89% of patients had IHD and 28.17% had CKD.

**PP 90 - Health-related quality of life (HR-QOL) and its determinants in Sri Lankan women with breast cancer.**

**Sathika Gunarathna, Sarith Ranawaka, Chris Booth<sup>2</sup>, Sanjeewa Gunasekara<sup>3</sup>, Sanjeewa Seneviratne<sup>1</sup>, Thiwanka Wijeratne<sup>2</sup>**

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<sup>3</sup>Apeksha Hospital, Maharagama, Sri Lanka

### **Introduction**

Lifesaving cancer treatment can often be a major contributor to reduced quality of life among cancer patients. This study aims to evaluate the quality of life (QOL) and its possible determinants in women with breast cancer.

### **Methods**

A cross-sectional descriptive study was conducted among women with breast cancer receiving treatment at the Apeksha Hospital, Maharagama. QOL was assessed using validated EORTC QLQ-C30 and QLQ-BR23 questionnaires.

### **Results**

A total of 146 women between 4-66 months from treatment commencement were included. The median age was 57 years (IQR 17). Majority ( $n=94$ , 61.2%) had undergone a mastectomy whereas 32.9% ( $n=51$ ) had undergone breast conservation surgery. Just over half ( $n=80$ , 53.9%) had stage 2 cancer. The mean 'Global Health Status' (GHS) was 64.6/100 (SD 21.4) and the mean QOL-C30 summary score was 80.0/100 (SD 17.8). Of the functional scales (higher value indicating better QOL), the highest mean QOL (88.3/100) was for social functioning, whereas for sexual enjoyment (64.4/100) was lowest. Symptom scales (lower value indicating better QOL) that contributed most to poor QOL were worry associated with loss of hair (35.9/100), financial difficulty (35.2/100), physical pain (32.8/100) and fatigue (31.5/100). GHS was not associated with cancer stage ( $p=0.35$ ), type of surgery (breast conservative surgery vs. mastectomy,  $p=0.81$ ), income level ( $p=0.68$ ) or level of education ( $p=0.057$ ).

### **Discussion and conclusions**

Despite a high GHS, women experience significantly low QOL in areas including sexual enjoyment, physical pain, hair loss and financial difficulties. Further studies are warranted to identify underlying reasons and methods to rectify these issues.

**PP 91 - Lessons learnt from first hundred hepato-pancreatobiliary (HPB) surgeries- Descriptive study.**

**Prabath Kumarasinghe, Buddika Uragoda, Anuradha Jayathilaka, Dharshana Karunasagara, Malaka Jayawardene, Upul de Silva**

**Transplant Unit, National Hospital of Sri Lanka**

**Introduction**

Hepatobiliary procedures are technically demanding. Detailed patient assessment, systematic planning and intense post-operative management is needed to achieve a favourable outcome. This study analyses immediate surgical outcome of first 100 HPB cases done by a single surgeon.

**Material and methods**

This retrospective descriptive analysis done using the data base from 2020 January to 2021 June. All the surgeries were done by a single consultant. Consecutive patients who underwent surgical treatment for HPB pathologies were analyzed. Post-operative complications were graded in Clavien-dindo (CD) classification. Liver transplants were excluded.

**Results**

Hundred cases were done with in 18 months duration. Median age was 56 years (range 13-80). 51% were males. Majority were liver resections(n=50). Out which 64% were major liver resections including (n=11) right hepatectomies, (n=10) left hepatectomies (n=2) ALPPS procedures (n=2) and hemi-hepatectomy with portal vein resection(n=2) for hilarcholeangiocarcinoma. Pancreatic and biliary included 37% and 12% respectively. Out of pancreatic surgeries 18 were whipples, 8% required vascular reconstruction. Two had coeliac axis resection with distal pancreatectomy.

Following liver resections 5 patients had complications. It includes CD-1=1, CD-3a=2, CD-5 =2. Two deaths were due to post-operative liver failure and pulmonary complications.

Following pancreatic surgery 3 patients had complications including two CD-1 and one CD-3b complications. There were no post-operative pancreatic fistulae (POPF) or bleeding in this series. All biliary surgeries and vascular reconstructions were uncomplicated.

**Conclusion**

CD-1 and CD-2 complications were common following HPB surgeries in this series. Vascular reconstruction can be done safely to expand the boundaries of complex HPB surgeries.

**PP 92 - Outcomes of pancreato-jejunostomies in a low volume HPB surgery unit in Sri Lanka.**

**Sarith Ranawaka, Sathika Gunarathna, A P Malalasekara, D J Anthony, Duminda Subasinghe, Harshima Wijesinghe, KA Salvin, M P S Fernando, P Ratnasingham, Rajah Mowshica, Ravindri Jayasinghe, Sarah Haputantri, S Sivaganesh, U A Liyanage, Vihara Dassanayake, Y Mathangasinghe**  
**Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

**Introduction**

Leaks from the pancreatojejunostomy (PJ) after a pancreaticoduodenectomy (PD) occur in 20-40% patients. Clinically significant grade B & C leaks occurring in 12.3 – 16.5% result in morbidity and mortality. This study looks at the outcomes of patients who had a PJ in a low volume HPB surgical unit.

**Methods**

Retrospective analysis of a HPB patient database and records from 2011-21 was done. Patient demography, clinico-pathological details, pancreatic leak rates (ISGPF classification) and survival was recorded. PJs were done using a duct to mucosa technique with 3-0 and 5-0 polypropylene with a stent in-situ.

**Results**

Of the 59 patients, mean age was 55.1 years with a M:F ratio of 1.1:1. 93.2% (n=55) of the PJs were done as part of a PD, 3.4% (n=2) after central pancreatectomy and 3.4% (n=2) after longitudinal PJs. Histologically, 78% (n=46) were malignant and 81.4% had a R0 resection margin (n=35/43) while 18.6% (n=8) were R1 resections. Grade B and C leaks occurred in 6.8% (n=4). One grade B and both grade C fistulae were after PD. The other grade B fistula followed a central pancreatectomy. One grade C leak led to death on postoperative day 18 despite reopening. The median postoperative ICU and hospital stay were 2 (IQR=3, n=24) and 11 days (IQR=8, n=31), respectively.

**Discussion and conclusions**

Clinically significant PJ leaks were comparatively low in this group. However, grade B & C fistulae resulted in significant morbidity and in one case mortality. Even in low volume centres, adhering to standard practice can result in good outcomes.



**PP 93 - Revascularization for chronic limb threatening ischaemia: Does it improve the quality of life?**

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**Introduction**

Revascularization is crucial in patients with chronic limb threatening ischaemia (CLTI). There is a paucity of data on whether successful limb salvage translates to improved health related quality of life (QOL). A study was conducted to compare QOL Improvement between patients who underwent revascularization and major lower limb amputation for CLTI.

**Materials and methods**

Patients who presented to University vascular surgical unit-NHSL with CLTI and underwent bypass or amputations were followed up over 12 months. QOL was assessed using the EQ-5D five level questionnaire at admission. Follow Up assessments were done over the phone interview at 3 months and 12 months respectively.

**Results**

185 were included. Mean age was 63.12 years (37-89) and 67% were males. 53 were amputees. Both groups demographic factors, Comorbidities and baseline QOL matched. Amputees QOL has not improved from the baseline within the first 3 months, but significant improvement was seen from 3 months to 12 months ( $p < 0.05$ ). In Revascularized patients QOL improvement was significant in both at 3 months and 12 months ( $p < 0.05$ ). 3 and 12 months total quality of life improvement was significantly high in Revascularized patients ( $p < 0.01$ ) compared to amputees.

**Conclusion**

This study shows that treatment with revascularization leads to better QOL compared to amputation in CLTI.

**PP 94 - Division of pancreas by energy sources in distal pancreatectomy.**

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**Department of Surgery, Teaching hospital Peradeniya, Sri Lanka**

**Introduction**

Distal pancreatectomy is the treatment for tumours of body and tail of the pancreas. When done by laparoscopy the morbidity is lesser compared to the open technique. The standard procedure utilizes division of pancreas using staplers which is costly. Suturing the stump is performed as an alternative to the above technique. In our study, bipolar diathermy and ultrasonic dissector was used for the division of the pancreas & the stump was left without suturing. The outcome of patients who underwent distal pancreatectomy in the afore mentioned method was evaluated.

**Method**

Laparoscopic distal pancreatectomy was done utilizing the above method to deal with the stump. The study was carried out in the surgical unit of Teaching hospital Peradeniya from 2019 March to 2021 August. The drain output was measured daily and was removed once the output was less than 50ml.

**Results**

Total of 09 patients underwent the procedure. There were 06 females and 03 males with ages ranging from 29yrs to 68yrs. In all the patients oral feeding was commenced from postoperative day 01 and the drain was removed within the first 05 days.

**Conclusion**

Dividing the pancreas using bipolar diathermy and ultrasonic dissector is an effective and a safe method.

**PP 95 - Vascular injuries associated Orthopaedic Trauma, Compartment syndrome common with Closed fractures; an experience in Tertiary care trauma centre in Sri Lanka.**  
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**National hospital Sri Lanka, Vascular Professorial unit, Sri Lanka**

### **Introduction**

Vascular injuries associated with extremity Orthopaedic Trauma is 5.1%. Type of fracture can affect the nature of arterial injury. This study describes the characteristic of Orthopaedic Trauma associated with vascular injuries in a single unit at the National hospital of Sri Lanka, Colombo (NHSL).

### **Methods**

This is a single centre retrospective observational study of patients with Orthopaedic Trauma admitted to Accident Service Unit, NHSL and managed by the Vascular and Transplant Unit 2. The study was done from February 2020 to February 2021. Data on patients demography, type of fracture, artery injured were collected.

### **Results**

41 patients were treated for Orthopaedic Trauma related vascular injuries. 36 (85.74%) were males. Mean age was 40.25 years (13-84). 20 (48.8%) were open fractures. Arteries injured were Popliteal in 18 (43.9%), Brachial in 11 (26.8%) and Superficial Femoral in 6 (14.6%). Periarticular knee injuries; Tibial Plateau fractures 6 (17.1%) followed by Knee Joint dislocations 5 (12.2%) and Supracondylar fracture Femur 4 (9.8%) led to highest incidence of vascular injuries. 16 (38.10%) had arterial lacerations or contusions. 8 (42.86%) Underwent reversed Saphenous vein interposition graft repair while 6 (14.28%) underwent end-end repair.

### **Conclusion**

Arterial injuries are commonly associated with open fractures. Popliteal artery is the commonest arterial injury associated with fractures (p-0.253). Periarticular knee trauma is the commonest cause for arterial injuries (p-0.1727). Compartment syndrome is common with Closed fractures (p-0.0143), probably due to closed facial compartments.

**PP 96 - Wound infections – real enemies and questionable friends.**

**J M Wijerathne, L S K P Maduranga, L S Chathuranga, M M Senarathne**  
**National Hospital Kandy, Sri Lanka**

### **Introduction**

Wound infections remain a significant surgical problem even in the modern-day. Due to the rising prevalence of non-communicable diseases and antibiotic resistance, wound management is challenging and associated with a substantial burden to patients and healthcare systems.

### **Methodology**

A prospective analysis was done on the patients managed for infected wounds in general surgical wards of our institution from the 1st of May to the 31st of July 2021. Surgical site infections were excluded. Patient factors, antibiotic sensitivity pattern of the organisms causing wound infections, antibiotic usage and outcome was assessed.

### **Results**

Thirty-eight patients were included. Mean age of the patients was 59.5 years and majority were males (56%) with foot wounds (68 %). Mean hospital stay was 15 days. Most (86%) had diabetes. The most common pathogens were coliforms (36%), MRSA (21%), Pseudomonas (15%) and Klebsiella (15%). All tested coliforms were resistant to co-amoxiclav and 81% were resistant for cefotaxime. Ninety percent were sensitive to amikacin, 83 % for gentamicin, 75 % for meropenem, 66% for ciprofloxacin and 77 % for cefuroxime.

### **Discussion and conclusion**

Diabetes is the commonest comorbidity among patients with wound infections. The most common organism causing wound infections was coliforms. It had a high rate of antibiotic resistance with almost 100% resistance to co-amoxiclav, even though it is used as a first line antibiotic. We recommend cefuroxime with gentamicin or amikacin as the 1st line antibiotics for treating infected wounds, and that meropenem should be preserved as a 2nd line antibiotic.

**PP 97 - Thyroidectomy: vessel sealing using standard bipolar diathermy is safe and efficient alternative.**

**L S Chathuranga, L S K P Maduranga, J M Wijerathne, Lahiru Gamage, M M Senarathna, Malik Samarasinghe, Naveen Wijekoon, Ramesh Nataraja**  
**National Hospital Kandy, Sri Lanka**

**Introduction**

Thyroidectomy is one of the commonly performed surgeries in a general surgical unit. Thyroid gland is one of highly vascular organs in the body and surgical resection mandates meticulous surgical technique and haemostasis. Aim of the study was to assess the safety and efficacy of the standard bipolar diathermy as a vessel sealing system in thyroidectomy.

**Methods**

This is a retrospective study of 64 consecutive patients who underwent thyroidectomy from April 2020 to July 2021 at the National Hospital, Kandy. The main outcome measures included, operating time and complications namely, transient or permanent hypocalcaemia, recurrent or superior laryngeal nerve injury and neck haematoma. Bipolar diathermy was used for vessel sealing in all the steps except the ligation of superior pedicle.

**Results**

Out of 64 patients, 46 (71.87%) underwent total thyroidectomy and 18 (28.13%) underwent hemithyroidectomy. Mean operative time for total thyroidectomy was 95 minutes and for hemithyroidectomy it was 65 minutes. None of the patients who underwent total thyroidectomy developed postoperative haematoma. Temporary hypocalcaemia was observed in 5 (7.81%) patients who underwent total thyroidectomy. No permanent recurrent laryngeal nerve palsy was observed.

**Discussion and Conclusion**

Thyroidectomy using standard bipolar diathermy is safe, useful and efficient alternative to conventional suture ligation technique and has the potential to reduce operating time as well as the operating room cost.

**PP 98 - Endovenous laser ablation(EVLA) for symptomatic varicose veins(SVV) – initial experience in UVAProvince.**

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**Provincial General Hospital Badulla, Sri Lanka**

**Introduction**

Chronic venous disease causes significant burden to the patients and healthcare economy. Prompt intervention is deemed necessary to prevent disease progression and recurrence and to improve patients' quality of life(QoL). EVLA is an effective minimally invasive procedure that is used to treat SVV and has largely replaced conventional surgery in this era.

**Methods**

All patients who underwent EVLA for SVV at Provincial General Hospital Badulla from October 2020 to December 2020 were included in this prospective study. They were followed up at the vascular surgical clinic in weekly intervals until the symptoms were subsided. Patients' demography, disease characteristics, perioperative and follow up data were collected and analyzed.

**Results**

Forty eight patients were offered EVLA of which majority were females(64%). Sixty two percent of the patients were among the productive age group of 20-60 years. Half of the patients had active venous ulcers(C6 category). Nearly 19% and 4% of patients had lipodermatosclerosis(C4 category) and healed venous ulcers(C5 category) respectively. Patients with bilateral venous disease accounted for 31% of the cohort. Majority(71%) had saphenofemoral incompetence and long saphenous vein reflux. Mean operative time was  $40 \pm 18$  minutes. Average hospital stay was 7 hours. Majority(92%) had pain score below 5 at one week follow up. Two thirds of the patients with active ulcers benefitted with ulcer clearance at one month follow up. Deep vein thrombosis or cellulitis were not reported.

**Discussion and conclusions**

EVLA is a safe and effective approach for selected patients with SVV. EVLA can replace the conventional surgery with enhancement of patients' QoL and hospital productivity.

**PP 99 - Preliminary Study on Extending the recommendations of Vacuum assisted closure therapy (VACT) in management of lower extremity traumatic wounds prior to free tissue transfer(FTT) - A single unit experience.**

**D R Samarathunga, A R Fernando, D Dissanayake, G Ekanayake, T S Beneragama**  
**Plastic surgical unit- National Hospital of Sri Lanka.**

### **Introduction**

Vacuum assisted closure therapy (VACT) prior to free tissue transfer (FTT) is used in the management of lower extremity trauma. We assessed the timing of application and duration of VACT with outcomes of FTT. Immediate application of VACT and limiting the duration of VACT to <7 days are recommended.

### **Methods**

16 patients who underwent FTT following Gustilo 3B fractures and degloving injuries of the lower limb, in the plastic surgical unit - National Hospital of Sri Lanka for the past 10 months were included in the study. Date of application and duration of VACT were compared with FTT outcomes.

### **Results**

VACT was initiated in n=6 within (1-5days), n=5(6-10 days), n=1 in (11-15days) and n=1 in (16-20 days) [Mean 5.4 days]. In 3 patients VACT were delayed > 30 days from injury. VACT was used in n=7 for (4-7days), n=9 (8-11 days) [Mean 8 days]. None of the patients had recommenced VACT. n=11(68%) had uneventful recovery. N=2 had < 10% partial flap necrosis and n= 2 had <15% skin graft failure and n=1 had a deep infection.

Despite minor complications none had complete flap loss or limb loss.

### **Discussion and conclusions**

Although VACT had been used beyond the recommendations it appears to salvage lower limb wounds in a resource poor setting. Future studies are required to study the delayed patient outcomes as well as financial implications of delayed VACT.

**PP 100 - Demographic and histological patterns of appendicitis; a retrospective analysis at National Hospital Kandy.**

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**National Hospital Kandy, Sri Lanka**

### **Introduction**

Appendicitis is a common clinical entity where surgery is still the mainstay of management. Post-surgical histology ranges from suppuration to gangrene and neoplasia. Local data on this front is scarce.

### **Methods**

A consecutive sample of 224 histology reports of appendectomy specimens from 1/1/2021 to 25/8/2021 along with patient demographics at National hospital Kandy were retrospectively analyzed. Histological diagnoses were categorized as suppurative appendicitis, gangrene, lymphoid hyperplasia, neoplasia and normal. Category specific prevalence and demographic frequencies were calculated.

### **Results**

The age distribution ranged from 2 to 70 with a mean age of 26.9 and a standard deviation of 14.674. The commonest affected age group was 10 – 19 years (34.8%) and male predominance among cases were observed (58%). Normal appendices were observed in 29.9%, with female specific normal appendices being 35.1%. The commonest histological type was suppurative appendicitis (48.7%). Gangrene was observed in 12.5% and malignancy was present in one case (0.4%).

### **Discussion**

Appendicitis is the commonest surgical emergency with a lifetime risk of 8%. Peak incidence is observed in the 2nd and 3rd decades, and slight male predominance is noted. Acute appendicitis with suppuration is the commonest histological type reported in this study and worldwide. Appendiceal neoplasia was seen in 0.4% whereas global figures report higher. Negative appendicectomies range from 6% in the west where CT and laparoscopy are widely available to 28% in India and Africa where open surgery is commonly undertaken on clinical suspicion. This study reveals a high negative appendectomy rate especially in females, emphasizing the value of laparoscopy in enabling alternate diagnosis.



**PP 101 - A descriptive study on colorectal malignancies in a tertiary care centre.**

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Kandy, Sri Lanka

**Introduction**

Colorectal cancer malignancy (CRM) is the fourth leading cancer among men and the sixth leading cancer in women in Sri Lanka. Despite being common, local demographical data on CRM are lacking. This study aimed to analyse the trends in the presentation of CRM.

**Methods**

A descriptive study design was used to analyse 31 consecutive patients who presented with CRM from April 2021 to July 2021 to the National Hospital, Kandy. The trends in presentation in relation to age, sex, type of surgery, tumour stage, and histological grade were analysed.

**Results**

Out of 31 patients, 15 were males with a male: female ratio of 1:1.1. Mean age of presentation was 63.26% in males and 67.05 in females. 14 patients (45.6%) had Anterior resection while others had Abdominoperineal resection APR (29.03%), Right hemicolectomy (6.45%), and Hartmann's Procedure (12.90%). Percentage of low-grade, moderate, and high-grade adenocarcinoma were 9.67%, 74.19%, and 9.67% respectively. Majority (58.06%) had nodal positivity (Stage 3) at the time of presentation while 9.67% had metastatic disease. 2 patients had recurrence after APR.

**Discussion and Conclusion**

CRC was known to be a disease of the elderly with a mean age at presentation of 60 – 70 years. Though recent studies showed rising incidence in younger age groups, our study is in par with conventional figures. Majority of the study population had advanced malignancy at presentation (67.73%). This highlights the importance of screening programme for CRM.

**PP 102 - Female breast cancer molecular subtype classification: A histopathological guide to predict clinical outcome.**

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Shirani Samarathunga, Bingumal Jayasundara**  
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**Introduction**

Tumour, nodal and metastasis(TNM) stage, histological type/grade and hormonal receptor status determine the clinical course in female breast cancer(female-BC). There is a global trend for molecular classification of female-BC using estrogen receptor(ER), progesterone receptor, HER2 and Ki-67 status to predict outcome.

**Method**

A retrospective review of histopathology database was performed to analyze and correlate the prevalence of molecular subtypes among female-BC resection specimens at District General Hospital, Nuwaraeliya from 2018-2020. Molecular subtypes were divided as Luminal-A-like(L-A-L), Luminal-B-like-HER2-Negative(L-B-L-HER2-N), Luminal-B-like-HER2-Positive(L-B-L-HER2-P), HER2-Positive(HER2-P) and Triple negative(TN).

**Results**

Among 67 cases(median age-53 years; range 30-84) studied, 60(89.5%) underwent mastectomy and rest had wide local excision. Fifteen(22.4%) received neo-adjuvant chemotherapy. Commonest histological type was invasive breast carcinoma of no special type-57(85%) followed by invasive lobular carcinoma-5(7.5%). According to TNM-anatomical stage group classification, 3(4.5%), 38(56.7%) and 26(38.8) had stage-I, II and III disease respectively. Three(4.5%), 36(53.7%) and 28(41.8%) cases had Nottingham grade I, II and III female-BC respectively. Molecular subtype distribution was as L-A-L – 28(41.8%), L-B-L-HER2-N -17(25.4%), L-B-L-HER2-P – 8(11.9%), HER2-P -8(11.9%), TN -6(9%), within case population. Among two subtypes with negative ER status(HER2-P and TN), 11/14(78.6%) had Nottingham grade III cancer; while other subtypes with positive ER status had 17/53(32%) grade III disease (p-value=0.002). Thirty-four of 53(64.1%) cases with negative ER status and 7/14(50%) cases with ER positive cases had TNM-anatomical stage III disease(p-value=0.3).

**Discussion and Conclusion**

L-A-L disease is the commonest molecular subtype in this study population. ER-negative subtypes(HER-2 and TN) showed advanced tumour grade and TNM-anatomical stage than ER-positive subtypes, predicting poor prognosis.

**PP 103 - Management experience of oesophageal cancer: A malignancy with advanced disease at presentation resulting dismal prognosis**

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**Introduction**

Oesophageal cancer(OC) is the fourth commonest malignancy among males and sixth commonest malignancy among females in Sri Lanka. OC causes high cancer mortality in both genders and related age standardized death rates are on the rise.

**Method**

A retrospective review of histopathology and clinical databases were performed to describe management outcome of OC, newly diagnosed at District General Hospital, Nuwaraeliya from January 2018 to May 2020.

**Results**

Histopathology database revealed 106 cases[78(73.6%) females; mean age-62.6 years; range 38-86] with endoscopic biopsy confirmed OC [103(97%) had squamous cell carcinoma(SCC) and rest had adeno-squamous cell carcinoma]. Seventy-five(70.%) had moderately differentiated carcinoma and rest had poorly differentiated carcinoma. Clinical and Computed Tomography(CT) details were available only in 48 cases. Twenty-nine had unresectable locally advanced disease or metastatic disease at presentation. Five who bared potentially resectable OC, had to be palliated due to poor functional status or lack of consent for surgery. Of twelve cases that underwent oesophagectomy (five following neoadjuvant therapy), six had microscopically positive margins. In 10/12 resections, histological staging was advanced than CT staging. Further, two cases had resection uncompleted after trial dissection, due to advanced disease contrary to radiological staging.

**Discussion and Conclusion**

Females were predominantly affected by OC in this study population. Many had metastatic or locally advanced disease at presentation. In all patients undergoing oesophagectomy or trial dissection, disease was advanced than the CT staging. Among patients undergoing surgical resection, many had microscopically positive margins even after neoadjuvant therapy.

**PP 104 - An audit on gastric cancer management: Late presentation, advanced disease and poor prognosis**

**Nilesh Hettipola, Sajith Kalugampitiya, Niluka Samarakoon, Shirani Samarathunga, Duminda Dissanayake, Bingumal Jayasundara**  
District General Hospital, Nuwaraeliya, Sri Lanka

**Introduction**

Gastric cancer (GC) remains within top ten anatomical sites for cancer specific mortality among both genders in Sri Lanka, despite not found within top ten sites for cancer incidence over last two decades. However, outcome data on GC in Sri Lanka is sparse.

**Method**

A retrospective review of histopathology and clinical databases were performed to describe management outcome of GC, newly diagnosed at District General Hospital, Nuwaraeliya from January 2019 to June 2021.

**Results**

Histopathology database revealed 51 cases [35(68.6%) males; mean age-62.9 years; range 38-82] with endoscopic biopsy confirmed GC. Thirteen (25.5%), 12(23.5%) and 26(51%) had gastro-oesophageal junction, cardia/body and pylorus/distal stomach cancer. Forty-six (90.2%) had adenocarcinoma and rest had neuro-endocrine tumour. Clinical details and Computed Tomography (CT) staging were available only in 32 cases. Of them, fourteen had unresectable locally advanced disease or metastatic disease on CT at presentation. One patient with potentially resectable GC, had to be palliated due to poor functional status. Of twelve cases that underwent resection with curative intent (Distal gastrectomy-10, Subtotal gastrectomy-2), ten had pT4 tumour staging and seven had nodal disease. Five cases had gastric bypass procedures after trial dissection, due to unresectable locally advanced tumour, contrary to radiological staging.

**Discussion and Conclusion**

GC showed male preponderance in this study population. Many had metastatic or locally advanced disease at initial presentation. Majority of patients undergoing gastrectomy had advanced tumour and nodal disease stage, projecting poor prognosis.

**PP 105 - Initial presentation of female breast cancer as locally and systemically advanced disease: Ignorance, self-neglect or Covid-19 effect?**

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District General Hospital, Nuwaraeliya, Sri Lanka

**Introduction**

In Sri Lanka, breast cancer (BC) is the commonest malignancy in females that leads to highest cancer mortality among them. Female-BC related age standardized death rates are on the rise. Advanced disease at presentation results in poor prognosis. Sri Lanka lacks a proper BC screening program.

**Method**

A descriptive case series analysis was performed on all newly diagnosed patients with female-BC, managed by a single general surgeon from January-July 2021 at District General Hospital, Nuwaraeliya. Prospectively maintained female-BC database was reviewed to describe the patient demographics, disease specifications and management options. Tumour-Nodes-Metastasis (TNM) classification was used to stage the disease.

**Results**

Within 21 cases (median age-56.6 years; range 34-79) studied; 16(76.2%), 4(19%) and 1(4.8%) had invasive breast carcinoma-nonspecific type, mucinous carcinoma and metaplastic carcinoma respectively. At presentation, 13(62%) had T4 lesions on TNM classification including four fungating lesions. According to TNM-anatomical stage grouping; 5, 3, 11 and 2 patients were staged as IIA, IIB, IIIB and IV respectively. Sixteen (11-Upfront surgery) had curative intent surgery and comprised 14-Pateys' mastectomies and 2-Lumpectomies with axillary clearance. One awaits mastectomy following neoadjuvant therapy. Four patients received palliative treatment (One palliative mastectomy and three chemo/radiotherapy). Seventeen(81%) patients had breast symptoms for more than two months at review and 13 attributed Covid-19 pandemic as a cause for delayed presentation.

**Discussion and Conclusion**

Majority of female-BC patients in the cohort, presented with advanced disease at initial assessment. Many attributed Covid-19 related fear as a reason for the delay in seeking medical attention.

**PP 106 - Clinicopathological analysis of neuroendocrine tumours; an experience from a tertiary care setting.**

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**Introduction**

Neuroendocrine tumours (NET) are uncommon neoplasms originating from widely distributed neuroendocrine cells and characterized by the production of hormones, amines or the presence of secretory granules. We aimed to contribute to the current evidence by evaluating the clinicopathological characteristics of NETs in two selected tertiary care hospitals in Sri Lanka.

**Methodology**

A retrospective study was done at the National Hospital of Sri Lanka and Colombo South Teaching Hospital from Jan 2017 to June 2021. All the patients diagnosed with NETs either on biopsy or resected specimens were included and the data retrieved from the histopathology reports. The classification and grading of NETs were done according to WHO 2019 guidelines.

**Results**

Total of 70 NETs included: 41% resections (n=29), 59% biopsies (n=41). Age ranged from 21-82 (median age 58) years with M: F ratio 1:1.36 and the commonest presentation was abdominal pain (29%). 52 (72%) were primary tumours; 65% gastroenteropancreatic tumours (GEPNET) (G1 40%, G2 29%, well-differentiated G3 11%, neuroendocrine carcinoma 20%). Less common primary tumour sites were lung (19%), head & neck (9%) and genitourinary tract (7%). 18 (28%) were metastatic deposits in CNS (n=5), liver (n=4), lung (n=4), lymph node (n=3) and bone (n=2). 83 % of deposits were from NECs. Synaptophysin was positive in 54 (98%), chromogranin in 27 (69%) and both positive in 25(67%).

**Discussion and conclusion**

Our findings correlated with other studies focusing on GEPNET incidence and demographic details in Asian countries with pancreas being the commonest primary site.

**PP 107 - Surface anatomy and dimensions of distal great saphenous vein : An aid to peripheral venous access.**

**A M D S R U Senevirathne, K V H Nimana, A P Malalasekara, D J Anthony, Duminda Subasinghe, Harshima Wijesinghe, K A Salvin, M P S Fernando, P Ratnasingham, Rajah Mowshica, Ravindri Jayasinghe, Sarah Haputantri, S Sivaganesh, U A Liyanage, Vihara Dassanayake, Y Mathangasinghe**

**Department of Anatomy , Faculty of Medicine , University of Colombo, Sri Lanka**

**Introduction**

Distal great saphenous vein is a popular site for venous access by means of percutaneous cannulation or venous cut down in a haemodynamically unstable patient. Aim of this study was to precisely define surface anatomy and dimensions of the distal part of the great saphenous vein to facilitate the aforementioned procedures.

**Method**

Cross-sectional anatomy of the distal saphenous vein was studied in 24 cadaveric ankles sectioned at a horizontal plane across the most prominent points of medial malleolus (MM) and lateral malleolus. Photographs of the cross-sections were analyzed using Fiji(v1.53). The curvilinear distance from the most prominent point of MM to the centre of the saphenous vein, its widest collapsed diameter and skin depth were obtained. Calf circumference was obtained as an anthropometric measurement.

**Results**

The great saphenous vein was located at a mean distance of  $24.4 \pm 7.9$  mm anterior to the MM. The mean widest collapsed diameter was  $3.8 \pm 1.5$  mm. The mean distance from skin surface to the vein was  $4.1 \pm 1.2$  mm. Pearson's correlations and independent-sample t-tests showed no statistically significant associations of the above mentioned measurements with calf circumference or side of the ankle ( $p > 0.05$ ). However, the diameter of the great saphenous vein positively correlated with the distance between MM and the vein ( $r = 0.53, p = 0.009$ ), indicating that the larger veins were located relatively away from the MM.

**Discussion and Conclusions**

The mean distance from the MM, mean skin depth and the widest collapsed diameter could be used to locate the saphenous vein accurately, particularly in haemodynamically unstable patients with visually indiscernible veins.

**PP 108 - Anatomical landmarks for a safe ankle block: A Sri Lankan cadaveric study.**

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**Introduction**

Five peripheral nerves at the level of ankle are infiltrated to accomplish anaesthesia of the foot in “ankle block”. The purpose of this study was to describe anatomical landmarks to accurately locate these nerves.

**Methods**

Twenty-four formaldehyde-fixed cadaveric ankles (10-left; 14-right) were studied. Photographs of cross sections of the frozen legs, cut at a horizontal plane across the most prominent points of the medial malleolus (MM) and lateral malleolus (LM) were analysed using Fiji(v1.53). The curvilinear distance from the most prominent point of the closest malleolus to each of the five cutaneous nerves and their depth from the skin surface were measured.

**Results**

Sural, tibial, deep peroneal, saphenous and medial dorsal cutaneous branch of superficial peroneal nerves were located  $5.2 \pm 1.3$ ,  $9.2 \pm 2.4$ ,  $7.4 \pm 1.9$ ,  $2.8 \pm 1.1$ ,  $2.1 \pm 0.6$  mm deep to the skin surface. The curvilinear distances from MM to tibial, deep peroneal and saphenous nerves were  $32.5 \pm 8.9$ ,  $62.8 \pm 11.1$  and  $24.4 \pm 7.9$  mm, respectively. The curvilinear distances from LM to sural and medial dorsal cutaneous branch of superficial peroneal nerves were  $27.9 \pm 6.3$  and  $52.7 \pm 7.3$  mm, respectively. Only the distance between LM and sural nerve showed a significant association with the calf circumference ( $r = 0.6$ ,  $p = 0.002$ ). Independent sample t-tests showed no associations of the side of the leg with the abovementioned measurements ( $p > 0.05$ ).

**Discussion and Conclusion**

Easily identifiable, palpable bony landmarks could be used to locate the nerves around the ankle with a high degree of precision, which could help deliver safe ankle blocks.



**PP 109 - Fistula-in-ano: a surgical audit.**

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D P Wickramasinghe**

**Department of Surgery, Faculty of Medicine, University  
of Colombo, Sri Lanka**

**Introduction**

Fistula-in-ano is a common reason for recurrent admissions to a surgical ward. Many surgical techniques have been developed yet it remains a surgical challenge.

**Objectives**

This study aims to document an 18 year experience in surgical management of fistulae-in-ano at a single unit in a tertiary referral center in Sri Lanka and to compare the results with the western parameters.

**Methodology**

A prospective audit was conducted since 2003 to 2021 at the National Hospital of Sri Lanka, Colombo. All patients with an anal fistula presenting to the Professorial Surgical unit admitted under a single surgeon were included in the study.

**Results**

A total of 711 patients were included in the study, with 575 (80.9%) being males. The mean age of presentation was 40±13 (range 7-78). Only one surgical procedure was needed in 319 (44.9%) patients while the rest required more than one, ranging from 2 to 11. The primary tract was classified according Parks classification in 687 patients. Trans-sphincteric fistulas were the commonest (n=317, 44.6%) followed by inter-sphincteric (n=195, 27.4%) and superficial (n=90, 12.7%) fistulas respectively. Complex fistulas were seen in 119 (16.7%) patients and 13 (1.8%) had associated sinus tracts. Histology was analyzed in 128 patients and Crohn's disease was diagnosed in 14 patients and tuberculosis in 2 patients.

**Conclusion**

The demographic factors influencing fistula-in-ano correlate with the western parameters of the disease. The commonest fistula was trans-sphincteric fistulas.

**PP 110 - Quality of life among colorectal cancer patients.**

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S Gunasekara, D N Samarasekara, S Seneviratne,  
T Wijeratne**

**Department of Surgery, Faculty of Medicine, University  
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**Introduction**

Survivors of colorectal cancer (CRC) have many issues affecting their quality of life (QOL). This study assesses the QOL among patients who have undergone curative surgery for CRC.

**Objectives**

To describe the QOL in Sri Lankans with colorectal cancer and its association with patient characteristics.

**Methods**

A descriptive cross sectional study was conducted among patients receiving adjuvant therapy at Apeksha Hospital, Maharagama. The study was explained to the participants via phone calls and the questionnaires EORTC C30 and CR29 were posted. The return of the questionnaire was considered implied consent. Statistical analysis was performed using Statistical Package for Social Studies (SPSS) version 25.

**Results**

Of the 101 patients, who returned the questionnaire, the mean age was 61±11 (range 26-87) and 53 (52.5%) were males. The mean "global health status" was 1.54/100 and the mean QOL C30 summary score was 94.5/100. Cognitive and social functioning (100/100) of the functional scales (higher value indicating better QOL) reported the highest QOL while physical functioning, role functioning, emotional functioning were 31.7, 94.5 and 55.2. Of the symptom scales (lower value indicating better QOL) fatigability 33.1/100 contributed most to poor QOL. The GHS was not associated with gender or age.

**Conclusion**

Despite high C30 summary scores and functional scales patients experienced low Global Health Scores. Further studies analyzing the association between the QOL and type of surgery, postop duration and financial burden would provide more information to improve patient wellbeing.

**PP 111 - Open Repair of Infra Renal Abdominal Aortic Aneurysms – Experience of Vascular Unit in Teaching Hospital Peradeniya.**

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Teaching Hospital Peradeniya, Sri Lanka

**Introduction**

Abdominal aortic aneurysms (AAA) are repaired either with endovascular or open approaches. Open repair is the mainstay of treatment in Sri Lanka. Vascular unit of Teaching Hospital Peradeniya was established in 1970s and continues to provide around-the-clock specialized vascular surgical treatment.

**Objective**

To analyze the characteristics of open AAA repair including details of presentation, surgical techniques, and outcomes.

**Methods**

19 open infrarenal AAA repairs done at Teaching Hospital Peradeniya from 01/10/2018 to 01/04/2021 were included. Data were collected using patient's bed head tickets.

**Results**

Mean age was 66 years (44-81, SD 9.1). Majority were males 17 (89.4%). All patients had infrarenal, fusiform AAA. Only 3 patients had involvement of common iliac arteries. 47% admissions were transferred from other provincial hospitals. 3 patients had ruptured aneurysms, 13 symptomatic aneurysms and 3 asymptomatic. One patient who presented with hematemesis was found to have primary aortoenteric fistula. Mean diameter was 6 cm (3 - 8.6 cm, SD 1.74). 10 patients underwent laparotomy with a midline incision and 9 patients with a transverse incision. There was no significant difference between the type of incision in duration of surgery (p=0.26), duration of aortic cross clamp time (p=0.52), postoperative hospital stay (p=0.17), and postoperative complications (p=0.63). There was no mortality in the study cohort. Morbidity included reopening (n=3), pneumonia (n=2), exacerbation of COPD (n=1), atrial fibrillation (n=1), lacunar infarctions (n=2) and hypertension crisis (n=1).

**Discussion**

Open abdominal aortic aneurysm repair is safe and reliable. There was no significant difference between midline laparotomy versus transverse laparotomy for AAA repair.

**PP 112 - The outcome of kidney transplantation in children and adolescents: A single unit experience.**

**AA Nishanthan, KAN Chanaka, AM Alabadaarachchi, J Arudchelvam, MHP Godakandage, MRN Cassim, RMPD Kularathne, SM Wijeyaratne, TD Gooneratne**  
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**Introduction**

Kidney Transplantation (KT) is the ideal treatment for end stage renal failure (ESRF). However, the number of KT's done in children remains low as these are done only in few Units in Sri Lanka.

**Materials and Method**

A retrospective study on children who had undergone KT from 2016 to 2021 at the Lady Ridgeway Children Hospital was done. The details of patient demographics, cause of ESRF, type of donor (live or deceased) and post-operative complications were collected. Incomplete records were excluded.

**Results**

23 were included. Mean age of transplant recipients was 11.7 years (0.33 – 17). 21 (91%) were live donor KT's. 15 (65.2%) were males. 14/23 were pre-emptive KT's. Mean weight of the Recipients was 24.45 (9.8-50kg). Causes for ESRF were renal dysplasia 9 (39.1%), glomerulonephritis 6 (26%), obstructive uropathy 4 (17.4%) and reflux uropathy 2 (8.7%). There were 4 (17%) bleeding, one pyelonephritis (4%), one lower respiratory tract infection (4%) and one death (4%) during the immediate post-operative period. Mean urine output at post-operative day 3 was 2750ml/24h and mean serum creatinine at discharge was 122mmol/l. 8(34%) developed acute rejection and 2(8%) had acute tubular necrosis. Overall graft survival at a mean follow-up of 24 months (4-60) was 96%.

**Conclusion**

The overall graft survival at 24 months is 96% which is acceptable for a newly initiated transplant program.

**PP 113 - The pattern and trends in the pathology of colorectal cancer.**

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**Introduction**

The incidence of colorectal cancer in Sri Lanka has increased. Therefore, it is necessary to identify the macroscopic and microscopic patterns and trends in tumor biology in colorectal cancer at a tertiary referral center in Sri Lanka. Adapting western parameters without local validation is likely to result in inferior outcomes for patients.

**Methodology**

colorectal-cancer pathology reports of patients operated at the National Hospital of Sri Lanka, Colombo, from 2018 to 2020 were analyzed retrospectively to determine age, gender, sub-site distribution, histological type and staging of disease. Colonoscopy biopsies were excluded.

**Results**

A total of 253 reports were included, with 152 (59.8%) being males. The mean age was  $63 \pm 12$  (range 18-90) with a peak age of presentation at 60 and 73. Most of the tumors were left-sided [sigmoid colon (n=98, 38.6%), rectum (n=63, 24.8%)], while tumors of the ascending colon (n=53, 20.9%) were the commonest right-sided tumors. The tumors were mostly circumferential (n=101, 39.8%) and polypoidal (n= 72, 28.4%). Adenocarcinoma (n=241, 94.9%) was the commonest while neuroendocrine (n=4, 1.6%) and signet ring cell (n=4, 1.6%) tumors were rare. Most of the patients (n=149, 58.7%) presented with T3 tumors and 18 (7.1%) already had metastasized tumors on other investigations.

**Discussion and Conclusion**

The trends were similar to the western data. Rare tumors were found requiring further studies. Patients present at advanced stages and studies are needed to assess their knowledge and awareness regarding the disease.

**PP 114 - Safety and outcome of Total Thyroidectomy: Conventional suture ligation technique vs suture-less technique.**

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Sri Lanka

**Introduction**

Total thyroidectomy is the commonest operation in the field of endocrine surgery. Achieving primary haemostasis plays a crucial role in the prevention of adverse outcomes of the surgery. Haemostasis can be achieved by using conventional suture ligation (CSL) and suture-less techniques (SL). This study compares the safety and surgical outcome between conventional suture ligation technique and suture-less vascular sealing technique by using bipolar diathermy in total thyroidectomy in terms of recurrent laryngeal nerve damage, duration of surgery, postoperative bleeding, the incidence of hypoparathyroidism and duration of hospital stay.

**Methods**

A retrospective cohort study was conducted using the records at the Professorial Surgical Unit, Teaching Hospital Jaffna, from 2018 to 2020. All patients admitted for total thyroidectomy were included in the study, and patients with extrathyroidal invasion and history of radiation/ radioiodine ablation were excluded. Data were analysed using t-test and chi-squared equation.

**Results**

There were 42 CSL surgeries and 17 SL surgeries with a mean age of  $44 \pm 12.47$  (range 23 to 68) and  $47.63 \pm 13.37$  (range 27 to 73) and male: female was 1: 9.5 and 1:7.5 respectively. The postoperative evaluation of operative time, blood loss and hypoparathyroidism revealed no statistically significant differences between both techniques, but there were two significant differences between CSL and SL in voice change (n=, 2.3% and n=0,  $p < 0.05$ ) and the need for a drain.

**Conclusion**

SL techniques were safe, effective and time-saving. SL is an effective alternative for CSL surgeries.

**PP 115 - Annual audit of neoplastic liver lesions and their management in a single tertiary center.**

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**Division of Hepatopancreatobiliary Surgery, Professorial Surgical Unit, Teaching Hospital Peradeniya, Sri Lanka**

**Introduction**

Neoplastic liver lesions comprise benign and malignant liver neoplasms, and malignant metastases. Worldwide, metastatic liver lesions are more common than primary neoplasms.

**Method**

A retrospective analysis of liver neoplasms presenting to our unit between May 2020 and April 2021. Patients were classified by aetiology and assessed on mode of management and outcome.

**Results**

58 liver masses were managed during this 12-month period. The 47 primary lesions comprised 15 cholangiocarcinomas, 13 gallbladder masses, 11 hepatocellular carcinomas (HCC), 4 haemangiomas, and other lesions including a cystadenocarcinoma, a teratoma and a fibroadenoma. Out of the 11 metastatic lesions, 7 were colorectal metastases (CRCMs). Following multidisciplinary discussion, 22 were taken up for resection (40.7%) while others were managed by a variety of modalities including ablation, palliative chemotherapy, embolization, targeted therapy etc. Eight liver resections were major hepatectomies. The 30-day mortality of the operated group was 9%. One-year survival was 87.5% (n=16). 33 neoplastic liver lesions were deemed inoperable. One-year survival in this group was 39% (n=21).

**Discussion**

The spectrum of liver lesions in our unit is different to the worldwide norm with more primary liver tumours than metastatic disease, mainly CRCMs, possibly due to Gastrointestinal and Oncosurgical units in the region handling metastatic liver disease, with primary liver tumours referred to the regional HPB center. Stage-for-stage comparison is not possible between operated cases and those deemed inoperable. However operative survival appears to be acceptable and much higher than non-operative survival. The relatively small number of patients presenting during the year is the main limiting factor of this study.

**PP 116 - Association between Elevated C-Reactive proteins and Severity of Acute Appendicitis.**

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**National Hospital, Kandy, Sri Lanka**

**Introduction**

Acute appendicitis (AA) is a common surgical entity diagnosed clinically. ALVARADO score (AS) is an important clinical predictor for diagnosis. C-reactive protein (CRP) is a reliable inflammatory marker available in government hospitals in Sri Lanka that is elevated in acute inflammation including appendicitis.

**Method**

A study consisting of 32 patients who underwent surgery for right iliac fossa tenderness with an AS >5 admitted to a surgical unit in National Hospital Kandy from 01.05.2021 to 30.08.2021 was carried out. Out of which 2 male patients who underwent surgery without CRP were excluded. The operative findings were categorized into two; mild-moderately inflamed AA (Group 1) and gangrenous-ruptured AA (Group 2). The association between the CRP level and operative findings was analyzed using the Chi-Square test.

**Results**

Out of the 30 subjects, each sex consisted of 15 individuals. There were 20 patients in Group 1 out of whom, only 02 (10%) had CRP >50mg/dl. Meanwhile, there were 10 patients with gangrenous-ruptured AA (Group 2) and 9 (90%) of them had a CRP >50mg/dl. The association between a CRP level >50mg/dl with gangrenous-ruptured AA was statistically significant (Chi-Square test p-value <0.001).

**Discussion and Conclusions**

Though the Alvarado Score is an important diagnostic tool in AA, an elevated CRP can be used as a single laboratory value for the prediction of the severity of AA. Therefore, CRP should be performed for every patient who presented with RIF pain.



### **PP 117 - Pancreas preserving surgery in pancreatic trauma.**

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**K B Galketiya**

**Division of Hepatopancreatobiliary Surgery, Professorial Surgical Unit, Teaching Hospital Peradeniya, Sri Lanka**

#### **Introduction**

Injury to the pancreas is not common following blunt abdominal trauma, accounting for only 4% of all abdominal injuries in adults and even less (0.5%) in children. A major clinical problem with pancreatic trauma is delayed diagnosis or frank misdiagnosis. Major pancreatic duct injuries occur in about 15% of pancreatic injuries and carry a higher morbidity and mortality.

#### **Presentation of case**

A 14-year-old boy was brought, 5 days after blunt abdominal trauma. Imaging (CECT and MRCP) demonstrated pancreatic injury with a localized fluid collection in the lesser sac compressing the stomach and complete transection of pancreas near the neck with viable proximal and distal portions and no injury to the splenic vessels. After allowing 6 weeks for development of a mature cyst wall, an open cyst-gastrostomy was performed. It was followed by an uneventful recovery, and no short or long term complications at 3 years

#### **Discussion**

Diagnosing retroperitoneal injuries is a challenge, especially in resource poor settings without advanced imaging facilities (CECT, MRI). This leads to delayed presentation, as in our patient, causing management dilemmas. Complete duct disruption precluded any attempt at stenting, while the intense inflammation would make pancreaticojejunostomy technically challenging with increased risk of complications. Distal pancreatectomy was an option but would invariably lead to lifelong exocrine and endocrine pancreatic insufficiency. As the collection was well localized, cyst-gastrostomy was performed once the wall of the collection matured.

#### **Conclusion**

Pancreatic cyst-gastrostomy is a safe, technically easy, and pancreas preserving procedure for late presentation of pancreatic trauma with localized fluid collections.

### **PP 118 - Effectiveness of oral metronidazole versus topical metronidazole in pain control after haemorrhoidectomy: Current results of an ongoing Randomized Controlled Clinical Trial.**

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**S Gunathilaka, A Shantha**

**Professorial Surgical Unit, Teaching Hospital Peradeniya, Sri Lanka**

#### **Introduction**

Oral or topical Metronidazole has been in use for post haemorrhoidectomy pain reduction. The ideal route of administration needs to be investigated.

This study was conducted to evaluate the effect of oral metronidazole versus topical application of metronidazole in postoperative pain management following open haemorrhoidectomy.

#### **Methods**

Patients were recruited to a randomized controlled clinical trial after informed written consent at the Professorial Surgical unit, Teaching Hospital Peradeniya. Patients who underwent open haemorrhoidectomy were prescribed with either 400 mg of oral metronidazole 8 hourly or topical Metronidazole (2 %) twice daily for 7 days following surgery by random allocation. The visual analogue pain scale at 6 h and 12 h, and days 1, 4, 7, and 14, need for rescue analgesia during the hospital stay were analyzed. Observer was blinded to the treatment patient was on.

#### **Results**

Total of 20 patients have been recruited. Population ratio was 1:1 in oral metronidazole group to topical metronidazole group. There was no statistically significant difference in pain relief between oral versus topical metronidazole groups at any time point post-operatively as listed; 6hour [Mean Difference(MD)=-0.4,P=0.71], 12 hours (MD=-0.2, P=0.84), day1 (MD=0,P=1), day 4 (MD=0.1,P=0.86), day 7 (MD=-0.1,P=0.83), day 14 (MD=0.2,P=0.44). Only two patients required rescue analgesics in oral metronidazole group. There was no significant correlation between route of administration of metronidazole and requirement of rescue analgesics (Fishers Exact Test=0.474).

#### **Conclusion**

There was no statistically significant difference in post-operative pain relief after open haemorrhoidectomy between oral and topical metronidazole use.

**PP 119 - Attitudes on euthanasia among medical students and doctors in Sri Lanka: a cross sectional study.**

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**Introduction**

Euthanasia is an ethically debatable topic. Euthanasia is still illegal in most countries. We aimed to assess the attitudes toward euthanasia among practicing doctors and medical undergraduates.

**Methods**

This is a descriptive cross-sectional study. An online questionnaire was administered to medical students in University of Colombo and practicing doctors in National Hospital of Sri Lanka, Colombo. We used the previously validated Attitudes Towards Euthanasia (ATE) Scale.

**Results**

Of the 425 participants (males-178, 42% median age- 27 years), 143 (33.6%) were first-year, 141 (33.2%) final-year medical undergraduates and 141 (33.2%) were practicing doctors. Overall, 200 (47.1%) participants favoured legalizing euthanasia in Sri Lanka while 110 (25.9%) were opposed. In the adjusted analysis accepting euthanasia for oneself ( $p = < 0.001$ ) was the only independent predictor of favouring the legalising of euthanasia. The responses of Attitudes Towards Euthanasia questionnaire were mostly negative and were not in favour of euthanasia. There was a statistically significant correlation across all responses and questions exploring similar scenarios had a high correlation coefficient. In the adjusted analysis favouring legalization of euthanasia and being open to euthanasia as an option for oneself were associated with a higher ATE score. Interestingly, being a practicing doctor or a senior medical student did not influence the final ATE score.

**Discussion and conclusions**

More respondents supported legalisation of euthanasia than those opposing it. Significant minority were “undecided” with unfavourable attitudes towards euthanasia. It is unlikely that a physician-initiated drive to change the legal status of euthanasia in Sri Lanka will emerge in near future.

**PP 120 - Early surgical experience of a Multi-disciplinary COVID hospital in Sri Lanka.**

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**Introduction**

Base Hospital Kantale was upgraded as a Multi-disciplinary COVID Hospital from 3/5/2021. Our objective was to describe our initial experience.

**Methods**

This study describes all patients managed in the surgical unit from 03/05/21–26/08/21. The limitations and overall experience were also described.

**Results**

Thirty-two COVID patients (Male=24) were managed within the period (Average – 5/day). Age ranged from 3 – 81 years (Mean - 43.9). COVID disease was mild in 22 (68.75%) and severe in 7 (21.87%). The predominant reason for admission was trauma (7) and appendicitis (4). One patient died of barotrauma as a COVID related surgical problem. Eleven patients underwent surgery. Major surgeries were a laparotomy for ruptured appendicitis and an amputation. Overall, 5 (15%) patients died of COVID pneumonia. One patient died due to a secondary bleed from a liver laceration. During the period, 3 laparotomies were done for blunt abdominal trauma of non-COVID patients. Over 346 non-COVID patients were referred/transferred to other hospitals (Average – 2.9/day). Main deficiencies were lack of adequate number of consultant surgeons for daily cover, deficient N-95 masks and absence of a negative pressure operation theatre. No staff members contracted COVID during the period.

**Discussion and conclusions**

The spectrum of COVID-surgical admissions is broadening. While efforts must be made to minimize the mortality, efforts must be made to prevent mortality due to non-COVID conditions of COVID patients. With the exponentially rising COVID burden, we recommend equipping all hospitals to care for the COVID rather than to convert Base Hospitals as COVID centers which hampers the care of non-COVID patients.

**PP 121 - Accuracy in routine inflammatory markers in Diagnosis of Acute Appendicitis compared to surgeon's clinical decision.**

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**A H M C D Abeyasinghe, G A D N B Wimalasena,**

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**Teaching Hospital Kuliyapitiya and Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka**

**Introduction**

Though the clinical assessment plays a major role in diagnosis of acute appendicitis White Blood Cell (WBC) count, Neutrophil Percentage (NP) and C reactive Protein (CRP) levels are frequently done to assist with the diagnosis. The aim of the study was to analyze the role of WBC count, NP and CRP levels in diagnosis of acute appendicitis.

**Methods**

A group of 108 patients who underwent appendectomy were reviewed retrospectively between 01/01/2020 to 30/11/2020. The diagnosis was confirmed by histopathological reports. The correlation between histologically confirmed diagnosis and levels of WBC count, NP and CRP levels were assessed.

**Results**

Out of 108 patients, 52 were male and 48 were female with the age distribution from 7 years to 72 years. 79 patients were histologically positive. 82 patients had high WBC count. 71 patients had high NP while 78 were having increased CRP levels. Among those with histologically positive appendicitis high WBC count, NP and CRP were seen in 70 (88.60%), 69 (86.07%) and 71 (89.87%) patients respectively while 12 (41.37%), 10 (34.48%) and 7 (24.18%) were respective results for the histologically negative group. Hence the specificity for WBC count was 58.62% while sensitivity was 88.60%. Specificity for NP and CRP were 65.51% and 75.86% respectively. 86.06% and 89.87% were the respective values for sensitivity for NP and CRP levels.

**Conclusion**

WBC count, NP and CRP levels strengthen the diagnosis of acute appendicitis. Those three parameters are equally important. Hence the combination of them will be more beneficial. They can be very useful in atypical presentations. However, these parameters are not specific for acute appendicitis.

**PP 122 - Factors affecting prolonged hospital stay of covid-19 infected patients in a surgical unit of Sri Lanka.**

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**Colombo east Base Hospital, Sri Lanka**

**Introduction**

The COVID-19 pandemic has exhausted the health system's capacity in Sri Lanka, significantly affecting the management of surgical patients due to resource constraints. Evaluating factors influencing the duration of hospital stay would be useful in planning resource allocation and reducing adverse outcomes with timely intervention.

**Methodology**

A retrospective study was conducted using data obtained from hospital records of 203 laboratory confirmed COVID-19 patients admitted to the Surgical Unit at Colombo East Base Hospital from March 2020 to July 2021 to analyse factors associated with prolonged hospital stay, defined as greater than 14 days. Comorbidities considered were diabetes mellitus, hypertension, ischaemic heart disease and bronchial asthma. Surgical diagnoses were categorized as infection, trauma, anatomical abnormalities, infarction/ischaemia, neoplasms and burns. Non-parametric tests were used for statistical analysis.

**Results**

Of the population, majority (37.4%) were 40 - 60 years of age (Mean= 36.4 SD 17.32) and 60.6% (n=123) were males. 33.5% (n=68) had a prolonged hospital stay (Mean=8.91 SD=5.07), which was significantly associated with presence of comorbidities (66.2% p=.041), sepsis (39.7% p=.044) and diagnostic category (p=.005) where 73.5% were due to infection (n=25) or trauma (n=25). There was no significant association with age (p=.263), type (p>.05) and number (p=.194) of comorbidities.

**Discussion and Conclusion**

Comorbidities, sepsis and the surgical diagnostic category are associated with prolonged hospital stay in COVID-19 infected surgical patients. Therefore, it is imperative to identify these factors and optimize these conditions at the earliest to reduce duration of stay and enable efficient resource allocation.

**PP 123 - Post adrenalectomy pathological review of adrenal masses: experience in a tertiary care unit.**

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**University Surgical Unit, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka**

**Introduction**

Adrenal masses are relatively low in prevalence. Adrenalectomy and histopathology remains the gold standard in diagnosis. They are categorized as cortical and medullary tumours. Cortical tumours are mainly adenomas, carcinomas and benign cysts. Medullary includes pheochromocytomas, neuroblastomas, ganglioneuromas and carcinomas.

**Methodology**

This is a retrospective pathological analysis of 33 post adrenalectomy patients with adrenal masses in the University Surgical Unit, Colombo South Teaching Hospital over last 5-years.

**Results**

In our cohort male: female ratio is 1:1. Mean age was 45(range =14-77). Twenty-two (66%) were cortical. Cortical tumors comprised 15 adrenal adenomas (68%, mean age=50.6, SD=13.5) and two (9%) carcinomas. Five benign cysts were noted with two myelolipomas and single cases of vascular cyst, inflammatory cyst and an undifferentiated cyst. Six (18%) pheochromocytomas (Female: Male= 5:1) were found including two paragangliomas. There were 2(6%) ganglioneuromas; both were male patients with age 77 and 23 years. One neuroblastoma (14 year old male) and two cases of hyperplasia were the rest.

**Discussion and conclusion**

Adrenal adenoma is the commonest type of tumor in our cohort. Compared to the literature, our cohort has less cortical carcinomas. Majority of the pheochromocytomas were encountered in young females. There were 2 ganglioneuromas, in our study group. They are originated from neural crest cells and adrenal involvement is very rare.

**PP 124 - Raised White Cell Count in Renal Colic: Is there a role for antibiotics?**

**K D H Manuthunga, J A V R Jayasinghe, A S Samarasinghe, K A N Wijayawardhane, L W P De Silva**

**Base Hospital(Teaching) Gampola, University of Peradeniya, Sri Lanka**

**Introduction**

Renal colic is a major cause of morbidity worldwide. Initial evaluation requires blood and urine tests and diagnostic imaging. In ureteric colic, an elevated white cell count (WCC) is a common finding, usually prompting antibiotics to be commenced even though features of underlying urinary tract infection (UTI) or positive culture results are absent.

**Method**

A retrospective study, using 51 patients with ureteric colic (with or without UTI) presented to the Base Hospital Gampola, during 14 weeks was conducted. Two sample T test was performed to compare the means of WCC counts of two groups (patients with ureteric colic with UTI and patients with ureteric colic without UTI).

**Results**

Means of the WCC counts of the group with ureteric colic with evidence of UTI and group with ureteric colic without evidence of UTI were 10.56 and 9.00 respectively. Similarly, the mean neutrophil counts of ureteric colic patients with evidence of UTI was 66.84, and without evidence of UTI was 59.65. Comparison of WCC and neutrophil counts between mean values of two groups using the two sample T test revealed no difference ( $P>0.05$ ).

**Discussion**

Though, the raised WBC is an indicator of infection in ureteric colic, it may go up to 16000 without an infection, but as an attractive inflammatory biomarker. In this study, we report increased WCC or the neutrophil count alone cannot be used as a reliable parameter to make.



## **PP 125 - Angle Grinder Injuries: Occupational Hazard due to Arbitrary and Unsafe Use.**

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University of Peradeniya, Sri Lanka

### **Introduction**

Angle grinders (AG) are very useful tools in the construction industry. However, it may cause serious, disabling injuries especially when they are used arbitrarily. Aim of this study was to evaluate the pattern of presentation of injuries due to arbitrary use (cutting timber) of AG which are routinely meant for harder objects.

### **Method**

This prospective observational study was conducted among patients presented to Base Hospitals, Nikaweratiya and Gampola, with cut injuries caused during arbitrary use of AG in cutting timber, from January 2017 to April 2021.

### **Results**

During the study period, 26 patients, all males whose average age was 33.57y (16-44) were presented with superficial cuts (n=1), deep cuts (n=25), involving foot (n=13) and leg (n=12) due to the unwarranted use of AG. Injuries to the right limb (69.23%) were the most common. Twenty patients had fractures, mainly in the tibia (n=12, 60%) and foot bones (n=8, 40%). Eight patients were transferred for orthopaedic care. Hospital stay was 12.15 days (5->30 days) including 3.5 theatre sessions in average. Median loss of working capacity of the patient was >8 weeks.

### **Discussion**

Grinder cut injuries reported during the study period suggests a widespread misuse of angle grinder in the community. Clinical complexity of these injuries, has led to labour intensive high cost for health care system, economical loss for the country while crippling the household economy of the victims. Raising awareness of dangers misuse of angle grinder in the community. Clinical complexity of these injuries, has led to labour intensive high cost for health care system, economical loss for the country while crippling the household economy of the victims. Raising awareness of dangers.

## **PP 126 - Impact of Covid-19 pandemic on General surgical Services: An audit at National Hospital Kandy. SKV Gunasekare, LS Chathuranga, SMM Niyas Department of General Surgery, National Hospital Kandy, Sri Lanka**

### **Introduction**

The Covid-19 pandemic resulted in changes in surgical practice to ensure safety of patients and health care workers. The study investigated the impact of the pandemic and associated lockdown on General Surgical Services provided at National Hospital Kandy.

### **Methods**

Monthly statistics from operating suite, endoscopy unit, surgical clinic and general surgical admissions were collected retrospectively and compared during covid era (March 2020 – December 2020) and the same period in 2019. Paired T test was applied and a P value < 0.05 was considered statistically significant.

### **Results**

Monthly average of admissions was 2216.7 in Covid era and 2955.8 in pre-covid era. Total number of admissions were reduced by 25% with a greater reduction in female admissions (29.9%). Total clinic visits were reduced by 35.5% with a 36.9% reduction in first visits. Statistically significant reduction was seen in surgical admissions (P=0.000) and clinic visits. (P=0.001).

Total reduction in surgeries during covid era was 2384 (17.5 %) with a 18.7 % and 13.7% reduction in major and intermediate surgeries respectively. There was a total reduction of endoscopic procedures by 31.9% with 31.9%, 42.4% and, 14% reduction in upper GI endoscopies, sigmoidoscopies and colonoscopies respectively. Statistically significant reduction was seen in major (P=0.031), minor surgeries (P=0.002) and in UGI endoscopies (P=0.005) and sigmoidoscopies (P=0.001).

### **Conclusions**

Administration should consider measures to improve and maintain the emergency and urgent surgical services as the pandemic is expected to continue. Maintaining registries of postponed procedures will help in future planning of surgical services to clear the back log.

**PP 127 - Clinical implication of measuring ankle pressure in patients with diabetes mellitus: Is it reliable?**

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**Introduction**

Ankle brachial pressure index (ABPI) is falsely elevated in arteries with calcification. Patients with diabetes (DM), which contribute to the majority of patients with critical limb ischaemia in Sri Lanka, will have a false reassurance with ABPI measured by cuff manometry.

**Methodology**

A prospective cohort study involving randomly selected patients with DM and infragenicular peripheral vascular disease from December 2020 to July 2021 was carried out. Patients with ABPI values less than 1.3 who underwent infragenicular surgical revascularization at the University vascular and transplant surgical unit, National Hospital of Sri Lanka were included. ABPI was calculated in the standard method. Intraoperative ankle level intraarterial pressure was measured.

**Results**

Twenty patients with Rutherford 5 and 6 critical limb ischaemia were included. Majority were males (12,60%). Mean age was 67.5(55-80). In addition to DM the major comorbidity was hypertension (14,70%). All had arterial calcifications with intraoperative confirmation.

The mean ankle pressures measured by cuff method and the invasive intraarterial method were 75 and 83.5mmHg ( $t=1.088, p=0.296$ ).

**PP 128 - Management of extreme cases of burns - A unit experience.**

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**Introduction**

Management of burns is challenging. Management of patients with risk factors is more challenging. Survival and satisfactory outcome depend on multiple factors.

**Method**

Three challenging burn patients were managed at the unit and they were followed up for 8 months. Case A, a patient with 84% flame burn. Case B, a 3month old infant with 30% hot water burn and case C, an over weight pt with 120kg (BMI of 37) with 50% flame burn.

**Results**

All patients were managed by a multidisciplinary team. Case A and C coordinated by a plastic surgeon and case B by a Paediatrician. Initially all were managed in the HDU and fluid resuscitation was done according to the parkland formula guided by blood pressure and urine output. Burn scrub was arranged on day 3-4 once the patient is stabilized. Prophylactic antibiotics were started. During each dressing change, wound swab and tissue cultures were taken and antibiotics changed accordingly. Rehabilitation started on day one. In case A peripheral parenteral nutrition followed by NG feeds considered and in other cases initial NG feeds followed by high calorie high protein enteral diet considered. In case A and C, once the patient is stable and optimized, staged skin grafting was performed weekly or two weekly. In Case B, wounds were dressed with collagen dressings. All three patients were discharged after complete healing.

**Discussion**

Timely taken clinical decisions play important role. Staged, multiple and short surgical procedures reduce surgical stress. Nutrition and rehabilitation should be addressed with significant gravity.

**PP 129 - Delay in presentation for patients with critical limb threatening ischaemia (CLTI) to specialized vascular care and limb salvage: Should the patients be referred earlier?**

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**University Vascular and Transplant unit NHSL, Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

#### **Introduction**

Chronic limb threatening ischaemia is associated with significant morbidity and mortality. The delay in presentation is common and is associated with a worse outcome. This case series explores patients presenting with CLTI and their outcome.

#### **Methodology**

This study was done at the professorial vascular and transplant unit at the National Hospital of Sri Lanka Colombo (NHSL). An age and sex matched retrospective cross-sectional study of patients who underwent either lower limb bypass surgery (LBS) or primary major amputation (PA) from January 2020 to July 2021 was carried out. The secondary amputees were excluded.

#### **Results**

Two groups of CLTI patients, 50 in each, undergoing PA or LBS were studied. Mean age was 66(46-84). Males were predominant [38(76%) vs 43(86%)] ( $p=0.202$ ). Diabetes was the commonest comorbidity [46(92%) vs 47(94%)]]. They had Rutherford stage 5(5,10% vs 10,20%) and 6 (45,90% vs 40,80%) disease with similar onset of the ulcer; either spontaneous (33,66% vs 33,66%) or following trivial trauma(14,28% vs 15,30%). Forty-five (90%) PAs were for non-salvageable limbs. There was a significant delay in the mean duration of presentation in the PA arm for specialised vascular care (22.9 vs 14.5 weeks) ( $p=0.013$ ). The preferred first health care contact was with the general practitioner in both groups(34,68% vs 35,70%) and was not associated with limb salvage( $p=0.196$ ).

#### **Discussion and conclusion**

This study shows that limb salvage in CLTI is significantly associated with delayed presentation. Therefore, early referral for specialised care should be encouraged.

**PP 130 - Pedicle Pectoralis Major Myocutaneous flap as a versatile oncosurgical reconstructive option for the head and neck, with cervical block dissection - a unit experience.**

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**Colombo North Teaching Hospital, Sri Lanka**

#### **Introduction**

Cervical block dissections are commonly done due to increased incidence of advanced head and neck cancers. Some cases are done with palliative intent for fungating lymphnode metastasis. As a reliable, technically less demanding flap with short operating time, PPMMC is widely used in elderly patients with several comorbidities.

#### **Method**

Five cases were performed for the period of 12 months as a combined cases with ENT and plastic teams. Three were advanced laryngeal carcinomas, two were pharyngeal carcinomas and all with cervical lymph node metastasis. All the patients underwent resection of the tumor with unilateral radical cervical block dissection followed by reconstruction with ipsilateral pedicle pectoralis Major myocutaneous (PPMMC) flap.

#### **Results**

In two cases, caudal end of the flap, minor dehiscence noted on day 5-7 and 2ry suturing were done later. Average flap harvesting time was 35.5 min. In two cases, flap was raised as double islanded flap, one for the pharyngeal lining and the other one for the skin. Drains were removed on day 10-14. On 9th month review, no patient complained donor site morbidity or significant subjective reduction of elbow adduction or internal rotation.

#### **Discussion**

PPMMC flap is a reliable, short duration and versatile flap in head and neck reconstruction specially when the microvascular options are not available and the prolonged surgery adds high surgical risk. It has less donor morbidity.

**PP 131 - Rolling V to Y pulp advancement for short finger tips with deformed curved nails - A modified novel technique.**

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**Colombo South Teaching Hospital, Plastic and Reconstructive Surgical Unit, Sri Lanka**

**Introduction**

Partial amputation and surgical refashioning of fingertips creates aesthetically inferior short fingertips with unsupported, deformed curved nails. Secondary procedures to reconstruct this is challenging. This article attempts to share a modified surgical technique to improve the aesthetic outcome of short finger tips with short nails.

**Method**

Four patients with short finger tips with curved deformed nails underwent this procedure. In the first step of the surgery, partial crescentic excision of nail fold was done to improve the show of the nail. Secondly, the nail plate was removed. Thirdly, V shape incision was made facing the apex just proximal to distal interphalangeal joint crease preserving its blood supply on the volar aspect and the flap is mobilized and advanced such a way that the distal end rolls up. Finally an artificial nail is inserted to the nail fold.

**Results**

Average lengthening of the tip is 3.5mm. Increase of the nail plate show was 18% at the end of six months. All patients were satisfied with amount of nail show gain and the contour of the pulp.

**Discussion**

Although the distal nail plate is well supported by the newly advanced tissue, it is not adhered to the bed which can be corrected with a nail bed graft, which will be the next level of the study. Long term follow up is necessary to identify the complications. This technique is a simple, short procedure with high patient satisfaction.

**PP 132 - Acute limb ischaemia: A single unit prospective cohort study.**

**MHP Godakandage, AANishanthan, MRN Cassim, AM Alabadaarachchi, J Arudchelvam, KAN Chanaka, RMPD Kularathne, SM Wijeyaratne, TD Gooneratne**  
**University Vascular and Transplant unit NHSL, Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

**Introduction**

Acute limb ischaemia (ALI) is a common presentation to the vascular surgical unit. From the presentation to diagnosis and management, sometimes it is associated with considerable delays and dilemmas. We followed up these patients with a special emphasis on the outcome.

**Methodology**

A prospective cohort study involving all patients presenting with acute limb ischaemia to university vascular surgical unit, NHSL from February 2020 to July 2021 was carried out.

**Results**

41 patients, 27(65.9%) with a single lower limb, 6(14.6%) with both lower limbs and 8(19.5%) with a single upper limb acute ischaemia were included. Majority were females (23,56.1%). Mean age was 57.5(20-91).

Only 13(31.7%) reached the hospital within 24 hours (mean 13.3) while others at a mean of 6 days (2-14). Presenting Rutherford grade was 3 in 4(9.8%), 2b in 23(56.1%), 2a in 8(19.5%) and 1 in 6(14.6%). Thirty-one (75.6%) underwent embolectomy/ thrombectomy while 6(14.63%) had only anticoagulation. Four (9.75%) developed reperfusion while 10(24.3%) died. Six (14.63%) had cardiac source, while 3(7.32%) had vasculitis, one each had aortic dissection (2.4%), and popliteal entrapment syndrome (2.4%). Others were of unknown aetiology (30, 73.17%). Rutherford grade ( $p = 0.003$ ) and ischaemic heart disease ( $p = 0.005$ ) were significantly associated with limb loss. At a mean follow-up was 253 days (27-532) there were no further mortality of limb loss.

**Discussion and conclusion**

This study shows that there was a significant delay in presentation following ALI. However, if the initial presentation is managed properly the outcome is satisfactory. Therefore, high degree of suspicion and early referral is essential.



**PP 133 - Need to establish an extremity vascular trauma registry in Sri Lanka: initial experience.**

**M H P Godakandage, R A S Ratnayake, A A Nishanthan, A M Alabadaarachchi, J Arudchelvam, K A N Chanaka, M R N Cassim, R M P D Kularathne, S M Wijeyaratne, T D Gooneratne**

**University Vascular and Transplant unit NHSL, Department of Surgery, Faculty of Medicine, University of Colombo, Sri Lanka**

**Introduction**

Management of limb vascular injuries has evolved over the years, leading to better outcomes. A Sri Lankan extremity vascular trauma registry, will result in better data gathering, developing protocols thus improving the management practices.

**Methodology**

All patients with limb vascular trauma who presented to the university vascular and transplant surgery unit of NHSL, from August 2020- August 2021 were included into a prospectively entered computerized data system. Data was shared on an online database system with the primary contact personnel. This enabled prospective updates of the database.

**Results**

Thirty-nine were included. 36(92.3%) were males. Mean age was 37.4(18-81).

Majority were due to motor vehicle accidents (25,64.1%) followed by occupational injuries (4,10.3%) and accidental falls (4,10.3%). Arteries injured were axillary (2,5.1%), brachial (9,23%), radial (2,5.1%), common femoral (1,2.5%), superficial femoral (9,23%), popliteal (13,33.3%). Four (11.1%) limbs were dead on presentation; 3(7.7%) had primary amputation due to extensive soft tissue damage; 1(2.5%) underwent secondary amputation, while 32(82.1%) were salvaged. Of the salvaged, 2(5.1%) with below trifurcation injuries were managed non operatively. Injury to intervention time more than 6 hours is not associated with limb loss ( $p=0.225$ ).

**Discussion and conclusion**

This study reveals that maintaining a computerised online vascular trauma registry results in maintenance of complete data. These vital data are often not documented in patients' notes in a busy emergency department. This information can be utilised to identify our practices. Further it can improve the vascular trauma related morbidity and mortality.

**PP 134 - Descriptive study of acute urinary retention in a tertiary care centre of central Sri Lanka.**

**A U B Pethiyagoda, Lashan Silva, Dulanjalee Keeragala, Himali Erandika, Inaam Niyaz, Osura Amarajeewa, Sithara Warnasooriya**

**Department of Surgery, Teaching Hospital Peradeniya, Sri Lanka, Sri Lanka**

**Introduction**

Acute Urinary Retention (AUR) is a common, painful condition mainly affecting men above 60 years of age.

**Method**

A retrospective analysis of 101 patients with AUR over 4 years.

**Results**

Mean age was 64.79 years, most in the 61–70-year age (35.6%). Most were males (91.1%) enrolled in elementary occupations (56.06%). However, association of AUR with occupation cannot be commented upon due to disproportionate utilization of public health services by lower socio-economic classes. Smoking and alcohol consumption were significantly higher among males. Most (56.4%) had a long history of Lower Urinary Tract Symptoms (LUTS) prior to AUR (Median = 180 days), however only 42.1% of them received prior treatment. Men, and those who have not received treatment for LUTS tend to present earlier with AUR. Most had precipitated AUR (62.4%) due to a single precipitating factor (77.8%). Constipation (42.9%) and delay in micturition (41.3%) were the most common precipitants. Most AUR was successfully treated with simple urethral catheterization with a minority (5.9%) requiring suprapubic catheterization. The median residual volume was 850ml. In most patients, prostate was moderately enlarged (55.43%) and of firm consistency (82.2%), bladder could be palpated / percussed (87.1%), hernial orifices were intact (92.1%), external genitalia normal (92.1%), and no neurological abnormality (91%).

**Conclusion**

AUR is a disease of elderly males, commonly precipitated by constipation or delay in micturition. Treatment of LUTS may delay / prevent onset of AUR.

**PP 135 - Biliary injuries can remarkably be prevented by demonstration of the 'Critical view of safety' during laparoscopic cholecystectomy - A single centre experience.**  
**B W U Wickramadewa, W G R C K Sirisena, HAMUS Perera, NADPNiwunhella**  
**Sri Jayewardenepura General Hospital, Sri Lanka**

### **Introduction**

A higher risk of biliary injuries is proven during laparoscopic cholecystectomy compared to the open approach, though the laparoscopic approach has become a better option with the experience of the surgeons and considering the patient benefits. This study was performed to evaluate the prevalence of the biliary tract injuries and to highlight the importance of obtaining the critical view of safety.

### **Methods**

This retrospective study was performed, evaluating the all patients who underwent laparoscopic cholecystectomies for acute cholecystitis and symptomatic cholelithiasis in Sri Jayewardenepura General Hospital during the period of three years from 2018. All underwent ligation or clipping of cystic duct and cystic artery following demonstration of the critical view of safety.

### **Results**

Laparoscopic fundus first approach was excluded from the study as there are considerable variations in the steps of performing the surgery. n=32, 21(65%) females and 11(35%) males. Mean age is 45.37 years (21-73 years). Average time of the surgery is 86 minutes. The catastrophic complications including accidental clipping or division of bile duct / common hepatic duct or injuries to the hepatic artery or branches were not observed among all cases. Average post-operative hospital stay was 2.4 days (1-5 days).

### **Discussion**

Routine demonstration of critical view safety disregarding the additional intraoperative time consumption will give favorable outcome with regard to inadvertent biliary injuries, thereby prevent patient morbidity, mortality and reduce post-operative hospital stay.

### **Conclusion**

We conclude that obtaining the 'Critical view of safety' during the procedure leads to better outcome, remarkably avoiding biliary tract injuries.

**PP 136 - Relationship between dietary habits and urolithiasis of a population in Sri Lanka.**

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**Department of Surgery, Faculty of Medicine, University of Peradeniya, Sri Lanka**

### **Introduction**

Dietary factors are known to increase the risk of urolithiasis. This has led to numerous attempts at dietary modification to prevent urolithiasis. However, the high recurrence rate of urolithiasis suggests that there is still much to explore regarding prophylaxis against stone disease. Accordingly a detailed analysis of dietary factors influencing urolithiasis in Sri Lanka is long overdue.

### **Objectives**

Identify the dietary factors that contribute to urolithiasis in Sri Lanka.

### **Method**

A retrospective analysis of dietary data of patients who presented with symptomatic urolithiasis to the Teaching Hospital Peradeniya, Sri Lanka.

### **Results**

The mean age of patients with urolithiasis was 44.48 years which was significantly lower than that of patients without urolithiasis ( $p=0.003$ ). Urolithiasis was significantly more common in men ( $p=0.000$ ). 30.5% of patients with urolithiasis had a history of urolithiasis in the past, and 9.8% of patients had a family history of urolithiasis. A significantly reduced occurrence of urolithiasis was seen in patients consuming more than 3 liters of water a day ( $p=0.001$ ), and in patients who frequently consumed small fish ( $p=0.000$ ), or coffee ( $p=0.000$ ). There was a significantly higher occurrence of urolithiasis in frequent consumers of tomato ( $p=0.027$ ) and citrus fruits ( $p=0.021$ ).

### **Conclusion**

Dietary factors play an important role in urolithiasis. Increased water intake, dietary oxalate restriction, normal calcium intake, and coffee consumption significantly reduce the risk of urolithiasis.

**PP 137 - Medical students' perception of trauma training.**  
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**D N Samarasekera, SA Seneviratne, S Sivaganesh,**  
**D P Wickramasinghe, CS Xavier**  
**Department of Surgery, Faculty of Medicine, University**  
**of Colombo, Sri Lanka**

### **Introduction**

Trauma is the leading cause of hospital admission in Sri Lanka, and first contact doctors play a vital role in determining the outcome. Therefore, it is important to assess the knowledge and practical skills in trauma management amongst medical students, who will be first contact doctors in the future.

### **Methods**

All consenting final-year medical students were included in the study. A self-administered questionnaire was used to collect data on lecture attendance and special training sessions. A Likert-scale was used to assess students' perception regarding adequacy of lectures and bedside teaching, and their confidence in performing vital steps in the management of a trauma patient.

### **Results**

A total of 74 students participated (females = 39, 52.7%). The median age was 26 (range 22-36, IQR=0). Most students (n=49, 66.2%) attended more than 75% of lectures, but participation in practical sessions was low. More students (n=47, 63.5%) found lecture-based teaching to be adequate compared to bedside teaching (n=34, 46.0%). Most students were confident in assessment of circulation (n=67, 90.6%), breathing (n=65, 87.8%) and Glasgow Coma Scale (n=61, 82.5%), but were least confident in applying pelvic binders (n=11, 14.9%), inserting chest drains (n=12, 16.3%), and applying splints for lower limb fractures (n=15, 20.3%). Overall adequacy of teaching showed significant correlation to overall confidence in trauma management (Spearman rho = 0.485,  $p < 0.01$ ).

### **Conclusion**

Medical students showed more confidence in some aspects of trauma management than others. Improvement in clinical bedside teaching and student participation in practical training sessions may resolve this discrepancy.

**PP 138 - Radical retropubic prostatectomy- Intermediate outcome at a single tertiary care centre.**  
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**Meganathan Shivashankar, Neville Perera**  
**Institute of Urology & Renal Transplantation,**  
**National Hospital of Sri Lanka**

### **Introduction**

Prostate carcinoma (CaP) is the second commonest cancer affecting males worldwide. The incidence in our population is much less, but rapidly increasing likely due to the increase in PSA testing. Majority of prostate cancers are detected late and hence palliated in Sri Lanka. Radical retropubic prostatectomy (RRP) remains the gold standard curative intent management for localized CaP in fit patients. There's severe scarcity of published data on intermediate and long-term outcome of this surgical procedure in Sri Lanka.

### **Methods**

Retrospective analysis of the RRP's done in a single unit at the NHSL during the last 5 years. Records were traced and patients were contacted over telephone and data was gathered using a standardized Proforma. Statistical analysis was done using SPSS software.

### **Results**

Of 42 patient details traceable mean patient age was 63 years (range 54-70 years). Histologically Gleason grades were evenly distributed (1-29%, 2-7%, 3-36%, 4-7%, 5-21%). Extra-prostatic extension (73%) and perineural invasion (83%) were present in majority of our patients. Laparoscopic assisted RRP was done in 14/42 (33%). Mean operative time for open and laparoscopic approaches (219 mins & 316 mins,  $p < 0.05$ ). Mean blood-loss was significantly in favour of laparoscopy assisted RRP (1344 ml vs 531 ml,  $p < 0.05$ ). No immediate post-operative mortalities were present & most frequent complication was erectile dysfunction (88%). While short term urinary incontinence rates were high (79%) majority settled by one year. PSA recurrence was noted in a minority requiring adjuvant therapy.

### **Conclusions**

RRP is a safe and effective curative option for patients who are detected sufficiently early. However, our figures have margin for improvement to western values most likely due to the lower-case volume and limitations in technological advancements.

**PP 139 - A cross-sectional study on patients who underwent laparoscopic varicocelectomy in Teaching Hospital Jaffna.**

**Jeyarajah Sanjeyan, Sreekanthan Gobishangar**

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**Introduction**

Varicocele, abnormal tortuosity and dilation of testicular veins within spermatic cord. Presents in 15% of normal male population and in approximately 40% of men presenting with infertility. Pain and subfertility are the main reasons for presentation. Unfortunately, even though Dr.Marc Goldstein's microscopic subinguinal varicocelectomy remains the gold standard, Laparoscopic varicocelectomy is performed in our part of the world due to poor resource settings.

**Methods**

It's a cross-sectional study done on patients who have undergone laparoscopic varicocelectomy from January 2019 to December 2020 at Teaching Hospital Jaffna to assess the presentation, complications and outcomes of surgery.

**Results**

A total of 22 men aged between 18 to 47 years with a mean age of 31.14(SD 8.14) years underwent laparoscopic varicocelectomy. Symptoms prompting the presentation were 14(63.5%) pain or scrotal discomfort, 5(22.7%) primary subfertility and 3(13.6%) had both. 15(68.2%) were left-sided varicocele, 7(31.8%) were bilateral, and no one had unilateral right-sided disease. 17(77.3%) had grade-2 varicocele, and 5(22.7%) had grade-3. Most 16(72.7%) did not have immediate postoperative complications. However, 4(18.2%) had pain, 1(4.5%) had a fever, and 1(4.5%) had faintishness. Only 14 out of 22 were able to be reached out to get follow up data. 9(81%) patients are pain-free, and 2(18.2%) are still having some discomfort among those who had pain preoperatively. 3(42.9%) out of 7 who were subfertile have become fertile.

**Conclusion**

Scrotal discomfort being the main reason prompting presentation and which is improved well with laparoscopic varicocelectomy. Subfertility also improved significantly. However, a large scale study is needed to find out more accurate data for our country.

**PP 140 - Prospective analysis of cystectomy series for high-risk bladder cancer A single unit experience in Sri Lanka.**

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**Introduction**

Bladder cancer (BC) ranks tenth globally. Radical surgery remains gold standard for muscle invasive BC. It has proven efficacy on local disease control and tumour free survival (TFS). Despite improvement of techniques and care, procedure associated with high peri-operative morbidity. Our analysis of cystectomy series with 3-year follow up will fill gaps in literature as first reported study in local setting.

**Methodology**

Twenty-six consecutive cystectomies were recruited from a tertiary center over two years from April 2016. Median follow-up was 43.5 months.

**Results**

Median age was 60 (range 35-74) years. 92% were males. 85% presented with hematuria.

Majority (21/26) had urothelial BC. 20 were male (mean age 59.6 years). 4 out of 5 who had non-urothelial BC were males. 42% were smokers. No risk factors identified among the rest. 38.5% (10/26) were pT4, extending beyond serosa. Median ICU-stay was 18 hours. Surgical complications emerged in 61%. Average blood loss was 850 ml. 15% (4/26) were transfused. Surgical site infections (6/26), ileus (5/26), AKI (3/26), myocardial infarction (1/26) were early complications. Urinary infections (8/26) and venous thrombosis (1/26) were reported within 90 days. 30-days mortality was 3.8% (Mycotic aneurysm). 90-days survival was 92% (24/26). One-year mortality was 23% (6/26). Four had palliative cystectomy.

Two were censored. 3-year overall survival was 58% (14/24). TFS was 41.67% (10/24). 4/24 had recurrences. Cancer specific mortality (CSM) at 3 years was 33%. Out of 14 survivors, 57% (8/14) had normal renal functions.

**Discussion and Conclusion**

Pathological staging of pT4 in 38.5% (10/26) indicate delayed presentation for cystectomy among significant proportion. Delay in cystectomy conferred an increased risk of CSM among high risk BC. We reported 61% rate of complications in series of 26 cystectomies. Despite higher complication rates radical cystectomy still improves TFS in high risk BC.



**PP 142 - Subtotal cholecystectomy as a successful method to prevent biliary injuries during difficult cholecystectomies - A single centre experience.**

**B W U Wickramadewa, W G R C K Sirisena,  
H M U A S Perera, N A D P Niwunhella  
Sri Jayawardenepura General Hospital, Sri Lanka**

**Introduction**

Biliary injuries are uncommon but the most devastating complication of the cholecystectomy, particularly with gallbladders with inflammatory adhesions. This study was performed to evaluate the prevalence of complications including the biliary injuries during subtotal cholecystectomies, a proven successful method for difficult gallbladders.

**Methods**

This retrospective study was performed, evaluating the all patients who underwent cholecystectomies in Sri Jayawardenepura General Hospital from 2018-2021. All were patients with complicated gallstones and underwent open subtotal cholecystectomy. All were followed up at the surgical clinic for sixth months and then if needed.

**Results**

Laparoscopic procedures open routine procedures were excluded from the study as there are considerable variations in the post-operative period and also the steps of performing the surgery. n=21, 13(61.9%) were females, 8(38%) males. Average procedure time is 92 minutes (45-165). 15(71%) were unremarkable at follow-up. Two(9.5%) underwent ERCP for retaining stone in the common bile duct. Retained stone in the gallbladder remnant was found in one(4.7%) patient. Three(14.2%) patients had complaints that are not related to the method of the surgery. However catastrophic complications such as inadvertent biliary tract injuries or injury to the hepatic artery or its branches were not noted in the study.

**Discussion**

Calots triangle of acutely inflamed and chronic gallbladders with adhesions may be difficult to approach. Thus subtotal cholecystectomy would be a better option to reduce the risk of damaging important structures around the porta hepatis.

**Conclusions**

Subtotal cholecystectomy can be defined as a safe method for difficult gallbladders in Sri Lankan set up.

**PP 143 - Descriptive study on safety & outcome analysis and iatrogenic pancreatitis in relation to cannulation duration in Endoscopic Retrograde Cholangio-Pancreatogram (ERCP).**

**N A D P Niwunhella, W G R C K Sirisena,  
B W U Wickramadewa  
Sri Jayawardenepura General Hospital, Sri Lanka**

**Introduction**

ERCP is the main modality of interventional treatment for biliary & pancreatic diseases. Purpose of this study was to evaluate the outcomes & safety upon our experience of ERCP over the past 2 years.

**Methods**

All patients (n=32) underwent ERCP from 2019 January to 2020 December were selected. Intra-procedure & post procedure details with special focus on duration of cannulation (including stenting) versus pancreatitis were assessed. All patients were followed up to at least 6 months post-procedure.

**Results**

Males =9 & females =23 with mean ages 52.7 and 60.5 years respectively; all ERCPs were done for therapeutic purposes; most common presentation was bile duct stones (75%, n=24); stone extraction rate was 62.5%; stent insertion rate (71.8%, n=23); 22% (n=7) cases managed only with a sphincterotomy 6.2% managed with a precut papillotomy; mean total procedure time - 37.5min (15-75min); mean cannulation duration -24.2min (10-40min) mean number of ampullary cannulation attempts was 1.78 for all cases; 12.5% (n=4) pancreatic duct stenting done with mean cannulation duration of 16.5min; one patient (25%) had post procedure acute pancreatitis with maximum Ransons score of 5 and recovered with 4 day post procedure hospital stay; mean hospital stay - 2.1days; No iatrogenic cholangitis/ bile duct or pancreatic duct strictures or mortality reported so far.

**Discussion**

ERCP depicts high clinical success rate in acute set ups. Cannulation durations less than 40 minutes show successful recovery rates without significant morbidity.

**Conclusions**

ERCP is a safe, life-saving procedure with less frequency of morbidity & mortality.

#### **PP 145 - Unplanned conversion to thoracotomy in VATS major lung resections.**

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##### **Introduction**

Video assisted thoracoscopic surgery (VATS) has become the main access technique for lung resections.. Infrequently VATS lung resections need thoracotomy due to intraoperative findings. Aim of this study is to find reasons for such conversions in Sri Lankan context.

##### **Methodology**

A prospective database of lung resections in a single Thoracic Surgical unit at National Hospital for Respiratory Diseases was reviewed for a 20-month period (from January 2020 to July 2021). Indication for surgery, surgical approach, type of resection, conversion rate, indication for conversion and intraoperative blood loss were analyzed.

##### **Results and Analysis**

Total number of lung resections were 62 (median age 58). Eleven patients underwent primary thoracotomy for lung resection (17.7%). Remaining 51 underwent VATS (82.3%), of whom 42 completed surgery via VATS (82.4%) and 9 (17.6 %) were converted to thoracotomy. In conversion group 6 patients had primary non small cell lung cancer, one patient metastatic breast cancer, each of the others had mycetoma and bronchiectasis. Six (66.6%) were converted due to extensive tumour adhesions at the hilum, 2 due to bleeding and the other one due to anomaly in the bronchovascular anatomy. Six patients had lobectomy and 3 had bilobectomy. Median blood loss was 112 mL in VATS lung resections and 235 mL in conversion group.

None of the 9 patients had postoperative deaths within 30 days.

##### **Conclusion**

Offering VATS lung resections to advanced lung cancers, bronchiectasis, and mycetoma in our cohort beyond the Western criteria would have lead to higher conversion rate.

#### **PP 146 - Patients' knowledge on their Diagnosis, Etiology and Surgery: An audit conducted in 5 surgical units at NHSL**

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##### **Introduction**

In the existing literature shows patients have insufficient knowledge about diseases and operations undergo. The reason may be low health literacy or poor communication. This audit was conducted to assess the patients knowledge of their disease and the surgical procedure.

##### **Methods**

Audit was conducted in five general surgical units at National Hospital, Colombo, Sri Lanka. Patients who had a diagnosis and underwent surgery were included. Patients  $\leq 16$  years, had an altered level of consciousness, were critically ill, hearing or speech difficulty were excluded. Questionnaire was filled by the investigator.

##### **Results**

208 patients were questioned (70 males and 138 females), mean age of 51.8 years. 40% were educated up to secondary education, while 14.4% did not attend school. 25% did not know their disease, while 5.7% have a good understanding. Out of the patients informed about the disease, 93.5% by healthcare workers. 24.3% by the interns, 19.2% by the consultant surgeon and 21.7% by a General Practitioner. 68.2% did not know the aetiology of the disease. 72.1% did not know the treatment. However, 54.3% knew the name of the surgery they underwent. 59.1% of the subjects knew why their discharge was delayed.

##### **Discussion**

It was hypothesized that the majority would lack knowledge of their disease, the majority (75%) had at least some knowledge. Nevertheless, more than two-thirds did not know the aetiology, which may seriously impact the management and prevention. Nearly half the patients were informed by an intern or by a GP. Thus it's desirable to have more senior input.

**SP 01 - Intra-operative Pain and Patient Satisfaction During Lichtenstein Repair Under Local Anesthesia Versus Spinal Anesthesia: An Open-Label Randomized Controlled Trial.**

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**Introduction**

In spite of the ability to perform Lichtenstein inguinal hernia repair (LIHR) under local anaesthesia (LA), most LIHR is done under spinal anaesthesia (SA). This is likely because many surgeons are concerned about patients experiencing pain during surgery. We conducted this RCT to compare pain in patients undergoing LIHR under local anaesthesia and under spinal anaesthesia.

**Methods**

Random allocation of patients was done into LA and SA groups. LA was administered by the surgeon in accordance with the local infiltration technique described by Amid using 0.5% bupivacaine. Both intraoperative and postoperative pain was measured by NRS (numerical rating scale). Postoperative recovery, time to discharge, and early complications were recorded. Postoperative pain was assessed at 2, 6 and 24 hours from the time of skin incision. Patient satisfaction was recorded on 5-point likert scale at 24 hours postoperatively.

**Results**

60 patients were randomized to undergo LIHR into two groups of 30 each. There were no conversions to a different anaesthesia technique. Median intraoperative pain was 0 (0,3) in SA and 2.5 (0,5) in LA group. In SA group, intraoperative pain did not exceed NRS 3 while in LA, pain greater than NRS 3 was reported in 30% patients. Minor postoperative problems were reported 9/30 (30%) in SA while 1/30 (3.33%) in LA group. The satisfaction rate was 67% in LA group whereas 37% in SA.

**Conclusion**

Acceptability of LA as method of anaesthesia was greater due to higher satisfaction rate, negligible postoperative complications. A higher pain score during surgery under LA did not translate into a poorer patient satisfaction.

**SP 02 - e-TEP for Ventral Hernia: our initial experience.**

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**Introduction**

Over the years, for management of ventral hernia is changed from one technique to others. e-TEP is recently introduced for ventral hernia repair, placing a mesh in the retro rectus plane.. This study aims to present a feasibility and advantage of a novel application of this technique for ventral hernia repair.

**Methods**

This prospective observational study was conducted at our Institute from January 2019 to June 2020. The primary objective of the study was to assess the feasibility of e-TEP by measuring the intraoperative duration, complications, rate and reason for conversion. The secondary outcomes measured were the postoperative pain, length of stay and postoperative complications.

**Results**

A total of thirteen cases were enrolled out of which eleven underwent e-TEP, and two (15.4%) were converted due to dense adhesions and multiple peritoneal breaches. The median operative duration was 135 minutes. The median VAS score at 6, 12, 24 and 48 hours were 5, 3, 2, 2; at 1 week, 1 month and 3 months were 1, 0, 0 respectively. There was 1(9.1%) seroma and 1(9.1%) superficial surgical site infection.

**Conclusion**

e-TEP not only comes with all the advantages of a Laparoscopic repair but also has reduced incidence of vascular and visceral injury, chronic pain; as mesh fixation can be avoided. This novel technique is safe, feasible and can be done in places with laparoscopic set-up in carefully selected cases.

**SP 03 - Bile bacterial flora and its clinical inferences with sensitivity pattern from a tertiary care centre.**

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**Introduction**

Though preoperative biliary drainage (PBD) has been linked with increased perioperative morbidity, it is still practiced widely. We studied the association of PBD and positive biliary culture with surgical site infection and analyzed the common pathogens and their antibiotic sensitivity spectrum.

**Methods**

Prospectively maintained data of patients who underwent various pancreatobiliary surgeries from 2017 to 2019 was analyzed. Patients whose intraoperative bile culture reports were available were included in the study. Multiple factors associated with surgical site infection (SSI), microbial spectrum of bile culture, and their sensitivity pattern were analyzed.

**Results**

Out of 68 patients whose bile culture reports were available, PBD was done in 65% (n=44). Among patients with infected bile (n=51), the biliary stent was present in 78.4% (n=40). On univariate analysis, the factors associated with SSI were low albumin level (<3.5 mg%), prolonged operative time (>6 hours), duration of the abdominal drain (>4 days), length of hospital stay, intraoperative bile spillage, and infected bile. However, on multivariate analysis, only the presence of drain for >4 days (p=0.04) and positive bile culture (p=0.02) were linked with increased risk of SSI. The most common organism isolated was *E. coli* (73.2%), with 100% sensitivity to Colistin and Tigecycline by gram-negative isolates.

**Conclusion**

Preoperative biliary stenting alone did not increase the risk of SSI, but the positive bile culture correlated with SSI irrespective of PBD. Most biliary pathogens were resistant to commonly used antibiotics, and intraoperative bile culture would provide appropriate antibiotic coverage.

**SP 04 - Preliminary Results from a Validation Sentinel Lymph Node Biopsy Study in cN0 Axilla using low cost dual dye technique: Potential solution for resource poor settings.**

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**Introduction**

Sentinel lymph node biopsy (SLNB) using radio-pharmaceutical (RP) and a blue dye is gold standard for axillary staging in clinically node-negative breast cancer. High costs and limited availability of RP and/or gamma probe are major deterrents in performing SLNB in developing countries. Fluorescence-guided SLNB can obviate the need for RP and gamma probe. In this study, we evaluated feasibility of SLN identification (SLN-IR) of fluorescein-guided (FG) SLNB in combination with methylene blue dye (MBD).

**Methods**

Twenty four cN0 early(12) and post NACT(12) breast cancer patients underwent validation SLNB using fluorescein (and blue LED light) and MBD. Inj Fluorescein 4% and MBD was injected, 1 ml each peri-tumoral and sub-areolar ten minutes before axillary incision. Axillary dissection was performed irrespective of SLNB histology. Cost of inj Fluorescein is 0.81 USD and MBD is 0.5 USD in our country. Our Institute does not have nuclear medicine facility.

**Results**

The mean number of SLNs identified was  $2.30 \pm 1.8$  (range 1–4). The SLN-IR in early cN0 breast cancer was adequate (3LNs) in 11 out of 12 patients. The SLN-IR in locally advanced post NACT cN0 breast cancer was not adequate as only 1 LN could be identified in six patients.

**Conclusions**

Fluorescein in combination with MBD is feasible and can identify adequate LNs in early cN0 breast cancer patients. This technique is very low cost as compared to the gold standard RP + MBD. Further study is continued to evaluate the SLN identification rate and false negative rate.



**SP 05 - Ultra-Low-cost phantom model of breast biopsy for the training of surgical residents during COVID-19 pandemic.**

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**Introduction**

In India, as with all other surgical procedures, core needle biopsy is also taught via traditional surgical training model (see one-do one-teach one) as costly simulators are difficult to acquire and sustain in low- and middle-income countries. COVID-19 pandemic has disrupted this 'live' surgical learning as its many collateral damages. We created a very low-cost model for performing core needle biopsy for residents.

**Methods**

A very low-cost phantom model was created using foam as breast and beet root as core (Figure 1). Cost was approximately 1 USD. Fourteen PGY1 surgery trainees with varied experiences in breast core needle biopsy were asked to perform core needle biopsy on the breast model. They were re-evaluated after demonstration and accuracy was evaluated.

**Results**

Adequacy of core biopsy improved after demonstration with adequacy achieved in 85.7 % after demonstration versus 68.5 % before. Number of correct core sampling (beet root in biopsy gun) after demonstration was 91.4% compared to 75.7% before demonstration. All residents rated this experience as good to excellent. Ninety-five percent of residents felt the model was realistic and helped them in understanding the idea of core biopsy. All felt more confident in performing core biopsy in patients after this training exercise.

**Conclusions**

For teaching core needle biopsy use of a foam-based breast model improves accuracy and adequacy of core needle biopsy in Surgery Trainees.

**SP 06 - The comparative outcome of sentinel lymph node biopsy performed under local and general anesthesia.**

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**Introduction**

Sentinel lymph node biopsy (SLNB) has become the standard care of management of clinically and sonographically node negative early breast cancer.

**Aims and Objectives**

The objective of this study is to compare the feasibility and outcomes of SLNB performed under general and local anesthesia.

**Materials and Methods**

A prospectively conducted non-randomised trial was done at the Department of Surgical Disciplines, AIIMS, New Delhi from January 2016 to December 2019. Patients were divided into the two groups according to type of anaesthesia.

**Surgical procedure**

In LA group, Lignocaine plus prilocaine cream was applied in the lateral mammary crease 1-hour prior surgery. 2% 10-15ml of lignocaine was used for local infiltration. In this group SLNB was done just after staging while patient were waiting for breast surgery. In GA group, SLNB was performed at the time of breast surgery.

**Results**

Total 271 SLNB were done, 173 under general anesthesia and 98 under local anesthesia. The results are shown in Table 1. Median nodes identified in SLNB were 2 and 3 for LA and GA, respectively. Axillary sampling was done in 9.18% and 8.67% respectively. Axillary Dissection (ALND) was performed in 37 patients. Out of these 30(9LA + 21GA) were in view of a positive SLNB and metastatic nodes were found in 8 cases. The remaining 7 in view of palpable nodes with a negative SLNB, metastatic nodes were found in 3 cases.

**Conclusion**

SLNB under LA has a similar identification rate as under GA. Thus, it is a good choice when case load is high and limited availability of operative time and pathologist to perform frozen section.