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ABSTRACTS OF THE  
45<sup>th</sup> ANNUAL ACADEMIC SESSIONS - 2016  
OF  
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AND JOINT MEETING WITH  
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## Contents

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### Oral Presentations

#### Free Paper Session 1 - 18th August 2016 - 8.00 - 9.00 am

Page

- OP 01 Association of differentiated epithelial thyroid carcinoma and sub types of chronic lymphocytic thyroiditis
- OP 02 Does the retrosternal extension of a goitre and its relationship to the aortic arch determine the surgical approach
- OP 03 Mini incision thyroidectomy (MIT): alternative approach to cosmetic thyroidectomy
- OP 04 Incidence of carcinoma among Thy 3 lesions of the thyroid
- OP 05 Descriptive study of age at surgical referral and anatomical location of undescended testis in children
- OP 06 Clinical presentation, characteristics and surgical outcome of the retrosternally extending goitres vs. goitres confined to the neck: results from a case control study

#### Free Paper Session 2 - 18th August 2016 - 8.00 - 9.00 am

- OP 07 Is there a relationship between duration of goitre and post-operative early clinical hypocalcaemia following total thyroidectomy for benign disease? Results from a cohort study
- OP 08 Endoscopic treatment for GI tumours: initial experience from a tertiary care center in Sri Lanka.
- OP 09 Predictive accuracy of Goodsall's rule for simple fistula-in-ano
- OP 10 Value of three-dimensional endo-anal ultrasound scan (3D-EAUS) in preoperative assessment of anal fistula
- OP 11 The role of 3D anorectal manometry (3D-ARM) & 3D endo-anal ultrasound scan (3D-EAUS) in evaluating patients presenting with anal incontinence.
- OP 12 Lower gastrointestinal symptoms: is it a malignancy? An experience of a surgical unit
- OP 13 A tertiary care center experience with flexible sigmoidoscopy: are we overloading the resources?
- OP 14 Management of recurrent pilonidal sinus with a muscle sparing gluteal artery perforator based flap

#### Free Paper Session 3 - 18th August 2016 - 13.30 - 14.30 pm

- OP 15 Outcome of thigh arteriovenous fistulas (TAVF) for haemo-dialysis (HD) for chronic kidney disease patients
- OP 16 Blind uphill balloon angioplasty: a novel technique of lower limb revascularisation
- OP 17 Endovascular aneurysm repair (EVAR): The first case series from Sri Lanka
- OP 18 Percutaneous transluminal lower limb angioplasty done in a minimal resource setting
- OP 19 Go home and walk advise to claudicants: non supervised vs. self monitoring log book - A randomized controlled trial
- OP 20 Outcomes of infra inguinal bypass surgery: a single unit experience
- OP 21 Use of 'The society for vascular surgery lower extremity threatened limb classification system based on wound, ischaemia and foot infection' (WIFI)

#### Free Paper Session 4 - 18th August 2016 - 13.30 - 14.30 pm

- OP 22 Position of the vermiform appendix: a cross-sectional study
- OP 23 Is there an association between inflamed appendix and its' internal diameter?
- OP 24 Diagnosis of acute appendicitis: is the Alvarado score better than Ripasa scoring system?
- OP 25 Resection margins and lymph node clearance in laparoscopic anterior resection and abdomino-perineal resections

- OP 26 Prevention of surgical site infections in appendicectomy
- OP 27 Incidence of low anterior resection syndrome in a selected group of patients who underwent laparoscopic resection
- OP 28 Disease pattern in Sri Lankan IBD patients

#### **Free Paper Session 5 - 19th August 2016 - 8.00 - 9.00 am**

- OP 29 Laparoscopic common bile duct exploration (LCBDE), safe technique for common bile duct stones
- OP 30 A new paradigm for ultrasonography, as an outcome predicting tool in choledocolithiasis
- OP 31 Disease characteristics and endoscopic management of choledocolithiasis
- OP 32 Resection margins and lymph node clearance in laparoscopic assisted pancreaticoduodenectomy
- OP 33 Is routine on-table cholangiogram (OTC) indicated in laparoscopic cholecystectomy?
- OP 34 Microbiological profile and antimicrobial susceptibility patterns in blood cultures from patients with biliary sepsis
- OP 35 Factors associated with need for revision reconstruction of hepaticojejunostomy after iatrogenic biliary injuries

#### **Free Paper Session 6 - 19th August 2016 - 8.00 - 9.00 am**

- OP 36 Ki-67 index and axillary lymph node metastatic status of breast cancers in Sri Lanka
- OP 37 Association between lymph node ratio and other prognostic factors in breast carcinoma
- OP 38 Ethnic variation of prognostic markers of breast cancer
- OP 39 Predictive factors of non-sentinel lymph node involvement in sentinel lymph node (SLN) positive breast cancer patients
- OP 40 Immunohistochemical Her2 staining in breast cancer, a novel predictor of lymph node metastasis
- OP 41 Validation of Sinhalese version of EORTC QLQ-C20 (Version 3) and BR-23 to assess the quality of life (QOL) in Sri Lankan breast cancer patients.

#### **Free Paper Session 7 (Bartholomeusz Prize) - 19th August 2016 - 13.30 - 14.30 pm**

- OP 42 Sensitivity of mammography and adjunctive ultrasonography to detect breast cancer
- OP 43 Treatment of fistula in ano with fistula plug: experience of a tertiary care centre in South Asia
- OP 44 Outcome of live donor kidney transplantation (LDKT) among patients with chronic kidney disease of unknown aetiology (CKDu)
- OP 45 Identification of high risk zones of road traffic accidents with significant morbidity and mortality in Marawila, using geographical information system (GIS)
- OP 46 Improved oncological clearance with experience does not result in a better overall survival in Whipple surgery
- OP 47 The pattern of Kras mutations in metastatic colorectal cancer: a retrospective study from Sri Lanka
- OP 48 The importance and proposed criteria for pre-operative diagnosis of spontaneous arterial acute subdural haemorrhages
- OP 49 Standard local infiltration vs. laparoscopic guided transverse abdominis plane block in laparoscopic cholecystectomy: interim analysis of double blinded randomized control study
- OP 50 Risk stratification of metabolic syndrome; factors and renal stone composition; what matters most?

**Free Paper Session 8 - 19th August 2016 - 13.30 - 14.30 pm**

- OP 51 Independence of activities of daily living following surgical treatment of fracture neck of femur: an interim analysis
- OP 52 Health related quality of life and its' associated factors following successful surgical treatment of fracture neck of femur
- OP 53 Outcome assessment of high tibial osteotomy with the knee injury and osteoarthritis outcome score (KOOS)
- OP 54 Genetic variants of ACAN gene associate with symptomatic lumbar disc herniation
- OP 55 Pitfalls in transportation of traumatic amputations of upper extremity
- OP 56 Socioeconomic correlates of patients with neck of femur fractures
- OP 57 Epidemiology and risk factors of neck of femur fractures

**Free Paper Session 9 - 20th August 2016 - 8.00 - 9.00 am**

- OP 58 Pathological and demographic characteristics of renal tumours treated at a tertiary care hospital in Sri Lanka
- OP 59 The 'pitcher pot' ilealneobladder: functional outcome and complications
- OP 60 Vesico-vaginal fistula repair: transvaginal route has made it easy
- OP 61 The outcome of renal transplantation: Single unit experience
- OP 62 Robotic arm assisted laparoscopic donor nephrectomy: is it better than the standard laparoscopic procedure?
- OP 63 Supine "Mini" PCNL: a minimally invasive percutaneous approach for renal stone removal
- OP 64 Microscopic haematuria in acute flank pain: is it urolithiasis?

**Free Paper Session 10 - 20th August 2016 - 8.00 - 9.00 am**

- OP 65 Significance of pre-treatment serum alpha-fetoprotein in hepatocellular carcinoma of non-viral aetiology
- OP 66 Incidence of work related hand injuries (WHRI) in a trauma setup and measures to prevent them
- OP 67 A comparative study of the surgical outcome of hepatocellular carcinoma in background cirrhotic and non-cirrhotic livers
- OP 68 Factors which contribute to road traffic accident among patients admitted to Teaching hospital Anuradhapura
- OP 69 Spectrum of benign liver lesions with a protocol for evaluation
- OP 70 Achieving international standards in emergency laparotomy
- OP 71 Testicular cancer information for patients on internet: an objective assessment of quality and reliability

**Poster Presentations**

- PP 01 Peri operative concerns of thyroidectomy patients: Are we addressing them?
- PP 02 Survival and the factors affecting survival in elderly patients with colorectal cancer
- PP 03 Early experience of endoscopic direct viewing in cholangiopancreatography in a Sri Lanka tertiary care center
- PP 04 Assessment of voice changes in patients undergoing total thyroidectomy (before and after surgery)
- PP 05 Analysis of intraoperative pancreatic fluid aspirate in patients with chronic pancreatitis undergoing lateral pancreatic jejunostomy
- PP 06 Patterns of bile duct injuries observed during endoscopic retrograde cholangiogram: 13 years

- of experience in a tertiary care referral centre
- PP 07 Our experience of 3D laparoscopic pyeloplasty at Lady Ridgeway Hospital for children
- PP 08 Prospective analysis of 72 consecutive patients with sole of foot diabetic ulcers admitted to General Hospital Polonnaruwa (GHP) over 9 months.
- PP 09 Comparative study of open preperitoneal (AK Henry) and laparoscopic total extraperitoneal (TEP) approach in inguinal hernia repair
- PP 10 Reductive surgery for lymphoedema: single unit experience
- PP 11 Incidence, progression and risk factors for endovenous heat-induced thrombosis after radiofrequency ablation
- PP 12 Hepatic resection for benign biliary stricture
- PP 13 Clinicopathological profile of urological cancers treated in a urology unit of Sri Lanka over a period of five years
- PP 14 Pancreaticogastrostomy: simple and safe technique
- PP 15 A single center experience of revascularization of dead and marginally viable limbs
- PP 16 Elective cervical block dissection (EBCD); is it the appropriate method for neck staging in node negative (N0) oral cancer? A pilot study
- PP 17 Disproportionate distribution of liver fat warrants careful assessment of segment IV b focal lesions
- PP 18 The lateral thoracic vein as a reliable landmark to approach the thoracodorsal pedicle
- PP 19 Usefulness of plain X-ray KUB in diagnosing ureteric stones in the casualty set up
- PP 20 Study about clinical outcome after emergency laparotomy in Surgical unit B, General Hospital Matara
- PP 21 Functional ambulation following successful surgical treatment of fracture neck of femur: a preliminary study
- PP 22 Outcome of thigh arteriovenous fistulas (TAVF) for haemo-dialysis (HD) for chronic kidney disease patients
- PP 23 Quality of the documentation of surgeries: an audit
- PP 24 Evaluation patients' accessibility for health information to provide informed consent for elective surgery
- PP 25 Predicting the efficacy of right colonic preparation based on left colonic preparation - a preliminary report
- PP 26 Can second toe pressure be substituted for big toe pressure
- PP 27 Age related trends in hormonal and Her2 status in a local cohort of breast carcinoma patients
- PP 28 Is there an association between autoimmune thyroiditis and incidental carcinoma of the thyroid?
- PP 29 Factors affecting inadequate axillary lymph node dissection (ALND) in breast carcinoma
- PP 30 Follicular nodules (Thy3) of the thyroid: is total thyroidectomy the best option?
- PP 31 Long term outcome of micro-vascular reconstruction of foot degloving injuries
- PP 32 The lymph node yield in colorectal cancer specimen: a single unit experience
- PP 33 An emerging trend of thyroid malignancy: our experience
- PP 34 Are you ready for the paradigm shift? Day case interval laparoscopic cholecystectomy over 5 years: an audit in the UK
- PP 35 Bloodless probeless fistulectomy; safe technique for both high and low anal fistula with minimal recurrence
- PP 36 Study of limb fracture pattern and mechanism among children admitted to Teaching hospital Karapitiya
- PP 37 Maximum deviation of the marginal mandibular nerve from the inferior angle of the mandible: a Sri Lankan cadaveric study
- PP 38 Incidence of postcholecystectomy syndrome after laparoscopic cholecystectomy among patients with symptomatic gallstones in Sri Lankan set up
- PP 39 Intralesional Bleomycin: an effective treatment for cystic lymphangioma of parotid and

submandibular gland

- PP 40 Comparative validation of three online nomograms for predicting non-sentinel lymph node positivity in sentinel lymph node (SLN) positive breast cancer patients
- PP 41 Prevalence of pressure ulcers among spinal trauma patients in a tertiary care centre in Sri Lanka: are early stages missed?
- PP 42 Chronic subdural haematoma: a single centre experience
- PP 43 Trauma Laparotomy: a single centre experience
- PP 44 Bacteriology and sensitivity pattern of pus culture of appendicular abscess - single unit study
- PP 45 A new surface landmark for the digital veins
- PP 46 An analysis of supracondylar fractures of the humerus in pediatric patients. An experience of a Teaching Hospital General Orthopaedic unit
- PP 47 Machinery hand injuries, why is it an epidemic?
- PP 48 Incidence of thyroid carcinoma in Sri Lanka: analysis of cancer registry data and comparisons with other South Asian populations
- PP 49 Value of sigmoidoscopic evaluation of patients presented with per rectal bleeding and diagnosed haemorrhoids on proctoscopy
- PP 50 Is biliary drainage beneficial in cases of complicated choledochal cyst?
- PP 51 Management of acute appendicitis in Trincomalee, Sri Lanka in 2014/15
- PP 52 A descriptive analysis of the characteristics of complex fistula in ano & their treatment in a cohort of patients attending a tertiary care unit
- PP 53 The quality, readability and reliability of patient education websites related to oesophageal cancer
- PP 54 A clinicopathological review of appendices removed for acute appendicitis in a peripheral hospital
- PP 55 A new approach to laparoscopic splenectomy
- PP 56 The incidence of thyroiditis in patients undergone total thyroidectomy for multinodular goitres
- PP 57 Study of limb fracture pattern and mechanism among children admitted to Teaching Hospital Karapitiya
- PP 58 Descriptive study of pediatric solid tumors presented to a single unit in Lady Ridgeway Hospital
- PP 59 Study of knowledge and attitude of healthcare workers on needle stick injury - Teaching Hospital Karapitiya
- PP 60 Relation between recurrent laryngeal nerve and inferior thyroid artery; intraoperative findings
- PP 61 Descriptive analysis of patients diagnosed with esophageal carcinoma
- PP 62 Value of upper gastrointestinal endoscopy in evaluating patients presenting with dyspepsia
- PP 63 Study on pattern of head injury in a single surgical unit, Teaching Hospital, Jaffna
- PP 64 Outcome of small and large hepatocellular carcinoma after surgical resection
- PP 65 Effect of luminal stage in axillary lymph node metastasis in a cohort of breast cancer patients
- PP 66 Laparoscopic adrenalectomy for adrenal tumours: a single unit experience in a period of eighteen months
- PP 67 Incidence of pancreatic carcinoma in Sri Lanka: analysis of cancer registry data and comparison with other South Asian populations
- PP 68 Iatrogenic bile duct injuries observed during endoscopic retrograde cholangiogram; is there a change with more formal training in laparoscopic surgery?
- PP 69 Outcomes following laparotomy and laparoscopic abdominal surgeries: preliminary results from 3 surgical units in National Hospital of Sri Lanka
- PP 70 Quality of life among patients with chronic venous ulcers, Sri Lankan experience
- PP 71 Incidence of liver cancer in Sri Lanka: analysis of cancer registry data and comparison with other Asian populations
- PP 72 What is the best bowel preparation for lower GI endoscopy in Sri Lanka?
- PP 73 A prospective study to assess the disability of upper limb following fracture

- PP 74 Wearing gloves during riding motorbike, does it protect your hand?
- PP 75 An ongoing audit on laparoscopic inguinal hernia mesh repair
- PP 76 Frequency, causes and pattern of intra abdominal injuries in patient with blunt abdominal trauma
- PP 77 Prevalence and risk factors associated with pin site infection among trauma patients who undergo external fixation in a tertiary care center in Sri Lanka
- PP 78 Safe approach to treatment in lower trans-sphincteric anal fistula
- PP 79 A novel technique for performing craniotomies in improvised situations
- PP 80 Study about appendicitis in patients admitted with acute onset right iliac fossa (RIF) pain admitted to District General Hospital Matara
- PP 81 Is there a place for open cholecystectomy in the laparoscopic era?

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# ABSTRACTS

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## Oral Presentations

OP01

### **ASSOCIATION OF DIFFERENTIATED EPITHELIAL THYROID CARCINOMA AND SUB TYPES OF CHRONIC LYMPHOCYTIC THYROIDITIS**

Nadeesha Nawarathna, Suwin Hewage, Palitha Ratnayake, Ranjith JK Seneviratne

#### **Introduction**

The most common differentiated malignant thyroid neoplasm is papillary carcinoma. Association of concurrent presence of chronic lymphocytic thyroiditis and its subtypes with differentiated epithelial thyroid carcinoma remains controversial. Our objective was to evaluate epidemiological factors of chronic lymphocytic thyroiditis and association between chronic lymphocytic thyroiditis and its subtypes with differentiated epithelial thyroid carcinoma.

#### **Methods**

A total of 684 patients who underwent thyroidectomy at Teaching Hospital Kandy, Sri Lanka for a period of two and half years from 2013 January were reviewed. The clinical and pathological characteristics of them were analyzed. Chronic lymphocytic thyroiditis was diagnosed by histology.

#### **Results**

Thyroid malignancies were detected in 14.2% of thyroidectomy specimen, of which well differentiated epithelial thyroid carcinoma were seen in 82%. Chronic lymphocytic thyroiditis was present in 31%, out of which 73.1% were nonspecific chronic lymphocytic thyroiditis and 26.9% were Hashimoto's thyroiditis. Gender, age and presence of thyroiditis were significantly associated with papillary thyroid carcinoma. In the analyzed sample, males were more likely to have papillary carcinoma compared to females ( $p = 0.013$ ). Those with nonspecific chronic lymphocytic thyroiditis were more likely to have papillary thyroid carcinoma ( $p = 0.002$ ) compared to those without. With increasing age, proportion of lymphovascular invasion in patients with papillary thyroid carcinoma significantly ( $p = 0.010$ ) decreases. None of the three factors mentioned were significant predictors of presence of follicular carcinoma, tumour focality, capsular or lymphovascular invasion in papillary or follicular carcinoma.

#### **Conclusion**

Presence of nonspecific chronic lymphocytic thyroiditis is associated with papillary thyroid carcinoma at a given age and gender. Influence of nonspecific chronic lymphocytic thyroiditis on the prognosis of well differentiated epithelial thyroid carcinoma need to be investigated further with a larger sample size.

OP02

### **DOES THE RETROSTERNAL EXTENSION OF A GOITRE AND ITS RELATIONSHIP TO THE AORTIC ARCH DETERMINE THE SURGICAL APPROACH**

KAPR Kumarasinghe, MDP Pinto, BNL Munasinghe, DMCD Dissanayake, PC Amaraweera, IGKP Abeyrathne, R Fernando

Colombo North Teaching Hospital, Sri Lanka

#### **Introduction**

Retrosternal extension (RSE) is defined as the enlargement of the thyroid below the thoracic inlet. The greatest challenge in embarking on surgery in RSE is to decide when to or when not to involve an intra-thoracic approach (sternotomy or thoracotomy), as this approach accounts for added morbidity & mortality. The aim of this study is to analyse whether the relationship of the retrosternal component of a goitre to the aortic arch decides the surgical approach of total thyroidectomy.

#### **Methods**

A total of 527 thyroidectomies were performed at Colombo North Teaching Hospital professorial unit during the period from November, 2002 to February, 2016. There were 51 patients with radiological evidence of retrosternal goitre (6.27%). These patients were categorized into 2 groups according to the degree of RSE. Groups were defined as extension of goitre above the arch of aorta (AA) and below AA.

#### **Results**

50 (98%) patients had RSE above the AA and 1 patient had RSE below the AA. RSE was seen on the right side of the mediastinum in 3 (5.88%) patients, on the left in 8 (15.68%) patients and bilaterally in 40 (78.43%). Total thyroidectomy was undertaken in all 50 patients with RSE above the AA, through cervical approach without an added morbidity. The patient with RSE beyond the AA underwent total thyroidectomy with axillary thoracotomy.

**Conclusion**

Majority of the RSE is above the AA, which can be dealt with a cervical approach and extension below the AA may need an intra-thoracic approach.

OP 03

**MINI INCISION THYROIDECTOMY(MIT): ALTERNATIVE APPROACH TO COSMETIC THYROIDECTOMY**

KAPR Kumarasinghe, MDP Pinto, BNL Munasinghe, PC Amaraweera, DMCD Dissanayake, IGKP Abeyrathne, R Fernando

Colombo North Teaching Hospital, Sri Lanka

**Introduction**

Technique of thyroidectomy has evolved from conventional open technique to minimally access techniques over the past few years. Regardless of the technique, outcome depends on meticulous surgical technique used. Mini incision is defined as surgical incision less than 3 cm or less in length. Once the small incision is made retraction is used and thyroidectomy done in the conventional manner. Main advantage is the superior cosmetic outcome compared to conventional method. Size of the gland is a main factor before deciding on a MIT. Careful patient selection must be done as large glands cannot be retrieved with the mini incision.

**Methods**

A prospective cohort study carried out on all patients undergoing MIT between 2008 to 2015 in professorial surgical unit, University of Kelaniya. Patients with small size glands, nodules less than 2cm were included. Skin incision was marked by measuring 3cm with a sterile measuring tape and methylene blue dye. The thyroid gland was delivered in to the incision and both pedicles were ligated. Capsular dissection with nerve encountering technique was adhered to. Recurrent laryngeal nerves, external branch of the superior laryngeal nerves and parathyroid glands were demonstrated and preserved. Drains were not used and routine closure done after absolute haemostasis.

**Results**

Twenty nine MITs were performed ( Male - 3 , Female - 26, median age 34.26y, range 22 – 42yrs, Total thyroidectomy - 18, hemi-thyroidectomy - 11). The commonest indication for total thyroidectomy was small MNG. None had recurrent laryngeal nerve injuries or significant haematoma formation. Transient

Hypocalcemia seen in 3%. The cosmetic effect was satisfactory. The longest follow up is 7 years.

**Conclusion**

MIT is a safe alternative to conventional approach in carefully selected patients and also it gives a superior cosmetic outcome.

OP 04

**INCIDENCE OF CARCINOMA AMONG THY 3 LESIONS OF THE THYROID**

KAPR Kumarasinghe, MDP Pinto, BNL Munasinghe, PC Amaraweera, DMCD Dissanayake, IGKP Abeyrathne, R Fernando

Colombo North Teaching Hospital, Sri Lanka

**Introduction**

Ultra Sound Scan (USS) and Fine Needle Aspiration Cytology (FNAC) of thyroid nodules are carried out in patients with goitre. THY3 lesions cause diagnostic difficulty and in published data risk of malignancy in THY3 lesions claimed to be 20%. The objective of this study is to determine the incidence of carcinoma among THY3 lesions and to relate the findings to the size of the nodule.

**Methods**

All the patients who underwent thyroidectomy at the Professorial Surgical Unit, Colombo North Teaching Hospital from November, 2002 to December, 2015 were analysed retrospectively. Histological and ultrasonic data in patients with THY3 lesions were analysed.

**Results**

510 patients yielded 29 (5.68%) THY3 patients. Only 6 (20.69%) patients were histologically proven to be malignant (Follicular carcinoma – 3 / Papillary carcinoma -follicular variant- 2/Mixed medullary papillary carcinoma - 1). All patients were females (Age range 17y -52y). Pre-operative USS nodule size in the malignant group ranged 2.6cm - 6.8cm (Average - 4.25cm). 20 patients (68.9%) had benign post-operative histology (MNG - 18, Thyroiditis-2). USS nodule size in the benign group ranged 2.3cm - 2.5cm (Average - 3cm). 3 patients (8.7%) were lost to follow up.

**Conclusion**

20.7% of THY3 lesions had thyroid carcinoma. Lesions larger than 4.25 cm are more likely to harbour a malignancy. Development of a clinical, USS and FNAC

based scoring system to evaluate patients with THY3 lesions, would be beneficial in predicting the likelihood of malignancy.

OP 05

#### **DESCRIPTIVE STUDY OF AGE AT SURGICAL REFERRAL AND ANATOMICAL LOCATION OF UNDESCENDED TESTIS IN CHILDREN**

UARS Ranawaka, FH Azmy, RT Bannaheke, AMA Nasar, RARPWMP Palipana, NLDI Nanayakkara  
Lady Ridgeway Hospital for Children, Sri Lanka

#### **Introduction**

Undescended testis(UDT) carries, 3.7-7.4 times relative risk of developing carcinoma in adulthood. High anatomical locations have higher risk. Orchidopexy is recommended around 6 months of age. In Sri Lanka, delayed surgical referral is common according to SLJOCH 2015;3:163-164. Around 10-20% UDT are impalpable. Right sided UDT are commoner. This ongoing first of such Sri Lankan descriptive study targets 200 subjects to enable comparison with international research (sample size <200 in most). Objectives include, clinician motivation for timely orchidopexy and, provision of data on paediatric UDT to surgeons managing adult testicular malignancy and statisticians.

#### **Methods**

Data collected from hospital records of all children with UDT attending outpatient department surgical unit of The Lady Ridgeway Hospital for Children from 2014/01/01 onwards.

#### **Results**

158 UDT in 150 children(8 bilateral) studied. Age at surgical referral: 26%(39) below 6 months, 20.7%(31) between 6.1-12 months, 14%(21) between 12.1-24 months, 21.3%(32) between 2.1-5 years, 16.7%(25) between 5.1-10 years and 1.3%(2) between 10.1-12 years. 45.8%(65/142) unilateral UDT were right sided. Surgical approaches: 136 inguinal, 10 scrotal, 1 perineal, 9 laparoscopic(2 bilateral, 1 atrophied) .Anatomical location: high-ileac-fossa 1.2%(2), low-ileac-fossa 5%(8), internal inguinal ring 15.8%(25), inguinal canal 38.6%(61), superficial inguinal ring 24%(38), high-scrotal 13.9%(22), perineal 0.6% (1), intra-abdominal testicular atrophy 0.6%(1)

#### **Conclusion**

Only 26% had referral for orchidopexy before 6 months

of age. A national policy on timely orchidopexy is needed 5.7% testes were impalpable. Palpability could be observer dependent 45.8% unilateral UDT were right sided. Malignant risk assessment needs long term follow up

OP 06

#### **CLINICAL PRESENTATION, CHARACTERISTICS AND SURGICAL OUTCOME OF THE RETROSTERNALLY EXTENDING GOITRES VS GOITRES CONFINED TO NECK: RESULTS FROM A CASE CONTROL STUDY.**

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#### **Introduction**

Goitres that extend beyond the thoracic inlet are defined as retro-sternally extending (RSE) goitres. These RSE goitres are a surgical challenge and their characteristics could be different to the goitres confined to the neck.

#### **Methods**

A retrospective case control study. Patients were selected from the thyroid database maintained in our unit (from November 2002 to February 2016). Patients with RSE goitres (confirmed by imaging) were selected as study group (SG). Control group (CG) patients (with goitres confined to the neck) were systematically selected in a 1:2 ratio. The end points were: (i) incidence of RSE goitres, (ii) clinical presentation, (iii) degree of RSE (iv) thyroid status, (v) post operative complications and (vi) histological pattern.

#### **Results**

527 consecutive patients (465 female: 62 male; median age 45 years, range 17 years to 71 years) were studied. SG (n=51, 9.6%). CG (n=102). Compression symptoms were not significantly high in the SG (27% vs 17%, p value <0.17). Majority had RSE of both lobes (78%). The median depth of extension into the mediastinum was 41.6mm (range 12mm - 95mm). A majority were euthyroid (SG 78% vs CG 82%). Post operative stridor was significantly high in the SG (7% vs 2%; P value = 0.015). Although a majority were colloid goitres, papillary carcinoma was significantly high in the CG (P value <0.05).

### Conclusion

A majority of RSE goitres did not present with compression symptoms, but had significantly high post-operative stridor (P value<0.05). Incidence of cancer is not high in SG.

OP07

### IS THERE A RELATIONSHIP BETWEEN DURATION OF GOITRE AND POST OPERATIVE EARLY CLINICAL HYPOCALCAEMIA FOLLOWING TOTAL THYROIDECTOMY FOR BENIGN DISEASE ? RESULTS FROM A COHORT STUDY.

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### Introduction

Total thyroidectomy is the standard surgical procedure for benign disease of the thyroid gland. Some authors claim that the long standing goiters are associated with a higher incidence of hypocalcaemia. This is probably due to surrounding fibrosis, difficulty in identification and preservation of parathyroid glands during surgery. Objective of this study is to determine the factors associated with early postoperative hypocalcaemia following total thyroidectomy in benign goitres.

### Methods

Data of 315 patients who underwent total thyroidectomy for benign disease by the same surgeon and followed up prospectively (from year 2002 to 2016) at our unit, was analyzed retrospectively. Main end points were to assess a correlation between hypocalcaemia and; (i) age (ii) gender, (iii) thy 2 and 3 classification of the goiter in fine needle aspiration and (iv) duration of goiter. Pearson's chi square test and logistic regression was used to analyze data and significance was assigned to a p value <0.05.

### Results

35 (11.1%) patients (5 males;30 females; median age 42 years; age range 15-69) developed clinical hypocalcaemia. Age (p = 0.73), gender (p = 0.36) or difference in thy classification (p=0.12) was not statistically significant. However, goiter duration showed a statistically significant association with early clinical hypocalcaemia (P=0.015). Furthermore with each additional year with goiter, lead to 1.041 increase

in odds ratio of having clinical hypocalcaemia.

### Conclusion

Goiter duration had statistically significant association with early clinical hypocalcaemia following thyroidectomy for benign disease.

OP08

### ENDOSCOPIC TREATMENT FOR GI TUMORS: INITIAL EXPERIENCE FROM A TERTIARY CARE CENTER IN SRI LANKA

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### Introduction

Endoscopic treatment is a minimally invasive organ-sparing advanced therapeutic technique which allows en bloc resection of small lesions of the gastrointestinal tract. The two commonly employed methods are the Endoscopic submucosal dissection (ESD) and submucosal resection (EMR). This study aims to report the feasibility, safety and effectiveness of ESD/EMR technique for treating benign, premalignant lesions in a GI tract.

### Methods

All the patients underwent endoscopic resections were recorded in a data base, followed up and analyzed.

### Results

There were 6 patients underwent endoscopic resection over period of 2 years and 6 months. The mean age at the time of the diagnosis was 63.2 (35-82) years. The mean duration of follow up was 16.3 (7-26) months. The site of the lesions were, Lower oesophagus (n=1), gastro-oesophageal junction (n=2), Stomach (n=1), duodenal ampulla (n=1), upper rectum (n=1). The histology of these lesions showed submucosal lipoma of lower oesophagus, Hyperplastic polyp at GOJ (n=2), gastrointestinal stromal tumour at lesser curve of the stomach, Villous adenoma of duodenal ampulla and rectal villous adenoma with low grade dysplasia. The patient with duodenal lesion underwent 2 sessions of resection and all other patients underwent single procedure with complete excision. The method of resection was EMR in 2 patients, ESD in one patient and diathermy snare in 3 patients. The mean duration of the hospital stay was 1.17 (1-2) days. There were no post

procedural complications.

### Conclusion

Endoscopic mucosal resection/dissection/snare were feasible and safe in carefully selected patients and is a valuable tool in sparing organs as it avoids unnecessary surgery.

OP 09

### PREDICTIVE ACCURACY OF GOODSALL'S RULE FOR SIMPLE FISTULA-IN-ANO

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### Introduction

Successful treatment of fistula-in-ano is sometimes challenging, due to difficulty in the recognition of the internal opening and the course of the fistula tract. Although Goodsall's rule was accepted in the past as a method to determine the course of the fistula, recent data has shown conflicting results. Therefore, this study was aimed to study and scrutinise the predictive accuracy of Goodsall's rule.

### Methods

A sample of 212 patients with simple fistulae were studied. Hydrogen peroxide was injected through the external opening and the appearance of air bubbling in the anal canal indicated the location of the internal opening. The morphological parameters including, site and the number of internal and external opening/s, the course of the tract were also recorded. Associations were established using Chi Square test.

### Results

The median age of the participants was 39 (range, 18-78) years. The majority (n=167, 78.8%) were males. Of the study group, 29.7% (n=63) had intersphincteric fistulae, 53.8% (n=114) transsphincteric fistulae and 16.5% (n=35) superficial fistulae. The overall predictive accuracy of Goodsall's rule in our patients was 78.3%. High predictive accuracy was noted in superficial fistulae (97.1%) and inter-sphincteric fistulae (84.1%) compared to transsphincteric fistulae (69.3%) and those with an external opening in the midline (98.2%), which were statistically significant ( $p < 0.01$ ,  $p < 0.001$ ).

### Conclusion

Although Goodsall's rule was not accurate in 22% of all

fistulae, it can be used as a guide in locating the path of the tract and the internal opening in simple fistulae.

OP 10

### VALUE OF THREE-DIMENSIONAL ENDO ANAL ULTRASOUND SCAN (3D-EAUS) IN PREOPERATIVE ASSESSMENT OF ANAL FISTULA

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### Introduction

3D-EAUS has become a cost effective procedure to assess fistula in ano. The aim was to study the accuracy of 3D-EAUS in pre-operative assessment of cryptoglandular anal fistulae in the identification of the fistula tract and compare with findings at surgery.

### Methods

A retrospective analysis of 87 patients with suspected anal fistula who underwent pre-operative 3D-EAUS between January 2009 and January 2016 was carried out. All patients subsequently had surgical exploration under anaesthesia, irrespective of findings at 3D-EAUS. The ultrasonographic results were compared with the surgical findings to determine the accuracy of 3D-EAUS.

### Results

86 patients (male: female: 75:11) were subsequently shown to have a fistula at surgical exploration. Though one patient showed a fistula tract on 3D-EAUS, at surgery, no internal opening was seen. Transsphincteric tract was the commonest primary tract detected (n=62, 71.3%). 3D-EAUS correctly predicted surgical findings in (n=61, 70.11%) patients with the highest accuracy being for transsphincteric fistulae (87.1%). Seven fistulous tracts were detected during the surgical exploration which were not revealed by 3D-EAUS. Sphincter defects were detected by the 3D-EAUS in 37 patients (internal sphincter defects-21, external sphincter defects-7, both-9) as an additional information. Horse shoeing and/or extending fluid collections were detected pre-operatively in three patients while one case was not identified by surgical exploration.

### Conclusion

3D-EAUS is an accurate pre operative investigation to identify fistula tract. Therefore, routine use of 3D-EAUS as a diagnostic method in patients with anal fistula would be cost effective for pre-operative planning of

fistula treatment.

OP 11

**THE ROLE OF 3D-ANORECTAL MANOMETRY (3D-ARM) & 3D-ENDO ANAL ULTRASOUND SCAN (3D-EAUS) IN EVALUATING PATIENTS PRESENT WITH ANAL INCONTINENCE**

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**Introduction**

Anal incontinence (AI) is a challenging condition which has multifactorial aetiology. Anorectal physiology studies have gained wide acceptance to evaluate AI. The aim of this study was to assess the role of 3D ARM and 3D EAUS in evaluating patients with AI.

**Methods**

This is a retrospective analysis of patients evaluated at the Gastrointestinal Physiology Laboratory of the National Hospital of Sri Lanka, between January 2009 and January 2016. A cohort of 44 patients with incontinence of solid stool of iatrogenic or idiopathic aetiology was selected. All patients were assessed by 3D EAUS and 3D ARM to evaluate AI.

**Results**

44 patients were assessed (male: female: 15:29) with a mean age of 41 years (SD±18.29, range 11-76). Incontinence due to iatrogenic causes was the commonest to encounter (n=23, 52.3%). EAUS showed internal or/and external sphincter defects in 8(38.1%) patients with idiopathic AI. In the remaining 13(61.9%) patients have either normal sphincters or only degenerative changes. In the iatrogenic group, 10 out of 23 (43.5%) patients had defects in both sphincters. The maximum squeeze (MSP) and resting pressures (MRP) were lowest in females than in males (mean MSP; 120 ±73 vs 82 ±46 mmHg, mean MRP; 67 ±35 vs 61 ±33 mmHg). Ageing has shown a considerable decrease in both SP and RP in both sexes. There were two patients with normal anorectal physiology.

**Conclusion**

The patterns of anorectal physiological test results should be interpreted critically together with clinical evaluation to facilitate and identify anatomical or physiological abnormalities, for which there may be effective treatment.

OP 12

**LOWER GASTROINTESTINAL SYMPTOMS: IS IT A MALIGNANCY? AN EXPERIENCE OF A SURGICAL UNIT**

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**Introduction**

Lower gastrointestinal (GI) symptoms could be alarming to the patient and is a common presentation to the surgical department. Colonoscopy is considered the gold standard in assessing these patients for an underlying cause. The objective of this study was to assess the correlation between lower GI symptoms and the findings at colonoscopy with regard to detecting a malignant lesion.

**Methods**

A prospective analysis was done on patients undergoing colonoscopy in our surgical unit between October 2014 and May 2016. Lower GI symptoms were categorized as altered bowel habits without bleeding per rectum (PR), altered bowel habits with bleeding PR, bleeding PR without altered bowel habits, anaemia without a cause and left lower abdominal pain. Malignant lesions detected in each group were statistically analyzed, considering a p value of <0.05 as significant.

**Results**

Patients included 223. Male:female ratio 3:2. Median age was 57 years (range 30-82). Ninety patients had altered bowel habits without bleeding PR, out of which 17 (18.89%) had malignant lesions (p=0.0188). Thirty four patients had altered bowel habits with bleeding PR with 5 (14.71%) having a malignancy (p=0.681). Sixty eight patients had bleeding PR only without alteration in bowel habits, out of which 2 (2.96%) had malignant lesions (p=0.0207). Sixteen patients had anaemia as the indication for colonoscopy and 3 (18.75%) had malignancies (p=0.437). Fifteen patients had left lower abdominal pain and 1 (6.67%) had a malignancy (p=0.475).

**Conclusion**

The most significant correlation with regard to detecting a malignancy was seen in the group with altered bowel habits without bleeding PR.

OP 13

## **A TERTIARY CARE CENTER EXPERIENCE WITH FLEXIBLE SIGMOIDOSCOPY: ARE WE OVERLOADING THE RESOURCES?**

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### **Introduction**

The flexible sigmoidoscopy, a readily available modality, is routinely done for patients with per rectal bleeding and left iliac fossa pain (after exclusion of Genito-urinary pathology) because of fear of missing colorectal cancer rather than to finding out the cause.

### **Methods**

The flexible sigmoidoscopy, a readily available modality, is routinely done for patients with per rectal bleeding and left iliac fossa pain (after exclusion of Genito-urinary pathology) because of fear of missing colorectal cancer rather than to finding out the cause.

### **Results**

Patients with left-iliac fossa pain are 53.94%. But all are endoscopically normal. Patients with per-rectal bleeding are 46.06%. Among them, haemorrhoids are 25.65%, male 66.66%, age 60-69 is 25.64%. Benign polyps are 12.5%, male 63.15%, age 50-59 is 21.05%. Malignant lesions are (histologically confirmed) 3.2%, male 60%, age 60-69 is 40%. Diverticulitis are 2.6%, male 75%, age 60-69 is 50%. Ulcerative colitis are 1.31%, male 100%. Bimodal distribution, age 30-39 and 60-69.

### **Conclusion**

Our finding shows that isolated left iliac fossa pain is not an indication for flexible sigmoidoscopy and all our patients with haemorrhoid did not have secondary pathology such as rectal carcinoma.

OP 14

## **MANAGEMENT OF RECURRENT PILONIDAL SINUS WITH A MUSCLE SPARING GLUTEAL ARTERY PERFORATOR BASED FLAP**

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### **Introduction**

Pilonidal sinus is a difficult disease to treat with high recurrence rates. Many treatment modalities from secondary-intention healing to various types of flaps

have been used for treating recurrent lesions with each having different rates of success.

### **Methods**

A perforator flap based on the superior gluteal artery perforators was designed at 45° angle to the defect created by the excision of the pilonidal sinus up till the sacral fascia, taking care to excise all the infected and fibrotic tissue and was transposed in 15 male patients with history of recurrent pilonidal sinus. Defect and flap size, length of surgery, blood loss, time to mobilization, hospital stay, time of return to work and rate of complications were evaluated.

### **Results**

The average defect size in length, width and depth were 6.9 cm, 3 cm and 3 cm, respectively. The size of the cutaneous part of the flap was slightly more than the defect size. The average length of surgery was 45 min (sinus excision 10 min, flap harvest 15 min and closure 20 min) with blood loss being less than 25 cc. Patients were mobilised and discharged home two days after surgery. The patients were able to return to normal daily activities after 3 days and to work 10 days after the surgery. There were no complications and no recurrences at an average of a 10-month follow-up.

### **Conclusion**

Excision of all the sinus tracts and fibrotic tissue till the sacral fascia with obliteration of the natal cleft are the keys in preventing recurrence of the lesion. The superior gluteal artery perforator flap (SGAP) offers many advantages over random (better vascularity and flap safety) or larger flaps (decreased operating time and donor-area morbidity) in the treatment of pilonidal sinus disease. The flap is easy to raise and has consistent vascular anatomy. We present our results with the use of the SGAP flap, which is designed at a 45( degrees )-angle to the defect created by the excision of the pilonidal sinus. Compared to the previously described techniques, it has the advantage of closing defects of any size within a short surgical time and minimal blood loss. The hospital stay, time to mobilization and return to daily activities and work are shortened, in addition to zero complications and recurrence rates.

OP 15

## **OUTCOME OF THIGH ARTERIO VENOUS FISTULAS (TAVF) FOR HAEMO-DIALYSIS (HD) FOR CHRONIC KIDNEY DISEASE PATIENTS**

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### Introduction

Functioning Arterio venous fistula (AVF) is an essential need for CKD Patients. It is best to have an upper limb AVF if it is not possible (e.g. In superior vena cava (SVC) obstruction) then a TAVF or a tunnelled line is the next option. Significant number of patients with SVC obstructions due to previous dialysis line insertions present to our unit. We are presenting a series of TAVF created on such patients.

### Methods

This is a retrospective analysis of patients who underwent TAVF at Teaching Hospital Anuradhapura over a 16 month period. Patients died in immediate post-operative period and who were lost to follow up was excluded. In all patients AVF was created between Lower superficial femoral artery and long Saphenous vein (LSV). LSV was tunnelled subcutaneously in a gentle curve orientation.

### Results

7 patients underwent TAVF and 5 included (2 excluded). 3 were males and 2 were females. All patients had failed upper limb AVFs or SVC obstruction. Mean age was 40.4 years. At mean follow up of 52.2 weeks, 4 patients were able to start on HD using TAVF. Success rate of TAVF was 80%.

### Conclusion

In our series success rate was 80%. This is a desirable outcome and is better than tunnelled line which is associated with high rate of infection. Keeping the LSV in gentle curve position rather than loop orientation results in easier cannulation.

OP 16

### BLIND UPHILL BALLOON ANGIOPLASTY: A NOVEL TECHNIQUE OF LOWER LIMB REVASCULARISATION

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### Introduction

An increasing number with critical limb ischaemia due to

superficial femoral (SFA) or tibial (TA) disease are either unsuitable for bypass surgery or do not have access to endovascular procedures.

We describe a novel technique of minimal-access, blind, balloon angioplasty suitable for limb salvage without significant surgical trauma, x-rays or use of contrast in those with significant cardiac and renal impairment and deemed unfit for standard interventions.

### Methods

Under local anaesthesia and Heparin the popliteal/tibial artery is accessed and opened into. A Fogarty balloon catheter is passed across the occlusion and is replaced with a guide wire over which an angioplasty balloon is sited and repeatedly inflated as it's moved across the entire segment. Feasibility, mortality, distal perfusion pressure increase and healing were documented.

### Results

Ten (7 SFA, 3TA) consecutive attempts are presented. Six (5SFA, 1 TA) were possible. In 4, the balloon catheter did not cross the lesion. All 4 were amputated, 3 died subsequently. All 7 SFAs were accessed uphill. 2 lesions could not be crossed. The remaining 5 were completed with return of popliteal pulses and 0.25 median increase in pressure index. At 6 months, 4 healed completely and the other nearly. Of the 3 TAs, the downhill catheters failed to cross the disease. The only uphill procedure was successful with return of distal pulses but had a cardiac death.

### Conclusion

In a resource limited setting, critical limbs in those with prohibitive surgical risks seem to benefit from minimal access, uphill, blind balloon angioplasty.

OP 17

### ENDOASCULAR ANEURYSM REPAIR(EVAR): THE FIRST CASE SERIES FROM SRI LANKA

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### Introduction

Endovascular aneurysm repair (EVAR) is another treatment option for high risk patients with aortic aneurysms. This is the first series of patients done in Sri Lanka.

**Methods**

10 EVARs performed from 2012 - 2016 were retrospectively analysed in relation to demographic factors, indications and outcomes with special consideration to perioperative complications and survival.

**Results**

The median age is 73 (59-80) years (male- 80%). All had Antero-posterior aneurysm diameter more than 5.5cm. Of them: 7 infra renal aortic aneurysms, 1 distal aortic aneurysms extending to common iliac artery, 1 thoracic aortic aneurysm and 1 thoraco-abdominal aortic aneurysm seen. All the aneurysms were successfully treated as elective surgeries (9 under general anaesthesia, 1 under local anaesthesia). Postoperative morbidity were seen in 30%, One developed acute liver failure secondary to right heart failure, another 2 developed bleeding and an unexplained backache respectively. The average hospital stay was 4 days (1-7 days). Postoperative imaging didn't reveal endoleaks, graft occlusion or migration in all 10 patients. Follow up revealed 9 patients were alive without any complication related to the aneurysm and 1 death due to an intra cerebral haemorrhage following a fall.

**Conclusion**

Endovascular treatment option offers a feasible alternative to standard open repair with the potential of reduced hospitalisation, morbidity and mortality.

OP 18

**PERCUTANEOUS TRANSLUMINAL LOWER LIMB ANGIOPLASTY DONE IN A MINIMAL RESOURCE SETTING**

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**Introduction**

Percutaneous transluminal angioplasty is a treatment modality for occlusive arterial disease applicable even in high risk patients unfit for open surgery. This is the first series of patients done in Sri Lanka by vascular surgeons.

**Methods**

Data from 148 patients who underwent lower limb

angioplasty from January 2013 to May 2016 were included. All the cases were done using 1 wire and 1 balloon.

**Results**

119 patients (80.4%) were male. The mean age was 66.4 years and all had tissue loss. This group had 19(13%) superficial femoral, 8(5.4%) popliteal, 57 (38.5%) tibial and 6 (4%) iliac, 58(39%) combinations of lesions. 84% cases were treated successfully radiologically. Perioperative mortality was 1 (0.6%), Morbidity were seen in 9 (6%). One year response rate was 89%. Overall 1 year survival rate is 74%. Limb salvage and wound healing figures are 74%, 33% respectively. The two year response rate was 81% and 64% were alive. Overall 2 year limb salvage and the complete wound healing figures are 74%, 43% respectively. The mean duration of wound healing is 7.97 months.(2-30 month range)Kaplan-Meier analysis shows there is no significant difference between patients treated for tibial lesions only and combination of lesions terms of survival and limb salvage rates.

**Conclusion**

Lower limb angioplasty can be considered an effective treatment modality with very low complication rates. Even without stents, using only 1 wire and 1 balloon a reasonable limb salvage rate could be achieved.

OP 19

**GO HOME AND WALK' ADVISE TO CLAUDICANTS: NON SUPERVISED V SELF MONITORING LOG BOOK-A RANDOMIZED CONTROLLED TRIAL**

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**Introduction**

Evidence points to unsupervised home-based programs being beneficial, but supervised programs being even more effective. Nevertheless hospital based supervision is not feasible and impractical to both patients and health care workers in our setting. We hypothesize indirect supervision by introducing a personal log book for exercise would be superior to standard unsupervised go home and walk advice for claudicants. Preliminary data is presented.

**Methods**

39 consecutive consenting claudicants were advised to walk at least for one hour/ day on four days a week and reviewed every three months. Half of them were randomized to a group (A) who maintained a log book in which they made a daily entry start and finish time of their walk. The others, group B were expected follow instructions without being monitored. Walking distance in meters to the onset of pain (initial distance, ID) and maximal pain (maximal distance, MD) were measured using a standard treadmill protocol.

**Results**

GpA v GpB, at recruitment, median, iqr for, ID:30[40] v 25[82.5] and MD:40(150) v 32.5(126.5) were similar. At 3 months, 7 (2 v 5) defaulted, 5 (2 v 3) deteriorated increase in ID: 60 (200%) v 0 (0.00%) and MD:80(350%) v 10(50%). Percentage that increased the MD by >100m: 8/17(47.05%) v 5/15(33.33%).

**Conclusion**

There is a trend towards greater improvement among those claudicants maintaining a personal log book as opposed to stand alone advice.

## OP 20

**OUTCOMES OF INFRA INGUINAL BYPASS SURGERY : A SINGLE UNIT EXPERIENCE.**

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**Introduction**

The effectiveness and safety of surgical revascularization continues to be questioned. We present a single centre audit of lower extremity bypasses performed over 18 months.

**Methods**

Consecutive patients undergoing infra-inguinal lower limb bypasses at the University Surgical Unit, Colombo from January 2015 to May 2016 were studied. Subjects were prospectively followed up until healing, amputation or death by clinical assessment and by telephone based questions at 6 and 12 months.

**Results**

145 patients (Rutherford 5) underwent infra-inguinal bypass procedures, including 68 femoro-popliteal (47%), 65 popliteal-distal (45%), and 12 femoro-tibial (8%) bypasses. The median age was 66 years (range 39-90). 63% were male. Median follow up was 6 months. 30 day perioperative mortality was 6.4% and amputation rate 9.6%. Overall amputation free survival(30 day) was 84%, with figures of 83% for femoro-popliteal and 78% for popliteal-distal bypasses. At 6 months, Kaplan-Meier survival analysis for patient survival, limb salvage and wound healing in salvaged limbs was 85%, 80% and 75%. The corresponding figures at 1 year were 82%, 80% and 95% respectively. There was no significant difference in survival, limb salvage and wound healing between femoro-popliteal and distal bypasses.

**Conclusion**

These results justify our revascularization strategy for Rutherford 5 category limb ischaemia.

## OP 21

**USE OF THE SOCIETY FOR VASCULAR SURGERY LOWER EXTREMITY THREATENED LIMB CLASSIFICATION SYSTEM BASED ON WOUND, ISCHEMIA AND FOOT INFECTION (WIFI)**

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**Introduction**

Amputation prevention and wound healing depends not only on the severity of ischaemia, but also on the severity of the wound and infection. These characteristics among those presenting with limb threatening disease in Sri Lanka has never been examined.

**Methods**

Fifty four consecutive patients with ulcerated limbs presenting over two months to the University unit at the National Hospital were staged according to the Society for Vascular Surgery (SVS) Wound, Ischemia, and foot Infection(WIFI) classification system.

**Results**

The median age was 64(39-93). 42(79%) were male. Comorbidities were diabetes(87%) hypertension(53%),

ischemic heart disease(14%) cerebrovascular disease(13%) chronic renal disease(13%). Smoking was reported in 35%. Median Anterior Tibial Artery (ATA), Posterior Tibial Artery(PTA), Toe pressures, Ankle Brachial Index, Pole tests values of the affected side lower limbs were 114.5mmHg, 107.5mmHg 41mmHg, 0.87 and 85cm respectively. Values for the contralateral limb were 140mmHg, 120mmHg,74mmHg, 1.0 and 85cm respectively. 84% of ATA and 90 % of PTA pulses were not palpable on the affected side. Grades of ischaemia were none (23.3%), mild (27.9%), moderate (18.6%), severe (30.2%), grades of infection were none (20.9%), mild (37.2%) moderate (39.5%) severe (2.3%) and wound grades were 0 (0%), 1 (20.9%), 2 (39.5%), 3(39.5%).Estimated risk of amputation were high (65.1%), moderate (11.6%), low (11.6%), very low(11.6%) and estimated benefit of revascularization were high (46.5%) moderate (23.3%), low (7.0%), very low (23.3%).

### Conclusion

In this population of patients 67% had a moderate or high risk of amputation and 70% would benefit from a revascularization procedure.

OP 22

### POSITION OF THE VERMIFORM APPENDIX, A CROSS SECTIONAL STUDY

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### Introduction

The vermiform appendix may occupy several positions. The commonest position seen in clinical practice is retrocaecal. Other positions, including retrocolic, pelvic, subcaecal and pre or postilial, are occasionally seen. This anatomical variation is a challenge during open appendectomy because it may require extension of the skin incision or additional muscle splitting or muscle cutting. It may increase the morbidity of the surgery.

### Methods

We have assessed the position of the appendix in all patients undergo open and laparoscopic appendectomy for acute appendicitis in surgical wards in General Hospital Trincomalee from August 2015 to January 2016. The percentages of different positions of appendix were calculated.

### Results

22 male and 17 female patients (total 39) with acute appendicitis were included to the study, with age range of 6 years to 71 years; Mean- 27.6 years (SD- 17.5 years). Retrocaecal 53.8%, Retro colic 12.8 %, Pelvic 23.1%, Postileal 7.7%, Sub caecal 2.6%

### Conclusion

Our study indicates that retrocaecal is the commonest position while the pelvic appendix is the second commonest. Although there is ethnic variation of position of appendix, our study results do not deviate from international values. In western literature retrocaecal and retrocolic appendix together account for 65% of incidence and it can present in the iliac fossa in 31%.

OP 23

### IS THERE AN ASSOCIATION BETWEEN INFLAMED APPENDIX AND ITS INTERNAL DIAMETER?

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### Introduction

The anatomy of the vermiform appendix displays great variation in internal diameter (ID) and may influence clinical outcome. Studies related to this observation are scarce. This cross sectional study aims to find an association between ID and inflammation using pathological specimens.

### Methods

Appendectomy specimens were pathologically examined and features of inflammation and internal diameter were measured between January and May 2016 in a single surgical unit. SPSS v.20 was used for analysis.

### Results

Eighty-eight samples were analyzed. Age ranged from 13 to 70yrs with a mean of 31.16yrs ( $\pm 14.36$ ). Forty-nine were inflamed and 39 were not. ID ranged from 1mm to 20mm with mean of 7.39mm ( $\pm 2.89$ ). Chi square test was used to assess association between various IDs and presence of appendicitis, and 8mm used as the best demarcation. 45 samples had ID of  $\geq 8$ mm and 35 were positive and only 10 were not inflamed. Forty-three had ID of  $\leq 7$ mm, 29 were not inflamed and 14 were inflamed ( $P \leq 0.05$ ). Positive and Negative Predictive

values were 78% and 22.5%. Odds ratio was 3.34 (P = 0.0038). Sensitivity and specificity respectively were 71.4% and 74.5%.

### Conclusion

There is a high probability of finding an inflamed appendix when its internal diameter is  $\geq 8$ mm. In doubtful cases of appendicitis the internal diameter may be a useful tool in diagnosing inflammation.

OP 24

### DIAGNOSIS OF ACUTE APPENDICITIS: IS ALVERADO SCORE BETTER THAN RIPASA SCORING SYSTEM?

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### Introduction

A prompt and accurate diagnosis of acute appendicitis (AA) is rewarded by marked decrease in morbidity and mortality. There are different scoring systems to facilitate the diagnosis of AA.

### Methods

A retrospective observational study was carried out in the North Colombo Teaching Hospital, Ragama, Sri Lanka for a period of one year from 1st of April 2014 using histology as gold standard. Patients who have undergone appendectomies on clinical assessment were included. Patient's bed head tickets were assessed according to the Alverado and RIPASA (Raja Isteri Pengiran Anak Saleha Appendicitis) scoring systems. The main objectives were to determine sensitivity and specificity for Alverado score and RIPASA scoring systems.

### Results

One hundred patients (63 males: 37 females: median age 33 years, range 6–67 years) were included & 92 were diagnosed as AA histopathologically. Sensitivity for Alverado vs RIPASA scores were 96.7% vs 95.5% which was significant (p value <0.001). Specificity for Alverado vs RIPASA scores 62.5% vs 55.5% (p value <0.001).

### Conclusion

Alvarado score has a better sensitivity and specificity than the RIPASA score.

OP 25

### RESECTION MARGINS AND LYMPH NODE CLEARANCE IN LAPAROSCOPIC ANTERIOR RESECTION AND ABDOMINO-PERINEAL RESECTIONS

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### Introduction

Anterior resection and abdomino-perineal resection are the curative resections for carcinoma of the rectum. Minimal access resections reduce the length of exposure and incision while having a clear vision with magnification, facilitating the resection. The post-operative morbidity is reduced. However it is important to obtain oncologically acceptable resection and lymph node clearance. This study was designed to evaluate resection margins and lymph node clearance of laparoscopic anterior resection and abdomino-perineal resection.

### Methods

A retrospective analysis of resection margins and number of lymph nodes harvested by laparoscopic anterior resection and abdomino-perineal resections performed from January 2014 to April 2016 was evaluated. The number of lymph nodes harvested was compared with that of open resections.

### Results

Twenty four patients underwent the procedure. The resection margins were clear in all except one. The patient with the positive resection margin was a 72 year old male who underwent complete laparoscopic mobilization and a pull through colo-anal anastomosis. The histopathology showed an adenocarcinoma arising from a villous adenoma. The lower resection margin was positive for low grade dysplasia. The average number of lymph nodes harvested was 18, comparable to open resections.

### Conclusion

There is increasing trend for laparoscopic anterior resection and abdomino-perineal resection worldwide and in most of the studies it is proven that the resection is comparable with open surgery achieving acceptable oncological requirements and with less post-operative morbidity. Laparoscopic anterior resection and abdomino-perineal resection have provided satisfactory

tumour clearance with negative resection margins in 96% of cases. The lymph node clearance is comparable to that of open surgery.

OP 26

### **PREVENTION OF SURGICAL SITE INFECTIONS IN APPENDICECTOMY**

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#### **Introduction**

Surgical site infections (SSI) after appendicectomy for perforated appendix (PA) are common. Post appendicectomy SSI causes a significant morbidity. Various surgical alternatives have been described to minimize the SSI. We have assessed the wound irrigation technique versus SSI after appendectomy for PA.

#### **Methods**

This study was included with 69 patients with intraoperatively confirmed appendicitis. All the surgeries were done according to standard open procedure by single surgical registrar. Patients were divided to 2 groups and one (n=35) had irrigation of muscles and skin with 500 ml of 0.9% saline after closure of transversus abdominis muscle layer and other (n=34) swabbed with povidone iodine soaked towel. All patients had primary closure. Incidence of SSI was measured on discharge and 1st clinic visit. Data analyzed with SPSS version 22.

#### **Results**

Mean age of patients were 20.96 (range 4-57) years. Majority were males (n=37, 53.6%). Average hospital stay was 2.8 days. 19 (27.5%) patients had perforated appendix and 1 with gangrenous appendix. There were 2 (2.9%) cases of superficial SSI in the group. 1 patient had perforated appendix and other had inflamed appendix. Both patients were cleaned with betadine swabs. There was no significant increase in SSI in perforated appendix group. (p= .45)

#### **Conclusion**

Our cohort of patients had SSI rates compared to international data. This study also supports the feasibility of primary closure of perforated appendix without increased morbidity. Our data suggests that cleansing of wound with saline results in lower SSI. Further studies are needed for better statistical

comparison.

OP 27

### **INCIDENCE OF LOW ANTERIOR RESECTION SYNDROME IN A SELECTED GROUP OF PATIENTS WHO UNDERWENT LAPAROSCOPIC ANTERIOR RESECTION**

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#### **Introduction**

Laparoscopic sphincter sparing surgery for rectal cancer as well as survivorship is improving in Sri Lanka, making quality of life increasingly important. Low Anterior Resection Syndrome (LARS) is still an ill-defined yet prevalent entity leading to significant impairment in quality of life. This study aims to profile its incidence in a Sri Lankan cohort of patients who have undergone laparoscopic anterior resection.

#### **Methods**

All patients who have undergone laparoscopic anterior resection in our unit were selected. Of those who were contactable, patients who currently have stomas were excluded. The standardized Low Anterior Resection Syndrome Score (LARS Score), assessing incontinence for flatus, faecal (liquid matter) incontinence, frequency, sense of incomplete evacuation and urgency -was applied to the study population.

#### **Results**

Forty patients had undergone laparoscopic anterior resection. Twenty one patients responded. Three were excluded due to stomas. Among the sample population of 18, 11 (61.1%) were females. Four (22%) had had neoadjuvant therapy. Eight (44.4%) had been on follow up for less than 24 months, 7 (38.8%) for 24 to 60 months and 3 (16.6%) for more than 60 months. Three (17%) had temporary ileostomies which were reversed at 4, 7 and 20 months. None of the patients had similar symptoms pre-operatively. Based on the LARS score criteria, no LARS was seen in 11 (61.1%), 5 (27.8%) had minor LARS and 2 (11.1%) had major LARS. None of those with temporary ileostomy, developed LARS after reversal.

#### **Conclusion**

A significant percentage of patients (38.9%) who have undergone laparoscopic anterior resection suffer from LARS.

OP 28

**DISEASE PATTERN IN SRI LANKAN IBD PATIENTS**

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**Introduction**

The prevalence of inflammatory bowel disease (IBD) is increasing worldwide. We assessed the pattern of disease in a cohort of Sri Lankan IBD patients.

**Methods**

Information was collected from IBD patients attending the gastroenterology clinic of the National Hospital of Sri Lanka from March to June 2016. All cases had endoscopic and histological confirmation of IBD. Demographic, clinical and investigation findings were recorded. Disease activities were calculated by Simple Clinical Colitis Activity Index (SCCAI) for ulcerative colitis (UC) and Harvey-Bradshaw index for Crohn's disease (CD).

**Results**

There were 129 patients (UC=100, CD=29). Age: range 14-81 years (mean=47, SD=16). 48 (48%) UC and 10 (34%) CD patients were females. Twenty one (21%) UC and 8(28%) CD patients had at least one immune-related comorbidity. Eleven (11%) UC and 7 (24%) CD patients have had reactions to at least one food or drug and 3 (3%) UC patients have a confirmed family history of UC in a first degree relative. Medications used at the time of review were: Sulphasalazine – 105 (81%), Prednisolone – 11(9%), Azathioprine – 55 (43%) and Amitriptyline – 11 (9%). Fifty four (42%) are on multidrug therapy and 80 (62%) had received oral steroids in the past. Nine (31%) CD and 1 (1%) UC patients had undergone surgery. Average disease activities were: before treatment (UC=12.72, CD=10.94) and on treatment (UC=2.81, CD=3.90).

**Conclusion**

UC is more common than CD in Sri Lanka. Optimized medical treatment helps reduce disease activity. Sizeable numbers of CD patients have an immune related co-morbidity and need a surgical procedure.

OP 29

**LAPAROSCOPIC COMMON BILE DUCT EXPLORATION (LCBDE), SAFE TECHNIQUE FOR COMMON BILE DUCT STONES**

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**Introduction**

Laparoscopic Common Bile Duct exploration is a single stage, single stay procedure with low morbidity and mortality which is currently the gold standard for CBD stones.

**Methods**

We have started performing LCBDE in January 2013. Procedure was done using two 10mm and two/three 5mm ports. We used trans-ductal approach for majority and trans-cystic approach used only once. Stone extraction done with standard laparoscopic forceps, vascular forgarty catheters, dormia basket followed by choledhoscopic confirmation. We routinely placed T-tube and allowed to free drain and on post-operative D10 T-tube Cholangiogram was done to confirm complete clearance.

**Results**

LCBDE performed in 18 patients since January 2013. Twelve were female, age range from 27 to 84 years with mean of 56.8 years. Nine of them had previous ERCP and stenting (two patients had ERCP trice). Three patients had cholangitis preoperatively. During exploration 10 were having multiple stones while 7 having single stone in the duct system. One patient had common hepatic duct stones and all others had CBD stones. Average operative time was 4 hours and 5 minutes. We achieved 100% stone clearance. None of our patients experienced any major morbidity or mortality. Average hospital stay was 10.2 days ranging from 4 to 25 days. We have followed up patients since 2013 and only once we encountered recurrent stones and underwent re-exploration successfully.

**Conclusion**

LCBDE is a safe procedure for CBD stones with a significantly low morbidity and mortality in the hands of experienced laparoscopic surgeon

OP 30

**A NEW PARADIGM FOR ULTRASONOGRAPHY, AS AN OUTCOME PREDICTING TOOL IN**

**CHOLEDOCOLITHIASIS**

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**Introduction**

This study is designed to evaluate the effectiveness of ultrasonography as an outcome predicting tool in the management of choledocolithiasis.

**Methods**

This is a retrospective analytical study enclosing a continuous sample of 247 subjects for a period of five years until January 2016. The sample includes patient referred for endoscopic management of choledocolithiasis to a tertiary care Hospital. Ultrasound reporting was done by different consultant radiologists and senior registrars of the hospital and of referring hospitals.

**Results**

USS was 97.4% accurate in detecting intrahepatic duct dilatation. Stone count given in the USS is strongly correlated with the number of stones delivered during endoscopic removal ( $p < 0.001$ ). The difference in mean diameter of the CBD of patients with choledochal cyst (18.57mm) and of patients without choledochal cyst (12.39mm) is statistically significant ( $p < 0.001$ ). At 14.5 mm, the negative predictive value for a choledochal cyst is 99.02%. Having multiple stones (Chi square  $p = 0.03$ ) and having proximal or mid CBD stones (Chi square  $p = 0.02$ ) were predictors of incomplete CBD clearance.

**Conclusion**

Ultrasonography is an excellent tool to detecting IHDD, stone count and the presence of a choledochal cyst. A CBD diameter of 14.5 mm in USS can be used as a cutoff for predicting extrahepatic choledochal cysts. Multiple stones and proximal or mid CBD stones are predictive of difficult CBD clearance.

OP 31

**DISEASE CHARACTERISTICS AND ENDOSCOPIC MANAGEMENT OF CHOLEDOCOLITHIASIS IN SRI LANKA**

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**Introduction**

This study is carried out to determine epidemiological, clinical and endoscopic characteristics of choledocolithiasis in Sri Lanka.

**Methods**

This is a retrospective analytical study enclosing a continuous sample of 253 subjects for a period of five years until January 2016. The sample includes patient from many parts of the island referred for endoscopic management of choledocolithiasis to a tertiary care hospital. Data is collected from the ERCP data base of the unit and from patient records.

**Results**

Mean Age of the patients is 53.6 and majority were females (58.9%). Patients were presented with obstructive jaundice (58.5%), cholangitis (25.3%), biliary colic or upper abdominal pain (14.2%) and biliary pancreatitis (2%). Patients presenting with cholangitis were significantly older than the patients with biliary colic ( $p < 0.001$ ). In 173 patients (68.4%) ultrasound has detected gall bladder calculi. 36 patients (14.2%) had juxta-papillary diverticuli. Stones were commonly found in distal CBD (68.4%) and majority had a single stone (47.8%). ERCP detected choledochal cysts in 21 (8.3%) and CBD strictures in 9 (3.6%) patients. CBD clearance was achieved endoscopically in 55.6% of patients in one attempt and 35.6% patients were stented.

**Conclusion**

Advanced age is correlated with grave complications of choledocolithiasis like jaundice and cholangitis. Patients with multiple CBD stones and proximal or mid CBD stones are more likely to require further endoscopic or surgical care.

OP 32

**RESECTION MARGINS AND LYMPH NODE CLEARANCE IN LAPAROSCOPIC ASSISTED PANCREATICO-DUODENECTOMY**

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**Introduction**

Pancreatico-duodenectomy is the curative resection for carcinoma of head of the pancreas and periampullary

carcinoma. Minimal access resections reduce the length of exposure, incision while having a clear vision with magnification, facilitating the resection. However surgeon faces a challenging learning curve and has to obtain oncologically acceptable resection and lymph node clearance. This study was designed to evaluate resection margins and lymph node clearance of laparoscopic assisted pancreatico-duodenectomy.

### Methods

A retrospective analysis of resection margins and number of lymph nodes harvested by laparoscopic assisted pancreatico-duodenectomy, performed from January 2014 to April 2016 was evaluated. The number of lymph nodes harvested was compared with that of open resections.

### Results

Twenty one patients underwent the procedure. The resection margins were clear in all except one. One patient with clear resection margins had only high grade dysplasia. The average number of lymph nodes harvested was 10 comparable to open resection.

### Conclusion

Although the Laparoscopic pancreatico-duodenectomy has been described two decades ago, its practice is limited since it is technically demanding. It is currently a feasible option in selected patients at centres with available expertise and technical support. Laparoscopic pancreatico-duodenectomy has provided satisfactory tumour clearance with negative resection margins in 95% of cases. The lymph node clearance is comparable to that of open surgery.

OP 33

### IS ROUTINE ON-TABLE CHOLANGIOGRAM (OTC) INDICATED FOR LAPAROSCOPIC CHOLECYSTECTOMY?

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### Introduction

The role of routine on-table cholangiogram (OTC) in Laparoscopic cholecystectomy is controversial. We reviewed results of our series of patients to assess the benefit of routine OTC during laparoscopic cholecystectomy and identify pre-operative criteria for OTC.

### Methods

This is a retrospective analysis of 205 patients in a single centre between years 2012-2013. All these operations were elective laparoscopic cholecystectomy that underwent routine OTC. Liver function test (LFT), ultrasound results and outcome of OTC were recorded for all patients. All these operations were performed by a single surgeon.

### Results

There were a total of 205 patients. 182 (89%) did not have bile duct stones. 23 (11%) patients were found to have bile duct stones and underwent further Common Bile Duct (CBD) exploration. Among these 23 patients, 13 (57%) had deranged LFT's and dilated CBD and the remaining 10 (43%) patients had dilated CBD. Out of 182 (89%) patients with normal OTC, only 25% were found to have deranged LFT's and remaining 75% had normal LFT profile and normal CBD.

### Conclusion

The above results highlight no clear benefit in undergoing routine OTC during laparoscopic cholecystectomy. Majority (89%) of patients had normal OTC and the remaining 11% patients who underwent CBD exploration had deranged LFT's and dilated CBD recorded on ultrasound. Therefore we can also conclude that deranged LFT and dilated CBD are potential sensitive markers for performing OTC. Preventing routine OTC will help to reduce operative times as well as reduce the risk of peri-operative complications.

OP 34

### MICROBIOLOGICAL PROFILE AND ANTIMICROBIAL SUSCEPTIBILITY PATTERNS IN BLOOD CULTURES FROM PATIENTS WITH BILIARY SEPSIS

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### Introduction

Biliary sepsis is a condition with significant morbidity and mortality. Empirical antibiotic treatment is determined by the most likely causative organisms and local susceptibility patterns. This study looks at the microbiological profile and antimicrobial sensitivity patterns (ABST) of blood cultures from patients with suspected biliary sepsis.

### Methods

Blood culture & ABST results obtained during the 6 months from November 2015 to April 2016 from patients with suspected biliary sepsis were retrospectively analyzed using the database at the Microbiology Laboratory of the NHSL, Colombo.

### Results

The total number of patients was 88. Mean age = 57 (range 15-82) and male: female = 1:1.1. Positive cultures were obtained in 32% (n=28) of which 67.8% were gram-negatives. Of the 28 positive cultures, the commonest organisms isolated were coliforms (n=10) followed by *Enterococci* (n=4) and *Staphylococcus aureus* (n=2). Coliforms were most sensitive to amikacin (100%), meropenem (77.8%), imipenem (66.6%) and cefepime (60%). Sensitivity to 2nd and 3rd generation cephalosporins was 50%. All staphylococcus isolates were methicillin sensitive while 1 of 4 *Enterococci* isolates showed resistance to vancomycin (VRE).

### Conclusion

The exceptional susceptibility to aminoglycosides shown by most causative organisms (i.e. gram negatives) of biliary sepsis makes them an effective and low cost first-line option in therapy. Carbapenems are a good, albeit expensive alternative in patients with compromised renal function. Of concern, is the increased resistance to cephalosporins. These results match anecdotal evidence showing increasing incidence of ESBL coliforms with similar sensitivity patterns.

OP 35

### FACTORS ASSOCIATED WITH NEED FOR REVISION RECONSTRUCTION OF HEPATICOJEJUNOSTOMY AFTER IATROGENIC BILIARY INJURIES

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### Introduction

Anastomotic stricture(AS) is the most frequent long-term complication of hepaticojejunostomy(HJ), the reconstructive procedure for iatrogenic biliary injuries(ABI). We analyzed the factors associated with AS leading to revision-HJ(RHJ) in all HJs performed for ABI in our unit.

### Methods

Association between the mode and Bismuth grade of initial injury, time and place of primary reconstruction and presence of vascular injury or bile leak were compared between two groups, RHJs and successful primary Hjs (SPHJs).

### Results

Out of 35 biliary reconstructions for ABI (30 females; Mean age-39 years), 23 had SPHJ and 12 needed RHJs (two re-revisions). Laparoscopic approach was the mode of injury in 8/12 RHJs and 14/23 SPHJs (P=0.626). All twelve in RHJ group and 10/23 in SPHJ group had hilarinjuries ( $\geq$  Bismuth III) (P= 0.033). Median time for primary reconstruction was three weeks in RHJs and 17 in SPHJs(p <0.001). Nine cases in RHJ group had initial reconstruction peri-operatively or within eight weeks of injury. All reconstructions were completed after eight weeks among SPHJs (P <0.001). Primary reconstruction was performed in a specialized hepatobiliary unit (SHBU) in 5/12 RHJs and 23/23 SPHJs (p<0.001). Four out of five cases with vascular injuries needed RHJ (P=0.047). Presence of bile leak lead to significantly earlier reconstruction (p <0.001), but was not associated with need for RHJ (p>0.05). Average time for a revision was 42(Range 8-120) months after primary HJ.

### Conclusion

Hilar injuries, early reconstructions, reconstructions at non-SHBUs and presence of vascular injury had significant association for AS leading to RHJ. Revision reconstruction was independent of initial cause of injury or presence of a bile leak. HJ stricture may happen even after ten years.

OP 36

### KI-67 INDEX AND AXILLARY LYMPH NODE METASTATIC STATUS OF BREAST CANCERS IN SRI LANKA

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### Introduction

The Ki-67 is a nuclear protein seen in proliferating cells and this is a prognostic factor in breast carcinoma. We focused the correlation between Ki-67 index and axillary lymph node metastasis in carcinoma of breast.

### Methods

This retrospective study conducted at NHSL in 2015 with permission. Out of 198 patient's records we analysed only 79 records which were possess

the Ki-67 status.

### Results

Study shows 22.8% (n= 18) of the patients had the Ki-67 index < 10. There were 60% (n=48) of patients contain Ki-67 index more than 20. Only 6.3% of the patients had more than 70. Positive axillary nodes seen in 46 patients (58.2%). When see the correlation between patients with positive axillary lymph nodes and Ki-67 index, if the index is <10, only 22% of patients with positive lymph nodes, index is (60-70), 85% of the patients with positive lymph nodes and index is more than 70, all the patients were nodes positive.

### Conclusion

According to "International Ki-67 in Breast Cancer Working Group" the Ki-67 cut-off point is 15 for breast carcinoma, even though different laboratories and experts use different values. Wide clinical usage of Ki-67 is still limited due to uncertainty of cut-off value. In this study direct proportional relationship noted between the Ki-67 proliferation index value and metastatic involvement of axillary nodes.

OP37

### ASSOCIATION BETWEEN LYMPH NODE RATIO AND OTHER PROGNOSTIC FACTORS IN BREAST CARCINOMA

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### Introduction

Lymph node ratio (LNR) has been identified as the most significant prognostic factor in node positive breast cancer (NPBC). This study assesses the association of LNR to other epidemiological and biological prognostic factors.

### Methods

A cohort of patients with NPBC was identified and epidemiological, histological and biological parameters were assessed retrospectively through clinic records. LNR was calculated and patients were categorized into low (<0.2), intermediate (0.2-0.65) and high risk (0.66-1) groups. Variations among each risk category were compared using chi square test through SPSS.

### Results

There were 66 NPBC patients and median LNR was 0.36 (range 0.05-1). 24.2% (n=16) had less than 10 nodes removed. There were 24 (36.3%), 28 (42.4%) and 14

(21.2%) patients in low, intermediate and high risk categories. Age (p=0.2), Tumour (T) stage (p=0.23), ER (p=0.5), PR (p=0.49), Tumour grade (p=0.16) and distant metastasis (p=0.44), were not significantly associated with LNR. HER2 positivity had a positive trend (P=0.06). Lymphovascular invasion was a significant risk factor for high risk LNR (p=0.0002) where as positive family history was protective (P=0.02).

### Conclusion

We have a higher LNR compared with international studies. Possible delays in diagnosis may be the reason for this finding. Lower risk in positive family history patients also supports this hypothesis as increased awareness avoids delays.

OP38

### ETHNIC VARIATION OF PROGNOSTIC MARKERS OF BREAST CANCER

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### Introduction

Ethnic differences in breast cancer was extensively being studied among the continents. Sub-continental studies from Asia are scarce. Identification of the prognostic markers among the various ethnic groups would be beneficial in management implications and allocating resources for breast cancer.

### Methods

Prospective cross sectional study was carried out at National Cancer Institute Maharagama and Teaching Hospital Jaffna. All female patients operated for early breast cancer in the above units from January 2016 to April 2016 were included. Patients' demographics, TNM stage at diagnosis, histopathology along with Immunohistochemistry reports were analyzed between Sinhala and Jaffna Tamil population.

### Results

There were 114 Sinhala patients and 61 Jaffna Tamil patients. Mean age of presentation was 56.7(SD±11.7) years for Sinhalese while it was 54.3(SD±10.6) years for the Tamils. The majority both parties had of invasive ductal carcinoma. In comparison of these two ethnic groups, Sinhala population were diagnosed at advanced disease stage and worse histological grade with

statistical significance ( $P=0.005$  and  $P=0.043$  respectively) while Tamils had statistically significant positivity in axillary nodal involvement ( $p=0.003$ ). However, no statistical significant difference was detected in T stage, lymphovascular invasion or ER/PR status. Furthermore, majority of Sinhalese confers Her2 neu receptor status ( $p<0.05$ ).

### Conclusion

Sinhalese seems to present at a later stage while Tamils had higher pathological node involvement. Further research is needed to evaluate these prognostic markers among the ethnicities.

OP 39

### PREDICTIVE FACTORS OF NON SENTINEL LYMPH NODE INVOLVEMENT IN SENTINEL LYMPH NODE(SLN) POSITIVE BREAST CANCER PATIENTS.

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### Introduction

SLN biopsy is an oncologically accepted technique of staging axilla in breast cancer patients. The standard practice for SLN positivity is Axillary Lymph Node (ALN) dissection. However in 40-70% patients, the SLN is the only involved axillary node. Factors predicting non-SLN metastasis should be identified in order to define subgroups of patients with positive SLN in whom axilla may be staged by SLN biopsy alone.

### Methods

The Breast Cancer patients undergoing primary surgery at NCI Maharagama from March 2013 with clinically and imaging negative axilla, were offered SLNB with Isolated Methylene Blue Technique. Pearson's Chisquare test and Fishers exact statistical tools were used to assess the predictors.

### Results

Out of 71 SLN positives, 15 were excluded with incomplete data. 27(48.2%) had positive non-sentinel ALN involvement. Out of the patients with a single positive SLN, only 33% had non-SLN deposits. Non-SLN involvement had statistically significant correlation ( $P<0.05$ ) with T stage, presence of extra nodal extension in SLN and the number of positive SLNs. Tumour type, Grade, ER status and SLN size were not

significant. Though the Lymphovascular invasion showed statistically significant correlation with the number of positive non-SLNs, it's correlation with non-SLN involvement was not significant.

### Conclusion

In majority of SLN positive patients ALN Dissection was negative. 66% of the patients with a single positive SLN had no other axillary deposits. T stage, number of positive SLN and the presence of extranodal extension had positive prediction for rest of the axilla involvement.

OP 40

### IMMUNOHISTOCHEMICAL HER2 STAINING IN BREAST CANCER, A NOVEL PREDICTOR OF LYMPH NODE METASTASIS

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### Introduction

Traditional immunohistochemistry (IHC) for HER2 receptor is presented as 1+, 2+, 3+ or negative. There are specific guidelines to interpret these results to HER2 positivity. Association between HER2 positivity and ALNM are still not clear. We assessed the grades of IHC in HER2 versus the axillary lymph node metastasis (ALNM).

### Methods

Retrospective analysis of a cohort of breast cancer patients ( $n=124$ ) with HER2 IHC were performed. Epidemiological data and tumor characteristics were collected through clinic records. These data were compared using chi square test through SPSS version 22.

### Results

Mean age of study population was 52.6 years (range 24-76). Fourteen patients had negative HER2, 41 (33.1%), 47 (37.9%) and 22 (17.7%) had 1+, 2+ and 3+ IHC for HER2. 25 patients (20.2%) had ALNM. Percentage of ALNM were 7.1% for negative HER2 and 12.2%, 23.4% and 36.4% for 1+ to 3+ grades. This variation was statistically significant ( $p=.035$ ).

### Conclusion

According our knowledge this is the first comparison of grades of IHC versus ALNM. Our result shows a possible association of HER2 grade and ALNM. Genetic variations in HER2 gene may be cause for this discordant results against international literature. Limitations of study

were retrospective design with sample bias and confounding risk factors for ALNM. We recommend prospective studies to analyze the probable associations between HER2 IHC and ALNM.

OP41

**VALIDATION OF SINHALA VERSION OF EORTC QLQ-C30 (VERSION 3) AND BR-23 TO ASSESS THE QUALITY OF LIFE (QOL) IN SRI LANKAN BREAST CANCER PATIENTS**

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**Introduction**

1:40 of the Sri Lankan females are affected from breast Cancer and the incidence is rising. Its diagnosis and treatment are associated with psychological distress with impaired QOL. The health related QOL in cancer patients can be assessed by many tools. European Organization of Research and treatment of cancer (EORTC) core QLQ-C30 and Breast cancer mode QLQ-BR23 are used worldwide in this purpose. This study is aimed to assess the reliability and validity of Sinhala version of EORTC QLQ-C30 (Version 3) and BR23 questionnaires.

**Methods**

A cross sectional descriptive study was designed at NCI Maharagama. The Sinhala literate patients on clinic surveillance, after completion of primary treatment (surgery  $\pm$  CT/RT) for breast cancer were included. The self-administered questionnaires were introduced. The compliance and completion of data were assessed. Internal consistency was calculated with Cronbach's alpha coefficient (CAC) test.

**Results**

The compliance was 98% and self-completion rate was 93%. The mean age was 57.2 $\pm$ 8.7 years of the total sample of 89 patients. Average time taken by patients was 18 min. The sexuality related questions were the ones least responded (19-29%). The CACs of QLQ-C30 and BR23 for internal consistency reliability were 0.646 and 0.829 respectively with an overall value of 0.873.

**Conclusion**

This study indicates that the Sinhala versions of the EORTC QLQ-C30 (Version 3) and QLQ-BR23 are reliable and valid supplementary measure of the QOL in breast cancer patients and can be used in clinical trials and

studies of outcome research in oncology.

OP 42

**SENSITIVITY OF MAMMOGRAPHY AND ADJUNCTIVE ULTRASONOGRAPHY TO DETECT BREAST CANCER.**

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**Introduction**

Breast cancer is the commonest malignancy among females. Mammography and ultrasonography are widely used in the triple assessment of females with suspicious breast lumps.

**Methods**

A retrospective observational study was carried out in the base hospital Wathupitiwala, Sri Lanka for a period of one year from 1st of January 2015 using histology to confirm the diagnosis. All patients who had clinically suspicious breast lumps were subjected to ultrasonography (USS) and mammography. Final histology was taken as the gold standard to compare sensitivity of mammogram and ultrasonography. Data were analyzed using the SPSS 20 (Illinois, Chicago, USA) and Chi square test was used to find a significance which was assigned to a p value <0.05.

**Results**

58 breast cancer patients aged more than 35 years were analysed. 41 patients had BIRADS 5 lesions and 15 had BIRADS 4 lesions that have been detected on mammogram with a sensitivity of 96.55% which is significant (P < 0.05). 24 and 20 patients had been detected to have BIRADS 5 and BIRADS 4 lesions on USS respectively with sensitivity of 75.86%.

**Conclusion**

Adjunctive ultrasonography does not increase sensitivity in detection of breast cancers in females aged more than 35 years. Mammogram is more sensitive than USS to diagnose breast cancers in females aged more than 35 years.

OP 43

**TREATMENT OF FISTULA IN ANO WITH FISTULA PLUG: EXPERIENCE OF A TERTIARY CARE CENTRE IN SOUTH ASIA**

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### Introduction

Fistula in ano remains a surgical challenge. Most of the surgical procedures for this condition are associated with troublesome consequences. The use of biologic anal fistula plug (AFP) has demonstrated excellent fistula healing. Therefore, this study was done to evaluate the efficacy of the AFP in treating patients with anorectal fistulae.

### Methods

This is a retrospective analysis of 51 patients with cryptoglandular anorectal fistulae, who underwent a surgical procedure using AFP. Patient's demographics and characteristics of the fistulae were obtained from a database which was maintained prospectively by the University Surgical Unit of the National Hospital of Sri Lanka from January 2007 to January 2016. Success was defined by the closure of the external opening and absent drainage.

### Results

51 patients were treated with anal fistula plug (Male:Female:37:14) with a mean age of 42 years (SD±14.86, range26-70). Ten patients defaulted follow-up and they were excluded from the analysis. Therefore, 47 procedures were left to be analysed. 29(70.7%) patients were healed completely while 12(29.3%) patients failed during the follow-up period of 12 months.24 simple fistulae were successfully healed(72.7%).Recurrent plug placement had succeeded over single plug placement (83.33% vs 68.6%).There was no statistical significance between patient's age, sex, fistula type and its primary track with fistula healing rate(P>0.05)

### Conclusion

Contrary to other published studies, placement of AFP was associated with much low fistula healing rate. Most successes were seen in simple fistulae. Repeat plug placement is associated with increased success rate. Therefore, repeat plug placements may be considered in treating patients who present with a recurrence after AFP insertion.

OP 44

### OUTCOME OF LIVE DONOR KIDNEY TRANSPLANTATION (LDKT) AMONG PATIENTS WITH CHRONIC KIDNEY DISEASE OF UNKNOWN AETIOLOGY

### (CKDU)

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### Introduction

CKDu is a unique form of renal disease mainly found in North Central Province (NCP) and nearby areas. It is thought to be due to agro chemicals. We are reporting outcome after LDKT done for mainly CKDu patients.

### Methods

This is a retrospective study of LDKT done from 2012 to 2016 at Teaching Hospital Anuradhapura. Data regarding Patient demography, indications, duration of haemodialysis (HD), donor characteristics, post-operative complications and current status were collected. Patients who were lost to follow up were excluded

### Results

50 KT's were done during this period, 44 of them was LDKT. 3 were excluded (41 included) There were 35 males and 6 females with mean age of 41.9 years (20 - 64). 38 (75.6%) recipients had CKDu and most recipients were from NCP. All except 1 were on HD. Mean duration of HD was 11.1 months (2 -36). 74.4% of donors were related donors. 4 patients developed lymphoceles and 2 developed ureteric strictures. Mean follow up was 71.6 weeks (10 – 185.3). One year patient survival was 70.7 %. Most of the deaths (92.3%) were due to infections (69.2% was pneumonia).

### Conclusion

This is a unique series of LDKT for CKDu patients in Sri Lanka. CKD occur at the rate of 1.9/1000 in NCP and 70% is due to due to CKDu. Finding a donor is a challenge, because the family members are affected by the same disease. Even though the one year survival was 70.7% it is improving now (90% in the last 20 transplants).

OP 45

### IDENTIFICATION OF HIGH RISK ZONES OF ROAD TRAFFIC ACCIDENTS WITH SIGNIFICANT MORBIDITY AND MORTALITY IN MARAWILA, USING GEOGRAPHICAL INFORMATION SYSTEM (GIS)

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### Introduction

Increasing number of Road Traffic Accidents (RTA) is a burden to the economy and also to the health sector. The goal of the study was to create a GIS based analysis of RTAs which has cause morbidity or mortality and to generate a public awareness program using an android application.

### Methods

Data was obtained from Police and hospital records from 01/01/2015 to 30/04/2016 in the Marawila Police area. These data were integrated to ArcGIS 10.4 and analyzed using spatial analysis techniques and mapped for morbidity and mortality. Using Kernel Density Estimation (KDE) crash intensity was generated to identify RTA hot spots.

### Results

Spatial analysis and using KDE revealed 5 hot spots in the Marawila area. Using these data a special android application called "RTA Alerts" was developed and published in the android market. When a person is approaching a hot spot, this application will give an automated voice alert with the speed limit of the area and another alert when exiting the hot spot.

### Conclusion

This system could be extended to generate an island wide warning system. General public can access this data and be aware of hot spots when traveling to minimize RTA related injuries. These identified hot spots can be used by the government to set up public awareness notices.

OP 46

### IMPROVED ONCOLOGICAL CLEARANCE WITH EXPERIENCE DOES NOT RESULT IN A BETTER OVERALL SURVIVAL IN WHIPPLE SURGERY

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### Introduction

The Whipple surgery was traditionally considered a demanding procedure. Perioperative outcome is well known to be superior in specialized centers. The study analyses perioperative outcome and change in oncological outcome in two successive groups of patients.

### Methods

Out of 61 patients, 56 with malignant disease (22 males, age 56.5 (18-77) years) who underwent Whipple procedure over a 3 year period were evaluated. Perioperative complications, patient characteristics, and operative parameters were evaluated. Subsequently, the cohort was divided as first 28 (A) and second 28 patients (B). The lymph node harvest tumour clearance and survival were compared in two groups.

### Results

67.2% were ASA-1 and 32.8% were in ASA-2. Only 5 patients had pre operative stenting. Median ICU stay was 2 days with hospital stay of 10. Two patients (3.5) had blood transfusions. There was one pancreatic leak (1.7%). Perioperative mortality was 3.5% (n=2). Group A had median lymph node harvest of 5 (0-15) compared to 17 (2-29) in B,  $p < 0.005$ . Pancreatic resection margin of A was 2.3cm (1.1-3.2) while it was 3.2 cm (2.1-4.3),  $p < 0.35$  in B. None had positive margins. Median hospital stay was 12 (7-25) days in both groups. Overall 12 (21.42%) patients develop recurrences (17.85%, n=5 in group A). Median survival of group A was 10.7 months compared to 10.1 months in group B ( $p < 0.426$ ).

### Conclusion

Whipple procedure can be performed with low morbidity and mortality. Though the oncological clearance improved with experience, it does not reflect in a better survival.

OP 47

### THE PATTERN OF KRAS MUTATIONS IN METASTATIC COLORECTAL CANCER: A RETROSPECTIVE STUDY FROM SRI LANKA

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### Introduction

Activating KRAS gene mutations found in approximately 53% of metastatic colorectal cancer (mCRC) cases can render targeted therapy with epidermal growth factor receptor inhibitors ineffective. This study aims to describe the pattern of KRAS mutations in a Sri Lankan cohort of mCRC patients.

### Methods

The KRAS genotypes detected in mCRC patients which have been maintained in an anonymized database were retrospectively analyzed.

### Results

Of the 146 colorectal tissue samples tested, 34 (23%) had KRAS mutations. Among the positive cases, 18 (53%) were males and 16 (47%) females. Their age distribution ranged from 29 to 85 years. Twenty-two (65%) patients had point mutations in codon 12 while 12 (35%) had a single mutation in codon 13. The predominant KRAS mutations were p.Gly12Val (35%) and p.Gly13Asp (35%), followed by p.Gly12Cys (9%), p.Gly12Ser (9%), p.Gly12Asp (9%), and p.Gly12Arg (3%). Codon 13 mutation was a G>A transition (35%), while G>T transversions (41%), G>A transitions (21%), and G>C transversions (3%) were found in the codon 12 mutations.

### Conclusion

The frequency of KRAS mutations was similar to that reported for Asian patients. In contrast to published studies, a relatively lower frequency of the p.Gly12Asp mutation in codon 12, and a preponderance of the p.Gly13Asp, and p.Gly12Val mutations in codons 13 and 12, respectively were found. This may be due to genetic heterogeneity in the KRAS mutation pattern in mCRC patients. A KRAS mutation frequency of 23% suggests that this testing should be considered prior to commencing targeted therapy in Sri Lankan patients with mCRC.

OP 48

### IMPORTANCE AND PROPOSED CRITERIA FOR PRE-OPERATIVE DIAGNOSIS OF SPONTANEOUS ARTERIAL ACUTE SUBDURAL HAEMORRHAGES

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#### Introduction

Spontaneous arterial acute subdural haemorrhage is a well-known entity since its first description in 1922 by Werkgartener. All case series and isolated case reports published in the literature have been diagnosed retrospectively when arterial spurter was identified pre-operatively. This subgroup has an exceptionally good prognosis but no attempts have been made with regard to pre-operative diagnosis.

### Methods

Twenty four patients admitted between June 2006 and December 2013 were pre-operatively confirmed to have spontaneous arterial SDHs. Their demographics, radiological and operative findings, and outcome were compared with 14 patients operated for spontaneous non-arterial A-SDHs.

### Results

All underwent pre-operative computerized tomography. Twenty (83.3%) of arterial A-SDHs had extend all over the hemispheric convexity with fronto-temporo-parieto-occipital spread while 71.4% non-arterials were limited to more anterior fronto-temporal region. Midline shift/maximum thickness of A SDH ratio was much higher in arterial group (average 0.83, 71.4% having a ratio > 0.75) compared to non-arterial group (average 0.68, 64.3% having a ratio <0.75). Classical 'hillock sign' of A-SDH was present in all patients with arterial SDH compared to 50% of non-arterials. All three radiological signs were positive in 40% of arterial SDHs with a positive predictive value of 88.9% and a negative predictive value of 39.3%. Prognosis was significantly better in the arterial group.

### Conclusion

Wide extent, higher (>0.75) midline shift/thickness of A-SDH, and 'hillock sign' seem to be reliable radiological signs to predict A-SDHs of arterial origin pre-operatively. Pre-operative diagnosis is crucial as outcome is exceptionally good irrespective of poor pre-operative status.

OP 49

### STANDARD LOCAL INFILTRATION VS. LAPAROSCOPIC-GUIDED TRANSVERSE ABDOMINIS PLANE BLOCK IN LAPAROSCOPIC CHOLECYSTECTOMY: INTERIM ANALYSIS OF DOUBLE BLINDED RANDOMIZED CONTROL STUDY

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#### Introduction

Transverse abdominal plane (TAP) block is a new technique used in perioperative analgesia. It has shown a clear benefit in long laparoscopic procedures. Current trial evaluates its efficacy in uncomplicated Laparoscopic cholecystectomy.

**Methods**

A single center Double blinded randomized control trial was designed with 45 patient to each group based on 80% power at a  $p < 0.01$ . Patients who underwent elective uncomplicated laparoscopic cholecystectomy were randomized in to local port site infiltration of bupivacaine and additional TAP block groups. Primary efficacy variables were postoperative pain score and requirement for opioids measured every six hourly. Duration of immobilization and hospital stay were some of the secondary variables. An interim analysis was done at 8 months.

**Results**

38 Patients were randomized to two groups during the study period. Twenty-two (58%) were given TAP blocks. The male- female ratio ( $P=0.24$ ), age ( $P=0.4$ ), indication for surgery ( $P=0.34$ ), ASA ( $P=0.45$ ) and BMI ( $P=0.58$ ) were similar in the two groups. There was no difference in operating time ( $P=0.28$ ), intraoperative findings ( $P=0.4$ ) and the difficulty index ( $P=0.26$ ). Six hourly pain scores till the time of discharge, total and six hourly opioid dose, number of vomiting episodes, total hospital stay ( $P=0.98$ ) and time to mobilize out of the bed ( $P=0.63$ ) were similar in the two groups.

**Conclusion**

TAP block does not have an added advantage over standard port site infiltration in uncomplicated laparoscopic cholecystectomy.

OP 50

**RISK STRATIFICATION OF METABOLIC SYNDROME; FACTORS AND RENAL STONE COMPOSITION; WHAT MATTERS MOST?**

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**Introduction**

Patients with metabolic syndrome have a higher risk of renal stone formation. The aim of the study was to determine the correlation between metabolic syndrome factors and the distribution of renal stone composition.

**Methods**

Patients who underwent percutaneous

Nephrolithotomy ( PCNL) from January to December 2015 at a single urological unit were evaluated. Metabolic syndrome (MS) was defined according to the latest WHO definition. All renal stones were analyzed using infrared spectrophotometry and categorized according to the main component. Patients MS factors were assessed in univariate and multivariate analysis to find the correlation with the composition of the renal stone.

**Results**

56 patients were evaluated. Mean age was  $48 \pm 11$  years (25-73). There was a male preponderance 38 (70%). 30 (53.5%) patients were diagnosed with metabolic syndrome. Diabetes (DM), Hypertension (HT), Dyslipidemia (DL) and Obesity were diagnosed in 34 (60.7%), 26 (46.4%), 19 (33.9%) and 11 (19.6%) patients respectively. Calcium oxalate stone were detected in 43 (76.7%) patients while the rest were uric acid 13 (23.3%). Metabolic syndrome was detected in 20 (46%) calcium oxalate stone formers while 10 (77%) in uric acid stone formers. Only DM was strongly associated with Uric acid stone formation.

**Conclusion**

DM and MS are commonly seen in uric acid stone formers in comparison to calcium Oxalate stone formers; however there is no statistically significant difference in both groups ( $p=0.05$ ). HT, DL and obesity have no significant correlation on the stone composition. The overall effect on metabolic stone factors is relatively small because most of the stones are of calcium oxalate.

OP 51

**INDEPENDENCE OF ACTIVITIES OF DAILY LIVING FOLLOWING SURGICAL TREATMENT OF FRACTURE NECK OF FEMUR: AN INTERIM ANALYSIS**

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**Introduction**

Neck of femur (NOF) fractures is common among the elderly which can compromise their activities of daily living (ADL) despite surgical correction. Dependence on family members could lead to impairment in psychological, social and economical health in both patients and their families. This preliminary study was conducted to describe ADL in a cohort of patients following surgery for fracture neck of femur.

### Methods

A descriptive cross sectional study was carried out. Katz index of independence of ADL, a validated questionnaire was used. Data were collected using interviewer administered questionnaires. A score of 6 indicates high independence and 0 indicates that patient is totally dependent. A sample of 25 consecutive patients who were independent prior to the fracture was interviewed. Results were expressed as frequencies and percentages.

### Results

The mean follow up duration of the study sample was 13.9 weeks. The mean value of Katz index of ADL was 3.7. Of the participants, 60%(N=15) needed help in transferring, 52%(N=13) for toileting, 56%(N=14) for bathing, 48%(N=12) for dressing and 12%(N=3) for feeding. A considerable proportion (48%) scored 3 or less. Only 3 individuals were totally independent. There was no association with type of fracture, type of surgery, presence of comorbidities, complications, age or sex.

### Conclusions

Significant proportion of participants was dependent on ADL despite surgical correction, specifically in transferring, toileting and bathing. Therefore, it is important to emphasize on rehabilitation, patient and family awareness and social support to minimize negative impact on patients' lives.

OP 52

### HEALTH RELATED QUALITY OF LIFE AND ITS ASSOCIATED FACTORS FOLLOWING SUCCESSFUL SURGICAL TREATMENT OF FRACTURE NECK OF FEMUR

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### Introduction

Neck of femur (NOF) fractures can affect the quality of life (QOL) but the documentation of QOL in the local setting is limited. This study was aimed to assess the impact of fracture NOF on the QOL following successful surgical treatment.

### Methods

A retrospective study was carried out. EuroQol a validated questionnaire was used to assess QOL before fracture and after successful surgical treatment. Twenty five consecutive patients who underwent successful

surgery for FNOF participated. Associations were established using Chi square test, Wilcoxon rank test and Mann Whitney-U test.

### Results

The mean follow up duration of the study sample was 13.9 weeks (range:4–50 weeks). The median age of participants is 65 years (range:51-85), males=7. The mean QOL health score before fracture was 80.32±14.31 while the mean score after successful treatment was 67.8±17.44. The decrease in QOL score was statistically significant (p=0.013). Of the participants 24% and 32% reported a reduction in mobility and self-care respectively. Those with comorbidities had significantly lower QOL (p<0.05). Comparatively lower QOL was seen among those aged more than 65 years, females and those who had an intracapsular fracture.

### Conclusion

There was a significant reduction in the health related QOL after NOF fractures despite successful surgical treatment. Those with comorbidities are at higher risk of experiencing poor QOL.

OP 53

### OUTCOME ASSESSMENT OF HIGH TIBIAL OSTEOTOMY WITH THE KNEE INJURY AND OSTEOARTHRITIS OUTCOME SCORE (KOOS)

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### Introduction

High tibial osteotomy is a procedure to treat symptomatic knee arthrosis. Although not frequently performed in general, it prolongs the life of the knee joint, correct poor knee alignment and transfer weight from the arthritic part of the knee to a normal area. The objective of the study was to evaluate the functional outcome and the accuracy of alignment of the knee joint.

### Methods

A retrospective study was conducted on 10 patients who underwent high tibial osteotomy in Sri Jayawardanapura General Hospital from 01/01/2014 to 31/03/2015. Functional outcome was assessed with the Knee Injury and Osteoarthritis Outcome Score (KOOS). Preoperative and postoperative X ray films were

evaluated to calculate the degree of correction.

### Results

Our study revealed seven males and three females. Mean age was 46 years (26-57). KOOS assessment revealed the following mean scores. Pain score was 0.85(0.80-0.92), Symptom score was 0.75(0.70-0.82), Activities of daily Living score was 0.80(75-89), Sport and recreation score was 0.39(0.25-0.56) and the knee related quality of life score was 0.57(0.50- 0.65). The degree of correction of tibio femoral angle was 4.8 degrees. There was one patient with scar tenderness.

### Conclusion

According to the KOOS score there was good outcome in reduction of pain and improvement of activities of daily living. The degree of correction of tibio femoral angle was also satisfactory with a good functional as well as a cosmetic outcome. However, analysis of a larger sample is needed.

OP 54

### GENETIC VARIANTS OF ACAN GENE ASSOCIATE WITH SYMPTOMATIC LUMBAR DISC HERNIATION

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### Introduction

Lumbar disc herniation (LDH) is a common spinal disorder which may require surgical intervention. Strong association exists between LDH and genetic factors. Aggrecan is the major proteoglycan of the intervertebral disc and maintains the structural and functional integrity. This study evaluated the associations between single nucleotide polymorphisms (SNPs) of aggrecan gene (ACAN) and severity of LDH in chronic mechanical low back pain (CMLBP).

### Methods

A descriptive cross sectional study was carried out on 106 patients. Severity of LDH in five lumbar levels was assessed on T2-weighted mid sagittal lumbar MRI scan using a semiquantitative score (grade 0 = no LDH, 1 = disc prolapse and 2 = disc extrusion). 27 exonic SNPs of the ACAN gene were genotyped on a Sequenom mass array iPLEX platform. Multiple linear regression analysis was carried out adjusting for age, gender and body mass index.

### Results

Mean age was 52.42 years. 74 (69.8%) were females. 27 (25.5%) were obese. 97 (91.5%) patients had disc prolapse and 45 (42.5%) had disc extrusion. In additive genetic model, each "A" allele of rs35430524 and "A" allele of rs2882676 increased the severity of LDH. Each "T" allele of rs2351491, "A" allele of rs938609, "G" allele of rs3825994, "G" allele of rs698621 and "G" allele of rs3817428 reduced the severity of LDH. In addition in recessive genetic model, "CC" genotype of rs2272023 and "AA" genotype of rs1042630 increased the severity of LDH.

### Conclusion

SNPs of ACAN gene are associated with the severity of LDH in patients with CMLBP.

OP 55

### PITFALLS IN TRANSPORTATION OF TRAUMATIC AMPUTATION OF UPPER EXTREMITY

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### Introduction

Machinery and other traumatic injuries to hand is the commonest type of accident to upper limb in working population. These injuries result in a significant morbidity and in some patients, permanent disability. Despite major advances in plastic and orthopedic surgical specialties in the country, still significant number of patients left with amputations due to mishandling of traumatic stump and amputated segments. This study was conducted to assess the knowledge among patients regarding fore mentioned aspects.

### Methods

Cross sectional study was conducted over 4 months in Accident service, NHSL among patients with traumatic upper limb amputations. Interviewer based questionnaire was used to acquire epidemiological data, injury characteristics and knowledge regarding correct transportation of amputated segment and traumatic stump handling.

### Results

51 patients included in study and majority were males (n=47). 34 patients had grinder cut injuries followed by assault (n=8). 86.27% (n=44) patients had lack of

knowledge in transportation of amputated segment. 34/51 patients have performed adverse first aid measures which would make reimplantation difficult. 11 patients had injuries where reimplantation was considered but was performed only in 6 patients. Out of 5 patients excluded for reimplantation 4 had complications related to transportation.

### Conclusion

Significant number of patients who can be reimplanted are left with amputations due poor public knowledge in transportation and first aid in traumatic upper limb injuries. Targeted public awareness programs are needed for high risk occupations for injury prevention and correct patient transportation.

OP 56

### SOCIO ECONOMIC CORRELATES OF PATIENTS WITH NECK OF FEMUR FRACTURES

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### Introduction

Along with aging population, the number of neck of femur fractures continues to increase. These fractures substantially increase morbidity and mortality in elderly. Socioeconomic factors contribute to known risk factors of neck of femur fractures. Those factors also influence on recovery and rehabilitation following surgical treatment. This study intends to describe socioeconomic status of patients presenting with fracture neck of femur, in Sri Lankan context.

### Methods

Patients diagnosed with neck of femur fracture were included in the study. An interviewer administered questionnaire and a data extraction sheet were used. Socioeconomic status of patients was described by income, occupation, education, living condition and access to essential resources.

### Results

During two years of study period 362 patients were recruited and 95% of patients were leading independent life. Majority (86.5%) were females. Mean age was  $69.85 \pm 15.745$  years where mean age of females and males were 71.75 and 57.76 years respectively. Patients from urban setting constituted 69.36%. 82% of the patients fell into low income category while 85% had

received primary education or less. Even though 80% of patients were living in own cemented houses with at least two rooms, electricity and water facilities, 50.2 % of households were overcrowded and 40% of patients had to manage with squatting or pit type toilets. Only 2.2% of patients did not have any care givers. Private vehicle access was available for 45% of patients.

### Conclusion

Majority of patients presented with fracture neck of femur were of low socioeconomic status. But they had reasonable social support.

OP 57

### EPIDEMIOLOGY AND RISK FACTORS OF NECK OF FEMUR FRACTURES

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### Introduction

The number of hip fractures worldwide is expected to increase from 1.7 million in 1990 to 6.3 million in 2050. Despite of modern surgical management, this common debilitating disease of elderly still results in significant morbidity as well as mortality. So it is vital to identify risk groups and implement preventive measures.

### Methods

An observational analytical paired sample study was carried out in NHSL from 1st of January to 31st of May 2016. Pearson Chi-Square test was used to assess the significance.

### Results

Test sample included 62 patients with mean age of 75(22-98) years and 66% of them were females. Right side was affected in 52% of the patients and 95% of the fractures were due to low energy injuries. Age and sex matched control sample had 49 participants. We assessed involvement of sports, occupation, history of osteoporosis, fractures and strokes, visual problems, walking difficulties and use of an aid, alcohol use and smoking as risk factors. Educational level was higher among test group.

### Conclusion

Majority of patients presented with fracture neck of femur were of low socioeconomic status. But they had reasonable social support.

OP 58

### **PATHOLOGICAL AND DEMOGRAPHICS CHARACTERISTICS OF RENAL TUMOURS TREATED AT A TERTIARY CARE HOSPITAL IN SRI LANKA**

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#### **Introduction**

Renal cell carcinoma (RCC) is a relatively common malignancy accounting for 2-3% adult malignancies. The pathological characteristics, demography and primary treatment of RCC varies geographically. We aimed to describe the above details of patients with RCC in a urology unit of a tertiary care hospital in Sri Lanka.

#### **Methods**

An observational analytical paired sample study was carried out in NHSL from 1st of January to 31st of May 2016. Pearson Chi-Square test was used to assess the significance.

#### **Results**

There were 178 patients with RCC. Mean age was 56.9 years (M:F= 3.5:1). 49 (27.5%) patients were less than 50 years old. About 36.5% were diagnosed incidentally by USS. Surgery was performed in 168 patients (Radical nephrectomy in 125, partial nephrectomy in 42). Ten patients were managed non operatively after biopsy (RFA in 3 patients, interferon alpha in 2, Sorafenib in 1, symptomatic treatment in 4). Pathological characteristics: T1a : 26.4% (n=47), T1b : 20.8% (n=37), T2 : 22.5% (n=40), T3 : 23% (n=40), T4:1.7% (n=3); M0 : 87.6% (n=156) ,M1 : 12.4% (n=22); N0:96% (171), N1:0.5% (n=1), N2:3.4% (n=6). Tumour grade:G1:24.2% (n=43), G2:55.6% (n=99), G3:10.7% (n=19), G4:2.8% (n=5). Clear cell carcinoma (76.5%, n=143) was the commonest histology followed by papillary carcinoma (14%, n=26). Twenty two (12.4%) patients had metastases at the time of diagnosis. Bone was the commonest site of metastases (n=11).

#### **Conclusion**

Average age of diagnosis of RCC in Sri Lankan patients is lower than the developed world with a large proportion of patients being under 50 years. Pathological Stage of

the disease at the time of diagnosis of RCC in Sri Lanka appears to be closer to developed countries. Our study shows a much higher proportion of papillary renal cell carcinomas and G2 tumours.

OP 59

### **THE 'PITCHER POT' ILEALNEOBLADDER : FUNCTIONAL OUTCOME AND COMPLICATIONS**

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#### **Introduction**

Low complications rate with a good long term functional outcome of any orthotopic bladder substitution will ultimately decide its utility. 'pitcher pot' ileal neobladder newly designed ilealneobladder-a modification of Studerneobladder. we analyzed functional outcome and complication with "Pitcher Pot" IlealNeobladder.

#### **Methods**

In a prospective observational setting, between 2007 to 2014 seventy five male patients who have been treated for invasive urothelial cancer by radical cystectomy with creation of Pitcher Pot IlealNeobladder, were included. Complications, Continence and voiding pattern were individually evaluated. Day and nighttime continence status, voiding frequency and pad usage was evaluated using questionnaire. Ultrasonography and uroflowrate were performed in all patients and cystometrography was done in 30 patients.

#### **Results**

Early and late post-operative complications occurred in 29% and 16% of patients respectively. Most of these complications were minor, mainly as a result of wound infection, urine leak or urinary tract infections and were managed conservatively. Three patients required revision of ureteroileal anastomoses. The functional neobladder capacity was 426 ml. The mean post-operative residual volume was 36 ml. 90% of the patients had desire to void and 70% voided with good stream. One year after surgery, continence was reported as good or satisfactory in 96% and 88% patients during the day and night respectively which is maintained over time. Overall, 96% of our patients were satisfied with the procedure.

#### **Conclusion**

Pitcher Pot IlealNeobladder provides excellent

intermediate and long term functional results with low complications rate as an orthotopic ileal neobladder reservoir

OP 60

### **VESICO-VAGINAL FISTULA REPAIR: TRANSVAGINAL ROUTE HAS MADE IT EASY!**

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#### **Introduction**

There is numerous approach and techniques describing repair of a Vesico-vaginal fistula (VVF) in the literature with variable outcome. We aim to present our experience for the repair of vesicovaginal fistula (VVF) with special reference to surgical approach.

#### **Methods**

This is a retrospective study on 224 patients with iatrogenic VVF due to all etiologies from 2000-2015. VVF repair was predominantly approached via transvaginal (TV) route with interposition graft (martius or peritoneal). Trans-abdominal (TA) route was considered in selected cases of fistula requiring ureteric reimplantation/augmentation cystoplasty, narrow vagina, prior pelvic radiation and in few cases of large (> 4 cm), multiple or recurrent fistula. The size of fistula, location, operative time, blood loss, hospital stay and per urethral catheter indwelling time and outcome were recorded.

#### **Results**

The most common cause was post hysterectomy in 176 (78.57%) patients. 37 (16.5%) were recurrent fistulae. 86.6% (n=194) and 13.4% (n=30) of the VVF were repaired by TV and TA approach respectively. Overall success rate of VVF repair was 96% (n=215) with 3% (10%) failure in TA and 6% (3%) in TV approach. 26 recurrent fistula (70%) were successfully repaired by TV route. There was less mean blood loss (80 vs. 250 ml, p<0.05), shorter operative time (85 vs. 176 min, p<0.05) and shorter hospital stay (3.5 vs. 6 days) in TV as compared to TA repair. The mean follow up was 7.5 years (range 1-15 years).

#### **Conclusion**

Most of the VVF can be repaired vaginally with excellent outcome and success rate. We recommend, vaginal

approach should be chosen over abdominal approach for repair of all vaginally accessible VVF until there is definitive indication for abdominal approach.

OP 61

### **THE OUTCOME OF RENAL TRANSPLANTATION : SINGLE UNIT EXPERIENCE**

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#### **Introduction**

Outcomes and predictors of long-term survival following renal transplantation in Sri Lanka were studied.

#### **Methods**

436 transplants performed between January 2007 and April 2016 were prospectively entered in to a computerized database and followed up at clinics and home by telephone. Recipient age, sex, duration of dialysis before transplantation, donor age, gender, type of donor (related or non-related) and type of transplant (live donor or cadaveric donor) level of HLA match, acute rejection at one month were the factors studied. The Kaplan-Meier method, log rank test and Cox proportional hazard model was used to analyze survival.

#### **Results**

Mean follow up duration was 18 months. Median recipient age was 44 years (10-80) and 322 (74%) of them were male. 336 (95%) were live donor transplants. Median donor age was 38 years (20-62) and 70% of them were male. Majority of the donors were non-related (70%). Early complications (<3 months) were urinary tract infection (29%), acute rejection (26%), acute tubular necrosis (12%) and surgical site haematoma and (5%) lower respiratory tract infections (5%). Causes of death were sepsis (53%), myocardial ischaemia (5%), stroke (5%) and malignancy (5%). 30 day, 6 month, 1 year and 2 year survival rates were 98% 85% 83% and 81% respectively. Longer duration of dialysis before transplant (> 6 months) was found to be significant predictor of adverse patient survival (p=0.048). Other variables studied failed to show any statistical significance.

### Conclusion

Transplantation without delay and infection prevention, early diagnosis and aggressive management of infections would improve our results.

OP 62

### ROBOTIC ARM ASSISTED LAPAROSCOPIC DONOR NEPHRECTOMY: IS IT BETTER THAN THE STANDARD LAPAROSCOPIC PROCEDURE

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### Introduction

In laparoscopic surgery, the laparoscope is handled by an assistant according to verbal instructions from the surgeon. Inexperienced assistant can add to significant difficulties during surgery. This study describes the first Sri Lankan experience of using a joystick-controlled robotic arm (RA) in laparoscopic donor nephrectomy (LDN) compared with the standard laparoscopic procedure.

### Methods

All patients underwent LDN between April 2015 to March 2016. Standard LDN was performed using 4/5 port technique, transperitoneal approach. SOLOASSIST, a joystick controlled RA system was introduced in performing LDN replacing the camera holding assistant in alternative cases. Outcomes of each group were compared in terms of demography, operative time, complication, hospital stay and subjective ease of the operating surgeon.

### Results

24 cases performed. The two groups were comparable in terms of demography, hospital stay. The operative time was not statistically different between the two groups despite the median mounting and dismantling time being 8 minutes. There were no major postoperative complications. Stable shake free image facilitating precision to the surgery, camera holding assistant actively supporting during suction during pedicle dissection, eliminating the need of a third assistant providing more space around the operating table were experienced as advantages.

### Conclusion

The RA proved to be successful in LDN and a reliable

assistant to perform long urological procedures. No problems specific to the RA were encountered. RA can be recommended to laparoscopic surgeon performing complex General or Gynecological surgery in the Sri Lankan setting where there will be difficulty in acquiring a well-trained camera holding assistant.

OP 63

### SUPINE "MINI" PCNL : A MINIMALLY INVASIVE PERCUTANEOUS APPROACH FOR RENAL STONE REMOVAL

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### Introduction

Percutaneous Nephrolithotomy (PCNL) has become the gold standard method, replacing open surgery for small renal stone removal. Mini PCNL (mPCNL), uses the 15Fr (5mm) sheath compared to 28-30Fr (10mm) sheath used in conventional PCNL. We report the first Sri Lankan experience of this miniaturization in technique in use.

### Methods

A total of 14 patients underwent mPCNL from January to April 2016. All had symptomatic small volume renal stones which were confirmed by CT scan. Using Modified Valdivia/Galdako supine position all underwent, renal access using the seldinger technique to introduce 15Fr Amplatz sheath. Stones were fragmented using holmium laser. 10Fr nephrostomy tube and stent were used routinely. The duration of surgery, stone free rate and complications were evaluated.

### Results

Mean age was 37.6 years (23-65), with male:female ratio of 9:5. Mean body mass index was 27.3 kg/m<sup>2</sup> (19.2-31.6). Previously failed therapies were; 2 shock wave lithotripsy and 1 ureteroscopy. Mean stone size was 14.8mm (10-24mm) with mean density of 118HU (915 – 1651HU). Stone location was lower calyx (n=9, 64%) in majority. Complete stone fragmentation was achieved in all except in one where the procedure was converted to a conventional PCNL (28Fr). Median operative time and hospital stay were 56min (34-95min) and 2 days respectively. Postoperatively one patient each developed Clavien Dindo grade I and II complications.

### Conclusion

This initial study of mPCNL showed that it is a safe and effective procedure for managing renal stones of up to 20mm. This procedure offers an attractive alternative to shock wave lithotripsy and retrograde intra renal surgery for managing renal stones.

OP 64

### MICROSCOPIC HAEMATURIA IN ACUTE FLANK PAIN; IS IT UROLITHIASIS?

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### Introduction

In clinical practice, the presence of microscopic haematuria (MH) in acute flank pain suggests a tentative diagnosis of urolithiasis. CT-KUB is now the gold standard in the diagnosis of urolithiasis, but cost and non-availability in many hospitals in our country limits its use. Our objective was to assess the correlation between microscopic haematuria and urolithiasis with or without obstruction in patients presenting with acute flank pain.

### Methods

A prospective analysis of patients presenting to our surgical unit with acute flank pain, from October 2015 to May 2016. MH was defined as more than occasional red blood cells per high-power microscopic field (rbc/hpf) in the UFR (number of rbc/hpf that defines MH lacks agreement and varies from 2-5). Urolithiasis was diagnosed by X-ray KUB, Ultrasound abdomen/pelvis and CT-KUB. Obstruction was detected by USS or CT-KUB as hydronephrosis/hydroureter. The association of microscopic haematuria with urolithiasis and the presence of obstruction was statistically analyzed. P value of <0.05 was considered significant.

### Results

Sixty five patients were analyzed. Male:female ratio 2.6 :1. Median age 44 years (range 16-82yrs). Thirty four patients had microscopic haematuria (52.3%) out of which 33 had urolithiasis (97%). But 29 patients out of 31 who did not have microscopic haematuria also had urolithiasis (93.5%),  $p = 0.50$ . Forty one patients had hydronephrosis/hydroureter (63%) out of which only 19 (46.3%) had microscopic haematuria ( $p=0.21$ ).

### Conclusion

There was no statistically significant correlation between microscopic haematuria and the presence of urolithiasis or obstruction in patients presenting with acute flank pain.

OP 65

### SIGNIFICANCE OF PRE-TREATMENT SERUM ALPHA-FETOPROTEIN IN HEPATOCELLULAR CARCINOMA OF NON-VIRAL AETIOLOGY

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### Introduction

Alpha-fetoprotein (AFP) is a biomarker for hepatocellular carcinoma (HCC). The significance of pre-treatment AFP (pt-AFP) in non-viral HCC (nvHCC) is not clear.

### Methods

Patients with nvHCC, referred to a Hepatobiliary Clinic from September 2011-2015 were screened. Clinical evaluation, liver biochemistry, pt-AFP and contrast enhanced CT abdomen were performed. HCC was diagnosed using American Association for the Study of Liver Disease guidelines, and TNM staged. nvHCC was diagnosed in HCC negative for HBsAg and anti-HCVAb. Child-Turcotte-Pugh (CTP) and Model for End-stage Liver Disease (MELD) scores were calculated. All values are presented as median (range). Differences between groups were tested using Pearson's Chi-square, Mann Whitney U and Kruskal-Wallis tests. Cumulative survival and recurrence rates were calculated by the Kaplan-Meier method. Difference between survival was evaluated by log-rank test. A  $p<0.05$  was considered significant.

### Results

389 patients with nvHCC [age 64(12-88)years; 344(88.4%) males] were screened [233(59.9%) had diabetes; 187(48.1%) were regular, 79(20.3%) social, 123(31.6%) non-consumers of alcohol]. 329(84.6%) had cirrhosis [Child A(57.3%), B(32.4%), C(10.3%); median CTP 6(1-14), MELD 11(5-28)]. 177(45.5%) HCCs were TNM stage 3, with median diameter 6cm (0.9-26.5). 233 (59.9%) had no vascular or visceral invasion. Median AFP was 25.46ng/ml(1.16- 100,000) [AFP<10ng/ml:

n=160(41.2%), AFP>400ng/ml: n=89(22.9%)]. Females ( $p < 0.05$ ), vascular invasion( $p < 0.001$ ), diameter>5cm( $p < 0.05$ ), late TNM stage( $p < 0.001$ ) and non-surgical candidates had higher AFP levels. Diffuse( $p < 0.001$ ), invasive( $p < 0.001$ ) and late stage tumours ( $p < 0.001$ ) had AFP>400ng/ml. AFP<400ng/ml was associated with longer survival compared to AFP>400ng/ml (16 vs. 7 months, $p < 0.001$ ).

### Conclusion

Although pt-AFP was not helpful for diagnosis of nvHCC, AFP>400ng/ml was associated with aggressive tumour behaviour and poor prognosis.

### OP 66

#### INCIDENCE OF WORK RELATED HAND INJURIES (WRHI) IN A TRAUMA SETUP AND MEASURES TO PREVENT THEM

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### Introduction

WRHI are the most frequent bodily trauma occurs during work. It occurs commonly in young healthy individuals causing an impact on the work force of a country.

### Methods

We have collected all work related hand injuries presented to national trauma centre with in a period of 4 months. (December 2015 to March 2016). Socio-demographic and injury related clinical information were analysed..

### Results

Out of 963 total admissions of all hand injuries there were 242 WRHI. Injuries proximal to the wrist joint were excluded. Male patients constituted the majority 92%, 78% of the patients were between ages 25y – 45y. Commonest site of the injury was fingers 151 (62%). The most common mechanisms of injuries were lacerations, crush injuries ,needle punctures, abrasions and burns. Skeletal injuries 66 (27.6%). WRHI recorded in industries involving metal and machinery. Negligence was the commonest cause for hand injuries 208 (86%), other causes were substance abuse, machinery failure and lack of protective gear 34 (14%)

### Conclusion

WRHI are common in a trauma setup and common among the working population adding a burden to the country s economy. Most of these occur due to neglect of safety protocols, long working hours and substance abuse during work hours. Addressing these issues and educating the employer and the employee plays a crucial role in preventing WRHI.

### OP 67

#### A COMPARATIVE STUDY OF THE SURGICAL OUTCOME OF HEPATOCELLULAR CARCINOMA IN BACKGROUND CIRRHOTIC AND NON-CIRRHOTIC LIVERS.

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### Introduction

Sri Lanka has a rising population of patients with non-alcoholic fatty liver disease. In these patients, hepatocellular carcinoma (HCC) is commonly detected without background cirrhosis.

### Methods

359 Patients with HCC from 2011-2015 were screened. Patients were divided as cirrhotic HCC (CH) and non-cirrhotic HCC (NCH) based on the liver biochemistry and CT appearance. The two groups were compared on their baseline factors, tumour characteristics and outcome. All data were collected prospectively.

### Results

301(84%) were CH and 58 (16%) were NCH. Male to female ratio (CH 8.4, NCH 6.25,  $P=0.3$ ) and the median age (CH 64, NCH 64,  $P=0.72$ ) were similar. NCH had lower incidence of diabetes (CH 62.5 %, NCH 46%,  $P=0.05$ ). However NCH had symptomatic presentation (CH 51%, NCH 69%  $P=0.008$ ), larger tumour diameter (CH 5cm, NCH 10cm,  $p=0.0001$ ) and were more likely to undergo intervention ( $P=0.001$ ). There was no difference in type of resection ( $P=0.247$ ), intraoperative blood loss ( $P=0.77$ ), complications ( $P=0.32$ ) and hospital stay ( $P=0.843$ ). The tumour differentiation ( $P=0.488$ ), invasion ( $P=0.058$ ) and the length of the margins ( $P=0.066$ ) were also similar. The overall survival of NCH was similar to CH ( $P=0.087$ ) and there was no difference in survival after surgery ( $p=0.718$ ).

### Conclusion

NCH are common in Sri Lankan cohort and diabetes is less common among them. Though NCH are larger in size at presentation, they have an equal survival to CH.

OP 68

### **FACTORS WHICH CONTRIBUTE TO ROAD TRAFFIC ACCIDENT AMONG PATIENTS ADMITTED TO TEACHING HOSPITAL ANURADHAPUARA**

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#### **Introduction**

Road traffic accident is defined as an accident which occurred or originated on a way or street open to public traffic; resulted in one or more persons being killed or injured and at least one moving vehicle was involved.

#### **Methods**

Descriptive Cross-sectional study was done in 704 patients admitted following road traffic accidents to the casualty surgical wards in Teaching Hospital Anuradhapura in the period of ninety days. Data on socio-demographic and lifestyle factors were collected with structured, interviewer administered questionnaire and severity of injury also measured.

#### **Results**

Out of 704 patients 582 (82.8%) were male. Patients who are between the ages of 30 and 40 were mostly affected. Nearly half of the patients were secondary educated. More than half of the patient (55.9%) had driving experience less than 15 years. Users of alcohol was 174 (24.7%). None claimed that they were using mobile phone when involved in RTA. Uses of Motor bicycle and bicycle were 68.3% and 10.9%. Places of accident in express way, provincial road, national road and local road were 61.6%, 19.2%, 19.1% and 0.1% respectively. 63.2% had minor injury and only six patients were death. Educational level, driving experience and license type were the significant factors ( $p < 0.05$ ) associated with road traffic accident.

#### **Conclusion**

Compared to female, accident percentage was high in male. Awareness programs should be carried targeting male motorcyclists and on drink and driving.

OP 69

### **SPECTRUM OF BENIGN LIVER LESIONS WITH A PROTOCOL FOR EVALUATION**

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#### **Introduction**

Focal liver lesions are increasingly diagnosed by ultrasound scan. Accurate diagnosis and management is not clearly defined. This study analyses an evaluation protocol for benign liver lesions.

#### **Methods**

101 patients were referred with ultrasonically benign liver lesions over a period of three years. Subsequent evaluation protocol included a triphasic CT scan in all and a subsequent MRI in doubtful lesions. Biopsy was done selectively. Patients with benign lesions were prospectively followed three monthly for two years. Symptomatic and suspicious ones underwent resection.

#### **Results**

57% were females. Median age was 47 years (range 19-76). Majority (47.3%) of USS were done for upper abdominal pain. 69.6% lesions were diagnosed by CT and 18.8% needed MRI. Two patients had biopsy. 37% had hemangiomas, 24% had liver cysts, 8% had focal nodular hyperplasia (FNH) and 5% had adenomas. 25% underwent surgery (cyst =29.2%, 7/25, haemangioma=28% , FNH = 24% , adenoma =8%). There were no major operative complications. 42% of the patients are being followed up. Pre and post operative diagnosis were different in 44% (n=11). Commonest lesion to misdiagnose was FNH (54.5%, n= 6/11). 63.6% (n=7/11) initially considered to be malignant were reported as benign. None of the benign lesions turn out to be malignant.

#### **Conclusion**

Haemangiomas are the commonest benign lesions while liver cysts are the commonest to undergo surgery. Evaluation protocol seems to overtreat lesions but has a good sensitivity in excluding malignancies.

OP 70

### **ACHIEVING INTERNATIONAL STANDARDS IN EMERGENCY LAPAROTOMY**

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### Introduction

Emergency surgeries have inherent Achilles heel due to suboptimal preoperative optimization. Standardization of perioperative care is vital component to improve patient outcome. National Emergency Laparotomy Audit (NELA) is ongoing national audit conducted by NHS. We have compared our trauma data with the NELA standards to objectively assess our local standards.

### Methods

We analyzed patient data from June 2015 to November 2015 in relation to emergency laparotomies. There were 21 patients underwent emergency laparotomies. These patient records were compared with NELA standards and performance was stated as percentages.

### Results

Preoperatively immediate surgeon assessment accomplished in 90.47% (n=19) patients. Only 6 (28.57%) patients had preoperative imaging. 100% patients received either prophylactic or therapeutic antibiotics and prompt access to theatre. Consultant surgeon was available for 17 (80.95%) cases and rest was supervised. Consultant anesthetist was available for 15 (71.42%) cases and rest was supervised. 15 (71.42%) patients were admitted ICU post-operatively after assessment by Consultant anesthetist. There were 2 patients older than 70 years and managed by same team due to lack of geriatrician.

### Conclusion

Our team has achieved comparable performance in most of NELA recommendations. Lack of specialized personality was the cause for low percentages for imaging and geriatric care. We conclude that with adequate personal resources even a peripheral hospital can achieve international standards.

OP 71

### TESTICULAR CANCER INFORMATION FOR PATIENTS ON INTERNET: AN OBJECTIVE ASSESSMENT OF QUALITY AND RELIABILITY.

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### Introduction

Even though testicular cancer is a rare occurrence, it can be detected at an early stage, which increases the chance of cure. Therefore, accurate knowledge among

patients is of great value for early presentation. We decided to assess the quality and reliability of the websites related to testicular cancer.

### Methods

Patient education websites were searched on Google, Yahoo and Bing. We assessed the reliability, usability and quality of those websites by using LIDA tool and DISCERN. Flesch Reading Ease Score (FRES) was used in the assessment of readability. The independent samples t-test was used for comparison. A p value of 0.05 was considered statistically significant.

### Results

Fifty-one websites related to testicular cancer were included in our study. Of which, 19 (36.5%) were certified by HONcode and the majority (n=48, 92.3%) were non-governmental websites. The mean FRES score was 52.03 (range: 29.1-74.1), the overall mean LIDA tool score was 57.33 (range: 31-90), and the mean DISCERN score was 42.69 (range: 16-69). There was no statistically significant difference between the certified and non-certified websites however the mean scores of certified websites were higher.

### Conclusion

The reliability and quality of websites related to testicular cancer is questionable, although the websites were of acceptable readability. Improvements are required to provide patients with reliable information to promote early presentation and awareness of the disease and also to make informed decisions on treatment.

# Poster Presentations

PP 01

## PERI OPERATIVE CONCERNS OF THYROIDECTOMY PATIENTS: ARE WE ADDRESSING THEM?

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### Introduction

Thyroidectomy is a relatively common surgical procedure performed in general surgical units. However, whether the concerns of the patient undergoing the procedure are being addressed is questionable. Identifying some of these concerns in our surgical population is the aim of this study.

### Methods

An interviewer administered questionnaire was used pre operatively on 24 patients who underwent total thyroidectomy for non-malignant indications.

### Results

Majority were females 22(91.7%) and the mean age of the population was 44 years. Anterior neck lump (19, 79.1%) was the predominant presenting complaint.

Summary of the results were as follows;

| <u>Patient concern</u>                       | <u>% worried</u> |
|--|------------------|
| Post-operative scar                          | 29.2 (7/24)      |
| Post-operative pain                          | 62.5 (15/24)     |
| Suture removal                               | 50 (12/24)       |
| Lifelong thyroxine                           | 12.5 (3/24)      |
| Anesthesia related complications             | 20.8 (5/24)      |
| Surgical complications                       | 29.2 (7/24)      |
| Voice change                                 | 29.2 (7/24)      |
| Problems in calcium metabolism (5/24)        | 20.8             |
| Going back to work                           | 16.7 (4/24)      |
| Return to activities of daily living (10/24) | 41.7             |
| Being a burden to others (8/24)              | 33.3             |
| Waiting time for surgery (11/24)             | 45.8             |
| Risk of malignancy                           | 45.8 (11/24)     |

|                             |             |
|-----------------------------|-------------|
| Need for a re-operation     | 16.7 (4/24) |
| Having unanswered questions | 8.3 (2/24%) |

### Conclusion

Post-operative pain, pain at suture removal, waiting time for surgery and the possibility of malignancy in the removed gland appears to be the main concerns in this population of patients. Addressing these issues during pre-operative counseling may improve patient satisfaction.

PP 02

## SURVIVAL AND THE FACTORS AFFECTING SURVIVAL IN ELDERLY PATIENTS WITH COLORECTAL CANCER

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### Introduction

Elderly patients constitute a majority of those affected by colorectal cancer (CRC). This study compared multiple variables affecting survival in elderly CRC patients (>70 years) with those < 70 years.

### Methods

Presenting symptoms, gender, site of tumour, cancer stage (AJCC), histological characteristics, carcinoembryonic antigen (CEA) level, preoperative albumin and postoperative complications were considered as independent factors affecting survival (>70 vs. < 70 years) in a cohort of 477 patients with CRC. Kaplan-Meier survival estimate curves were used to compare age categories. Whenever a significant difference was observed, the Cox- proportional hazard methods was used for multifactorial analysis. We also compared survival in the elderly versus those < 60 and < 50 years.

### Results

477 Patients, comprising 160 elderly (55% male; median age - 75; range 70 – 89) and 317 younger patients (49% male; median age = 55, range 16 to 69), were studied. There was no significant difference in survival in CRC patients >70 compared to those <70 (P=0.45) and < 60 years (P=0.08). However, significantly poor survival was observed in the >70 group compared to those <50 years (P=0.03). Multifactorial analysis showed that

postoperative cardiac complications was the only determinant affecting survival ( $P=0.01$ ).

### Conclusion

Survival was similar in elderly CRC patients compared with those <70 and <60 years. Postoperative cardiac complications significantly affected overall survival in those >70 compared to those <50 years. Cardiac optimization in the elderly with CRC should be a listed component in the work up of elderly patients and may improve survival in those >70.

PP 03

### EARLY EXPERIENCE OF ENDOSCOPIC DIRECT VIEWING CHOLANGIOPANCREATOSCOPY IN A SRI LANKAN TERTIARY CARE CENTER

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### Introduction

Space occupying lesions of the biliary tree present a diagnostic dilemma to Hepatopancreatobiliary surgeons. Necessary surgery may be delayed and unnecessary surgery may be performed on suspicion. Direct-viewing cholangiopancreatography (DV-CPS) is a useful tool in such cases. We describe our initial experience in DV-CPS at our unit.

### Methods

Findings of first three patients undergoing DV-CPS were evaluated.

### Results

Case 1: An 89 year-old female with obstructive jaundice had ultrasound and MRCP revealing dilated intrahepatic ducts (IHD) with non-visualized common hepatic duct. DV-CPS revealed a malignant-looking growth at the confluence. Stenting was performed after biopsy.

Case 2: A 65 year-old male with obstructive jaundice for two months and recent cholangitis had MRCP suggesting a benign or malignant stricture. DV-CPS revealed multifocal growths extending to the confluence. Biopsy was taken and palliative metal stenting done.

Case 3: In a 61 year-old male with a lesion in liver segment VIII, MRCP showed dilated segmental ducts and multiple filling defects with suspicion of

cholangiocarcinoma or sludge/calculi. DV-CPS of IHD confirmed presence of sludge at the confluence of right anterior and posterior IHDs and dislodgement was performed using irrigation.

### Conclusion

DV-CPS is a useful accessory tool in cases with diagnostic dilemma in the biliary and pancreatic tree. Further cases are needed to compare our success rates with promising international data in diagnostic and therapeutic procedures. The current system employs a limited-use reusable optical probe and biopsy forceps thus; cost-effectiveness needs to be further evaluated locally.

PP 04

### ASSESSMENT OF VOICE CHANGES IN PATIENTS UNDERGOING TOTAL THYROIDECTOMY (BEFORE AND AFTER SURGERY)

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### Introduction

Total thyroidectomy (TT) is known to associate with partial or complete injury to Recurrent Laryngeal Nerve (RLN) and External Branch of Superior Laryngeal Nerve (EBSLN). RLNs supply laryngeal muscles which involve in intensity and EBSLNs supply cricothyroid muscle which mainly involve in maintaining the pitch of the voice. Intra-operative causes such as complete or partial cut, ischemia, stretching and burning are well known to damage nerves. Subjective assessment of pitch and intensity of voice is a sensitive method to evaluate voice changes.

### Methods

54 consecutive patients who underwent TT in professorial surgical unit, Ragama from September 2015 were studied. All procedures were done by a single surgeon. Same microphone, recorder, file format, venue and position of the patient used to minimize errors. Voice was recorded preoperatively, in 2 weeks, 6 weeks, 3 months and 6 months and analyzed using standard voice analyzing tool "PRAAT" and SPSS V.20.

### Results

8 (14.8%) patients failed to achieve pre-operative pitch

in 2 weeks which fall in to 6 in six weeks. In 2 weeks, unexpectedly intensity was low in 34 (62.9%) patients which dramatically dropped into 8 in the 6th week. All patients were able to achieve pre-operative intensity and pitch in 3 months.

### Conclusion

When voice is objectively assessed EBSLN injury is 14.8% and the RLN injury 62.9% at 2 weeks in this cohort. These changes are temporary. Voice return to normal at 3 months and the higher incidence of RLN injury is likely to be due to traction.

PP 05

### ANALYSIS OF INTRAOPERATIVE PANCREATIC FLUID ASPIRATE IN PATIENTS WITH CHRONIC PANCREATITIS UNDERGOING LATERAL PANCREATIC JEJUNOSTOMY.

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### Introduction

Chronic pancreatitis is a progressive inflammation of the pancreas leading to permanent anatomical as well as functional damage. Lateral pancreaticojejunostomy is one of the most commonly employed drainage procedure used for its treatment. The intra-operative pancreatic duct aspirate is an important source to analyse the lithogenic property, cytodiagnosis to suspect occult neoplasms and to isolate the causative organism. The objective of the study was to analyse the intra-operative pancreatic duct aspirate during lateral pancreaticojejunostomy in the form of cytology, culture and antibiotic sensitivity and lithogenicity.

### Methods

It is a prospective and observational study of 18 months duration conducted in the hospitals of Kasturba Medical College, Mangalore. In the current study with patients undergoing Lateral Pancreaticojejunostomy study, the pancreatic duct aspirate was carefully collected and sent for analysis.

### Results

Total number of cases studied are 20. The aspirate culture was positive in 5 patients (*E. coli* in 4 patients and *Citrobacter* and *Enterobacter fecalis* in one patient). Cytodiagnosis was negative for all patients. The mean calcium levels of patients were within normal limits.

### Conclusion

The intra-operative pancreatic duct aspirate is an useful source to isolate the organism and to study the antibiotic sensitivity. *E. Coli* was the most common organism isolated in the study group. More number of cases may be required to assess the role of cytodiagnosis and to predict the lithogenicity.

PP 06

### PATTERNS OF BILE DUCT INJURIES OBSERVED DURING ENDOSCOPIC RETROGRADE CHOLANGIOGRAM: 13 YEARS OF EXPERIENCE IN A TERTIARY CARE REFERRAL CENTRE

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### Introduction

Endoscopic Retrograde Cholangiogram (ERC) has diagnostic and therapeutic indications in the management of bile duct injuries. Data on this aspect in the Sri Lankan setting is scarce.

### Methods

Retrospective analysis of the ERC findings of patients with suspected bile duct injuries from 2003 to 2016 was done. Injuries were categorized by Bismuth-Strasberg classification (A-E). E (1-5) were considered as major injuries. Iatrogenic bile duct injuries (IBDI) were grouped under laparoscopic (LC), converted to open (LCOC) and open cholecystectomy (OC)

### Results

Over 13 years, 3567 ERCPs were performed in biliary tree and 106 patients had suspected biliary injuries, of which 93(2.6%) were confirmed. Seventy two (78%) were females. Mean age was 44 years (range 10-80). The majority of injuries were IBDI (n=87,93%), 46 following LC, 15 after LCOC, and 26 after OC. Trauma was the cause in 6 patients. In IBDI group, 47% had major injuries, with Bismuth types A-36%, D-10%, E1-9%, E2-29%, E3-13%, E4-3%. There was no difference with regards to the severity of injury in the 3 surgery groups. All minor injuries were managed with stenting. The need for reconstructive surgery was significantly more with major biliary injury (p >0.01) and OC(p=0.01), and was

significantly less in LC( $p=0.01$ ).

### Conclusion

According to this study, minor injuries, managed solely with stenting are the commonest type of IBDI. However, major injuries still account for almost half of IBDI. Incidence of major injuries does not appear to have reduced by conversion, indicating that the injury occurred prior to conversion. The significant association of need for reconstruction with OC, probably reflects the case selection.

PP07

### OUR EXPERIENCE OF 3D LAPAROSCOPIC PYELOPLASTY AT LADY RIDGEWAY HOSPITAL FOR CHILDREN

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### Introduction

Laparoscopic pyeloplasty is the gold standard method for treating patients with pelviureteric junction obstruction. It has proven to be safe and effective in pediatric population. However major drawback to laparoscopy is the technical challenge of precise suturing in the small working space in children.

### Methods

Retrospective analysis of the data of all 3D laparoscopic pyeloplasties done at our unit (ward 11) during the period of June 2015 to May 2016.

### Results

Total number of patients underwent laparoscopic pyeloplasty was 11. There were 8 male patients. The median age was 9 years. All the procedures were performed trans-abdominally. Intra operative findings were pelvi ureteric junction stenosis in 7 patients and aberrant vessel causing obstruction in 4 patients. One was converted to open procedure. Mean duration of surgery was 149.5 minutes. Mean hospital stay was 6 days. None of the patients had major complications. After six weeks of surgery all the patients had symptomatic and ultrasonic improvement. Most of them had renographic improvement at six months.

### Conclusion

Our experience of 3D laparoscopic pyeloplasty was only one year. Because of our short experience our operating

time was high. Even with this limited experience we have found that only one was converted to open procedure and overall complications were less. There were no evidence of recurrence of obstruction clinically and radiologically. Laparoscopic pyeloplasty gives better outcomes and it is the safe procedure in the hands of experience surgeon.

PP08

### PROSPECTIVE ANALYSIS OF 72 CONSECUTIVE PATIENTS WITH SOLE OF FOOT DIABETIC ULCERS ADMITTED TO GENERAL HOSPITAL POLONNARUWA (GHP) OVER 9 MONTHS.

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### Introduction

Diabetic sole of foot ulcers is a common preventable surgical problem with significant morbidity and mortality. We launched a program for early risk patient identification leading to ulcer prevention.

### Methods

This is a prospective cross sectional study of consecutive admission from 28 July 2015- 01May 2016 to surgical unit B GHP. We studied demography, ulcer site, severity, diabetic control with duration, smoking, treatment given, treatable sole of foot lesions, calculation of Neurological Disability Score (NDS) in patients with diabetes mellitus and sole of foot ulcers.

### Results

There were 72 patients. Males; females 31(43%); 41(57%). Age range males; females 40-72 years (mean 57); 27-83 years (mean 59). Duration of diabetes was 2-20 years. 27/70 (39%) have defaulted treatment. 21/30 (70%) of males were smokers. 21 (29%) had Peripheral Vascular Disease. NDS is normal in 13 (18%) and was >6 in 35 (49%). Duration of hospital stay ranged from 1-41 days (mean 8). 48/71 (68%) had unattended foot deformities Charcot foot 11 (15%), callosities 30 (42%), hammer toe 15 (21%), claw toes 18 (25%), flat foot 25 (35%). Onychomycosis was seen in 13 (18%). 6 patients underwent some form of amputation. On admission Fasting Blood Sugar was high in 41(62%). Wagner ulcer severity class 1-4 were represented with 36 (52%), 10

(14%), 12 (17%) and 12 (17%) patients.

### Conclusion

68% had unattended foot deformities. 39% had defaulted treatment. 34 (48%) presented at later stage of ulcer. NDS can be used for early risk group identification. Proper health education of ulcer prevention with development of community and hospital based specific health task force for early pathological foot lesion identification with NDS measurements is necessary to prevent diabetic foot ulcer complications.

PP 09

### COMPARATIVE STUDY OF OPEN PREPERITONEAL (AK HENRY) AND LAPAROSCOPIC TOTAL EXTRAPERITONEAL (TEP) APPROACH IN INGUINAL HERNIA REPAIR

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### Introduction

Groin hernias are most commonly performed procedures and over 5 lacs hernias are repaired annually by different approaches. Preperitoneal approaches are being used increasingly. Our purpose of this study is to compare outcomes of open preperitoneal and laparoscopic TEP repair in Bilateral inguinal hernia.

### Methods

This was a prospective study in which half cases repaired by open preperitoneal midline approach (AK Henry) and half cases by laparoscopic TEP. Surgeons' preference, duration, postoperative complications, hospital stay, recurrence rate & cost effectiveness were analyzed.

### Results

25 patients in each group were analyzed. Duration was shorter (70min) in AK Henry as compared with laparoscopic TEP (130min) which was significant. Rate of post operative complications were more in laparoscopic TEP repair. Post operative pain was similar in both groups. Seroma was found in 7 patients (35%) in Laparoscopic TEP compared to 2 patients (10%) in AK Henry. Duration of stay in hospital was less in laparoscopic TEP cases. Recurrence rate was more in laparoscopic TEP (2 cases) compared to AK Henry (1case).

### Conclusion

Our study has concluded that preperitoneal approaches are gaining popularity especially laparoscopic approach but learning curve is longer compared to open preperitoneal approach. AK Henry approach is beneficial in view of less duration of surgery, less instrumentation, less recurrence rate, less postoperative complications, cost effectiveness and avoidance of general anaesthesia.

PP 10

### REDUCTIVE SURGERY FOR LYMPHOEDEMA: SINGLE UNIT EXPERIENCE

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### Introduction

Advanced lymphoedema leads to cosmetic disfigurement, social denial and psychological distress. Surgical debulking may be the last resort for such lesions.

### Methods

Six operative procedures in five patients with stage iii lymphoedema with grossly deformed limbs were offered Charle's procedure. Outcome was assessed in the perioperative period in the hospital and 6 weeks after.

### Results

Three females and two males (median age: 38, range 28-60 years). Five were lower limbs; one underwent bilateral lower limb reconstructions, an arm reduction was done for lymphoedema secondary to previous mastectomy. Five underwent limb elevation for 4 weeks prior to surgery. One was for recurrence. All underwent extensive debulking up to muscle with skin flap cover, +/-skin graft. Average weight of the tissues and operative time were 17.95kg (range: 0.75-28kg), 7hours respectively (range: 3-9.30hours). One patient had 2 units of blood transfusions per-operatively. Average hospital stay was 15 days post op. Complications: One had failed skin graft complicated with systemic sepsis needing parenteral antibiotics. All were having acceptable functional outcome when discharged and at six weeks follow up all wounds healed, and satisfied.

**Discussion**

Debulking surgery removes the hard connective tissue and any large folds of fatty tissue in affected body part. Potential risks include prolonged hospitalization, poor wound healing, cutaneous nerve damage, significant scarring, destruction of the remaining lymphatic vessels, loss of limb function, return of swelling, poor cosmetic results.

**Conclusion**

During this short follow up, despite evidence from published data, our series carry good functional outcome with acceptable morbidity.

PP 11

**INCIDENCE, PROGRESSION, AND RISK FACTORS FOR ENDOVENOUS HEAT-INDUCED THROMBOSIS AFTER RADIOFREQUENCY ABLATION**

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**Introduction**

Endovenous radiofrequency ablation has become an accepted mode of treatment for superficial venous reflux. In this study, we evaluated the incidence of endovenous heat-induced thrombosis (EHIT), its progression, and risk factors.

**Methods**

This was a prospective study of patients who underwent radiofrequency ablation of the great saphenous vein (GSV), and small saphenous vein (SSV) from March 1, 2013, to September 30, 2015. Demographic data, CEAP classification, previous history of DVT, body mass index, vein diameter, reflux time, catheter tip position, number of stab phlebectomies were analyzed.

**Results**

Of the 386 treated limbs, 282 (73%) had GSV, and 104 (27%) had SSV ablation. EHIT developed in 8 limbs for an overall incidence of 2%. Patients who developed EHIT were slightly older than those without EHIT (median age, 59 versus 56 years). In patients with EHIT, 34.8% were men, but only 25% were men among those who had no EHIT. GSV and SSV diameters were larger in EHIT patients. Reflux time and catheter tip distance from the saphenous junctions were similar in both groups. EHIT

resolution occurred in 2 to 4 weeks in all patients. In the EHIT patients, 68% had multiple phlebectomies compared with 39.4% of those without EHIT. DVT history made no difference for EHIT development.

**Conclusion**

Large vein diameter, male sex, and multiple phlebectomies are risk factors for development of EHIT. We recommend that EHIT class 1 and 2 patients be managed with observation or antiplatelets, or both, but class 3 and 4 patients should be anticoagulated.

PP 12

**HEPATIC RESECTION FOR BENIGN BILIARY STRICTURE**

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**Introduction**

Hepatic resection (HR) is a part of management protocol of benign biliary strictures (BBS) following cholecystectomy. Present study was done to uncover the factors leading to hepatic resections for BBS, and their outcome.

**Methods**

Retrospective analysis of a prospectively maintained departmental database from February 1989 to March 2014, to identify patients who underwent hepatic resection for management of BBS. Type of cholecystectomy, bile duct injury (BDI) and benign biliary stricture (BBS), indication for HR, time from cholecystectomy, previous repair, atrophy-hypertrophy complex (AHC) intraoperative parameters, histology of resected specimen, postoperative morbidity, and follow-up details were noted. Outcomes were graded according to McDonald classification.

**Results**

648 patients of BBS were studied. 10 patients underwent HR (1.53%). Out of these 9 patients had high BBS (type IV and V) while 1 patient had strictured hepaticojejunostomy (HJ) for a type III BBS. Laparoscopic cholecystectomy (LC) was the primary surgery in 80% (8/10) patients. AHC was present in 4 (40%) patients. Median time from cholecystectomy to HR was 545 (226-1566) days. Proximal BBS (type IV and V,

$p < 0.001$ ) and AHC ( $p = 0.004$ , OR = 15.4, CI: 2.94-80.99) were predictive factors for HR. Failed previous repair was also associated with HR (20%). Postoperative morbidity was 80% and mortality 20% (2/10). Outcomes of HR with median follow up of 18 months were good with success rate of 70% (McDonald A & B).

### Conclusion

Hepatic resection gives good results in complex BBS (type IV and V) with AHC. AHC is a strong predictor for need for HR in BBS.

PP 13

### CLINICOPATHOLOGICAL PROFILE OF UROLOGICAL CANCERS TREATED IN A UROLOGY UNIT OF SRI LANKA OVER A PERIOD OF FIVE YEARS

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### Introduction

Malignancies are a major health challenge in the new millennium. Our aim of the study was to identify the clinico-pathological profile of urological malignancies treated in the urology unit of a tertiary care hospital in Sri Lanka.

### Methods

Data related to all newly diagnosed and histologically confirmed malignancies in a urology unit of a tertiary care hospital in Sri Lanka were recorded prospectively over a period of five years from 1 January 2011 to 31 December 2015.

### Results

There were 386 prostate cancers, 193 bladder tumours, 173 renal tumours, 13 upper urinary tract carcinomas, eight penile cancers, seven testicular malignancies, one urethral carcinoma and two urachal carcinomas during the study period. Gleason score of 8 or more prostate cancers were seen in 164 (42.5%) patients. Metastases were present in 59.8% of patients with prostate cancer. Muscle invasive urothelial cancers constituted 31.4% patients with bladder carcinoma. Primary carcinoma-in-situ of the bladder was seen in only one patient. Average age at diagnosis of renal cell carcinoma was 56.9 years with a male to female ratio of 3.5:1.

### Conclusion

Renal cancers in Sri Lanka occur at an earlier age than the developed countries. They are diagnosed at an early stage similar to the developed world in contrast to the late diagnosis of prostate and bladder malignancies in Sri Lanka. Most prostate cancers are high grade with a Gleason score of 8 or more. Primary carcinoma-in-situ of bladder is extremely rare in Sri Lanka.

PP 14

### PANCREATICOGASTROSTOMY SIMPLE AND SAFE TECHNIQUE

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### Introduction

Pancreaticoduodenectomy (PD) is the treatment of choice for periampullary pancreatic tumors. This procedure carries a significant risk and morbidities, most of them are related to pancreatic anastomotic failure. Many techniques have been described to decrease the anastomotic leak rate and related complications, pancreaticogastrostomy (PG) is one of the techniques utilized to restore the pancreatic continuity after pancreatic head resection. The aim of this study is to describe and evaluate our modified pancreaticogastrostomy technique.

### Methods

Retrospective review was done for all patients who underwent pancreaticoduodenectomy between 2008 to 2014 at King Faisal Specialist Hospital & Research Center (Gen. Org.) - Jeddah, Kingdom of Saudi Arabia. A total of 34 patients underwent a pancreaticoduodenectomy with pancreaticogastrostomy using our modified technique. Our reviewed variables include Indication for surgery, intra-operative and post-operative variables and post-operative complications.

### Results

At King Faisal Specialist Hospital & Research Center (Gen. Org.)-Jeddah in group of patients who underwent pancreaticogastrostomy (n=34) including 20 males and 14 females, the mean age was 58.53 years (SD 14.1). The histopathology review post operatively showed 7 benign cases and 27 malignant cases. The indications for

pancreaticoduodenectomy based on the histopathology have been divided into 5 main categories: adenocarcinomas, neuroendocrine tumors, intra-ductal tumors, cystic lesions of the pancreas, trauma and others including inflammations and fibrosis. The mean tumor size was 3.23cm in diameter (range, 0-11 cm) with (0-6) no of lymph node involvement. There was a vascular invasion in 23.5% of the cases. The highest morbidity in our series following pancreaticoduodenectomy was, wound infection (20.5%), atelectasis (14.7%), delayed gastric emptying (8.8%). Others include Intra-operative and post-operative hemorrhage, abscesses and collections, wound dehiscence and Pulmonary embolism (PE) counted for 5.8% of the complications. biliary fistulas, Lymphatic duct injury and deep venous thrombosis (DVT) occurred in 2.9% of the patients.

### Conclusion

Pancreatic stump invagination into the gastric lumen with a two layers fixation of the ventral surface of the pancreas might be associated with a lower risk of pancreatic anastomosis failure. Further prospective validation with a larger number of cases is needed to support our finding.

PP 15

### A SINGLE CENTER EXPERIENCE OF REVASCULARIZATION OF DEAD AND MARGINALLY VIABLE LIMBS.

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### Introduction

Dead or marginally viable limbs (DMVL) (more than 50% of muscles are dead) are traditionally a contraindication for revascularization. In our centre we get significant proportion of patients with DMVL following vascular injury due to delay. We present our experience with revascularization of such limbs.

### Methods

This is an ongoing prospective study. Patients presenting to Teaching Hospital Anuradhapura over 14 months were included. Limbs with severe soft tissue and skeletal injury (mangled), unfit patients and patients with limb

infection were excluded. All patients underwent fasciotomy to confirm the viability. All patients were admitted to intensive care unit post operatively.

### Results

There were 5 patients with DMVL (4 males and a female). Mean age was 42.4 years. Mean ischemic time was 15.6 hours. The arteries injured were popliteal in 3 and lower femoral in 2. One limb was found to be nonviable and 4 limbs were marginally viable. One patient had significant reperfusion syndrome needing urgent amputation and other patients did not have significant effects. Limb salvage rate was 80% (n-4). All patients reported improved sensation but only one had improvement of motor function.

### Conclusion

In our series limb salvage rate is 80% and all patients preferred to have a limb even though it was functionless. Therefore the limb salvage should always be attempted irrespective of ischaemic time and the number of compartment viability. This will be appropriate in our setting where the ischaemic times are very long due to various delays.

PP 16

### ELECTIVE CERVICAL BLOCK DISSECTION(ECBD); IS IT THE APPROPRIATE METHOD FOR NECK STAGING IN NODE NEGATIVE(NO) ORAL CANCER. A PILOT STUDY.

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### Introduction

Oral cancer is the second commonest malignancy in Sri Lanka. The high incidence of occult cervical metastasis (>20%) in tumours of lower part of the oral cavity favors the elective treatment of neck. The Supraomohyoid Block Dissection (SOBD) as elective mode of treatment is well established. But with high LN negativity in ECBD, the possibility of Sentinel lymph node dissection is in debate at present. Complexity of lymphatic drainage and deeply located Lymph Nodes(LN) of the neck make this challenging.

### Methods

Prospective descriptive study was designed in oral cancer patients with clinically NO disease, who

underwent primary surgery with ECBD at NCI Maharagama between 2015 April and 2016 March. The demographic, clinical and histopathological data were analyzed.

### Results

Out of the data completed 17 subjects, 12 (70%) were males. Mean age was  $58.25 \pm 13$  years in males and  $53.4 \pm 4.9$  years in females. Tumour was in left side in 80% (n=14). Commonest sites were tongue 7 (41%) and buccal region 6 (35%). The neck was evaluated with CT in 12 (70.6%) and the rest with USS. Majority were in Stage T1-T2 disease (75%), with tumour depth of invasion  $6.67 \pm 3.39$  mm. The mean harvested number of LNs was  $18.7 \pm 6.3$ . Though 53% had vascular emboli only 2/17(11.7%) had positive LN, in both patients the tumour was in the floor of the mouth.

### Conclusion

Despite low number of subjects, this study elaborates high rates of neck negativity in ECBD. This warrants further studies in application of alternative neck staging modalities (Sentinel Lymph node, Pet/CT etc.) in managing NO neck disease.

PP 17

### DISPROPORTIONATE DISTRIBUTION OF LIVER FAT WARRANTS CAREFUL ASSESSMENT OF SEGMENT IVB FOCAL LESIONS

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### Introduction

Fatty liver (FL) has become a major health concern. Focal fat sparing and steatotic-adenomas are benign focal liver lesions associated with FL. This study evaluates a possible pattern of computed tomogram (CT) attenuation and deposition of fat in the liver.

### Methods

214 non-contrast CT abdomen and pelvis images were evaluated. Two 40mm<sup>2</sup> regions of interest (ROIs) were selected from each segments of liver and four ROIs were selected from the spleen. The diameter of bony pelvis and the diameter of soft tissue thickness were measured at the level of the sacral promontory. Liver

spleen density ratio < 1 was defined as FL.

### Results

119 (55.6%) were males and the median age was 56 (11-87) years. 100 (46.72%) of them had FL. Mean segmental densities were I-52.6, II-54.77, III-55.76, IVa-52.85, IVb-52.03, V-56.58, VI-56.23, VII-66.01 and VIII-55.78 (in HU). Mean segmental densities in FL patients were I-50.21, II-50.92, III-50.55, IVa-48.33, IVb-47.3, V-51.51, VI-51.24, VII-50.11 and VIII-50.64 (in HU). Segment IVb (p=0.000) had the lowest hepatic attenuation when compared with other segments. Similar pattern was seen in segment I (p<0.001). Segment IV b density did not correlate with age, gender or soft tissue pelvis, bony pelvis diameter ratio. When patients with FL were separately evaluated, the attenuation differences in IVb and I were even more significant.

### Conclusion

Distribution of fat is unequal in the liver showing consistently low density in segment IVb. Possibility of FL related lesions should be considered in patients having non-characteristic focal lesions in IVb.

PP 18

### THE LATERAL THORACIC VEIN AS A RELIABLE LANDMARK TO APPROACH THE THORACODORSAL PEDICLE

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### Introduction

Accurate anatomical landmarks to locate the thoracodorsal neurovascular pedicle (TDP) are important in axillary clearance and reconstructive surgery.

### Methods

Twenty axillary dissections were conducted on preserved Sri Lankan cadavers. Cadavers were positioned dorsal decubitus with upper limbs abducted to 90 degrees. An incision was made over the upper part of the anterior axillary line. The lateral thoracic vein (LTV) was identified and traced bidirectionally. The anatomical location of the TDP was studied in relation to the lateral border of pectoralis minor and from a point

along the LTV, 2 cm inferior to its confluence with the axillary vein (reference point x).

### Results

The LTV was invariably present in all the specimens. All the LTVs passed lateral to the lateral border of pectoralis minor except in one specimen, where the LTV passed along its lateral border. The TDP was consistently present posterolateral to the LTV. The mean distance to the LTV from the lateral border of pectoralis minor was  $28.7 \pm 12.6$  mm. The mean horizontal distance, depth, and displacement, from reference point x to the TDP were  $14.5 \pm 8.9$  mm,  $19.7 \pm 7.3$  mm and  $25 \pm 5$  mm respectively. The TDP was found  $54^\circ \pm 12^\circ$  to the horizontal plane 95% of the time.

### Conclusion

The LTV is an accurate guide to the TDP. We recommend exploring for the TDP from a point 2 cm from the confluence of the LTV and the axillary vein for  $25 \pm 5$  mm in a posterolateral direction, at an angle of  $54^\circ \pm 12^\circ$  to the horizontal plane.

PP 19

### USEFULNESS OF PLAIN X RAY KUB IN DIAGNOSING URETERIC STONES IN THE CASUALTY SET UP

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### Introduction

In an era non-contrast CT has emerged as the most sensitive modality for detecting ureteral calculi, plain X ray KUB still prevails in Sri Lanka. Overlying bowel gas, fecolith, phlebolith and radioluscent calculi makes identification difficult in X ray.

### Methods

Prospective data analysis was performed on 103 patients managed as ureteric colic in a single surgical unit at NHSL from 01st March 2016 to 25th May 2016.

### Results

Calculi were confirmed in 30 X-ray KUBs; 12 ureteric, 9 VUJ and 9 renal. Calculi were not detected in 65 and not conclusive in 8. There were no RBCs on UFR in 15 patients. 32.03% patients had even <6 hours of fasting and 37 had their X-rays even before single bowel motion. Detection of calculi in X-ray KUB was 13.33%

when UFR had no RBCs, 20% with RBCs <10, 37.93% with 10-100 RBCs, 45.45% with moderately field full RBCs and 50% with field full RBCs. In contrast calculi detection was 39.39% in patients who had <6 hours of fasting, 22.03% for 6-12 hours fasting and 36.36% for >12 hours fasting. Calculi detection was 30.3% for patients who had bowel motions prior to X-ray KUB and 27.02% for who did not.

### Conclusion

Performing UFR prior to X-ray KUB to detect microscopic haematuria increases the probability of stone detection and it is well worth for wait till confirmation before proceed to the X-ray KUB. Detection rate is slightly improved with bowel motions prior to X-ray.

PP 20

### STUDY ABOUT CLINICAL OUTCOME AFTER EMERGENCY LAPAROTOMY IN SURGICAL UNIT B, GENERAL HOSPITAL MATARA

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### Introduction

Emergency laparotomy is a common intra abdominal procedure. Despite being a commonly performed surgery outcomes are generally recognized to be poor. Main objective of this study is to assess factors affecting the morbidity and mortality following emergency laparotomy.

### Methods

Prospective descriptive study was conducted by collecting data from a single unit in GH Matara over 5 months.

### Results

During the study period 48 patients underwent emergency laparotomy. Male : female ratio was 2:1. Age range was 5 to 85 years with a median of 55 years. The unadjusted post operative mortality was 22% (11) for all patients and 43% in patients aged 70 years or over. 18% (9) of patients underwent immediate surgery and mortality was 33%, while in 66% (32) patients following urgent surgery mortality was 15%. For 21 (43%) of cases consultant surgeon was present in theatre, while a consultant anaesthetist was present in theatre for 31% of cases. 31 (64%) of cases returned to the ward post operatively, and 26% was admitted to Intensive Care

Unit. 10 (25%) of surgical site infections, 2 cases of burst abdomen and 6 cases of post op pneumonia were observed as major morbidities.

### Conclusion

This study confirms that emergency laparotomy carries a high mortality and morbidities. Mortality following emergency laparotomy increases with increasing age, higher ASA category and with increase urgency of surgery.

PP 21

### FUNCTIONAL AMBULATION FOLLOWING SUCCESSFUL SURGICAL TREATMENT OF FRACTURE NECK OF FEMUR: A PRELIMINARY STUDY

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### Introduction

Neck of femur (NOF) fracture is a common presentation in orthopaedic units. It can cause reduced ambulation and dependency even after surgical treatment. This study was aimed to describe the level of functional ambulation in a cohort of patients following successful surgery for fracture neck of femur.

### Methods

A descriptive study was carried out. Data regarding demographic factors, type of fracture, surgery related factors were collected using an interviewer administered questionnaire during follow up. A sample of 25 consecutive patients were interviewed regarding ambulation which then was classified according to Functional Ambulation Category ranging from 0 to 5. Univariate analysis was carried out and results were expressed as frequencies and percentages.

### Results

The mean follow up duration of the study sample was 13.9 weeks (range 4 – 50 weeks). The median age of participants was 65 years (range 51-85), males=7. Of the participants level 4 and 5 (independent level) were achieved by 7 (28%) patients. Majority (n=12, 48%) belonged to level 1 and 2 which requires physical assistance for ambulation. Four patients were non-ambulatory. There was no association with type of fracture, type of surgery, age or sex. Only 6 patients were compliant with physiotherapy and rehabilitation.

### Conclusion

Considerable proportion (64%) of participants was either non-ambulant or dependent on others for ambulation. More emphasis should be given for education and encouragement of patients to participate in rehabilitation.

PP 22

### OUTCOME OF THIGH ARTERIO VENOUS FISTULAS (TAVF) FOR HAEMO-DIALYSIS (HD) FOR CHRONIC KIDNEY DISEASE PATIENTS

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### Introduction

Functioning Arterio venous fistula (AVF) is an essential need for CKD Patients. It is best to have an upper limb AVF if it is not possible (e.g. In superior vena cava (SVC) obstruction) then a TAVF or a tunneled line is the next option. Significant number of patients with SVC obstructions due to previous dialysis line insertions present to our unit. We are presenting a series of TAVF created on such patients.

### Methods

This is a retrospective analysis of patients who underwent TAVF at Teaching Hospital Anuradhapura over a 16 month period. Patients died in immediate post-operative period and who were lost to follow up was excluded. In all patients AVF was created between Lower superficial femoral artery and long Saphenous vein (LSV). LSV was tunneled subcutaneously in a gentle curve orientation.

### Results

7 patients underwent TAVF and 5 included (2 excluded). 3 were males and 2 were females. All patients had failed upper limb AVFs or SVC obstruction. Mean age was 40.4 years. At mean follow up of 52.2 weeks, 4 patients were able to start on HD using TAVF. Success rate of TAVF was 80%.

### Conclusion

In our series success rate was 80%. This is a desirable outcome and is better than tunneled line which is associated with high rate of infection. Keeping the LSV in gentle curve position rather than loop orientation

results in an easier cannulation.

PP 23

### **QUALITY OF THE DOCUMENTATION OF SURGERIES: AN AUDIT.**

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#### **Introduction**

Accurate documentation of surgical operation notes is essential. The objectives of this study to compare surgery note documentation against guidelines published in Good Surgical Practice by the Royal College of Surgeons of England (RCS Eng) 2010.

#### **Methods**

The retrospective audit carried out in Colombo North Teaching Hospital. Operation notes of the patient who underwent major surgeries during June 2014 to December 2014 were traced. We compared them with the Good Surgical practice guidelines as the gold standard. Our findings were presented to the medical officers of the unit and guideline was made available in the theater. A second audit was then carried out from January 2015 to May 2015.

#### **Results**

Fifty operation notes were analyzed in initial audit and 30 analyzed in re-audit. Date and time of the surgery mentioned 44% in initial audit and 93% mentioned in re-audit. Type of incision noted in 86% and 100% documents, in initial audits and re-audit respectively. Regarding the blood loss recorded in 12% documents in initial audit and 63% of documents in second audit. Details about the closure technique documented, in 76% and 93% of documents in audit and re-audit respectively. None of the document included signature of the documenter in the initial audit and which was recorded in the 80% of documents in the re-audit.

#### **Conclusion**

Completeness of the records was not standard. Education of surgeons about the standard record keeping clearly improved documentation of operation notes. Further education and re-audit in regular intervals recommended to keep the standard of documentation.

PP 24

### **EVALUATION PATIENTS' ACCESSIBILITY FOR HEALTH INFORMATION TO PROVIDE INFORMED CONSENT FOR ELECTIVE SURGERY**

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#### **Introduction**

Informed written consent for elective surgery is becoming highlighted due to increasing medical litigation and increasing involvement of the patients in the decision making of their own treatment process. Adequate information for the patient is important in the ethical, legal and therapeutic outcome point of views. Patients usually gather information from the doctor who is providing the medical care during the process of routine informed consent. Patient may gather information also from Other medical staff (doctors/nurses) Friends who have undergone the same procedure Media and internet access for information is mainly determined by the patient's level of education and access for modes of information. In this study, we have assessed 50 patients who consented for a routine surgical procedure at a peripheral hospital, for their level of education, available modes of access for information, participation of other family members in the decision making and how actively they participated in the process of giving informed consent.

#### **Methods**

We have prospectively analyzed 50 patients, who gave informed written consent for elective surgical operations.

#### **Results**

Majority of the patients educated beyond grade 8 (80% vs. 20%), and are able to write and read (89% versus 11%). Comparatively few patients accompanied a relative for the support in the process (56%). Few asked questions to gather more information (24%). Majority gathered new information from radio, television or newspapers. Very few (20%) had the ability and access for internet for gathering information.

#### **Conclusion**

Majority of the study population are educated to gather information but have poor quality modes of information.

PP 25

### **PREDICTING THE EFFICACY OF RIGHT COLONIC PREPARATION BASED ON LEFT COLONIC PREPARATION - A PRELIMINARY REPORT**

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#### **Introduction**

Colonoscopy is resource hungry. Poor bowel preparation often leads to poor visualization requiring repetition. This study aims to predict proximal colonic preparation based on distal colonic preparation, so that time and material resources may be conserved.

#### **Methods**

Patients undergoing bowel preparation with Poly-Ethylene-Glycol split regime followed by colonoscopy were included. Previous colonic resections and with stomas were exclusion criteria. Preparation quality in the recto-sigmoid, descending, transverse and right colon were assessed individually using the Ottawa score (OS) and cleansing time (CT) as indicators. Ottawa 0,1 were considered as good preparation and 2,3,4 were considered poor preparation. Receiver Operating Characteristic (ROC) curves were plotted for cleaning times of recto-sigmoid, descending colon and total left colon, to establish the best predictive index of ascending colonic preparation.

#### **Results**

The first 38 patients meeting the inclusion criteria were recruited; 18 (47%) were males. Median age was 62 years (range 19-89 years). The ROC curve for recto-sigmoid CT was the best parameter for prediction. Specificity of 100% was achieved at 15.5 seconds CT. It was used to classify recto-sigmoid CT into good and poor preparation. Ascending colonic good and poor preparation (OS) compared against this categorization showed significant association ( $p=0.009$ ). Positive predictive value: 100% (95%CI 39.76% to 100%). Negative predictive value: 67.65 % (95% CI 49.47% to 82.61%).

#### **Conclusion**

Cleaning time of the recto-sigmoid junction is the best predictor of ascending colonic preparation. A recto-sigmoid cleaning time equal to or greater than 15.5

seconds, almost always predicts poor preparation in the ascending colon.

PP 26

### **CAN SECOND TOE PRESSURE BE SUBSTITUTED FOR BIG TOE PRESSURE?**

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#### **Introduction**

Wounded, gangrenous or amputated big toes make it impossible to measure big toe pressures. We studied the validity of using the second toe pressure as a substitute.

#### **Methods**

28 healthy consenting volunteers were studied. Pressures in the big toe and 2nd toe in 56 legs were measured along with upper arm brachial pressure under standard conditions using "Summit Doppler" machine and the "Hokanson Digit or Penile Vascular Cuff". Measurements were taken using Pulse Volume Recording (PVR) wave forms.

#### **Results**

Population median systolic BP is 117 mmHg (Male 67.9%, median age 24). The median and iqr for big toe and second toe pressure were 106 mmHg (25) and 99 mmHg (24.5) respectively. Pearson correlation coefficient was statistically significant ( $R= 0.618$ ,  $P< 0.001$ ).

#### **Conclusion**

Second toe pressures correlate with the big toe pressures in a healthy population. Further studies involving patients with PVD should be conducted to assess the existence of same correlation in diseased group.

PP 27

### **AGE RELATED TRENDS IN HORMONAL AND HER2 STATUS IN LOCAL COHORT OF BREAST CARCINOMA PATIENTS**

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National Cancer Institute of Sri Lanka

### Introduction

Multimodality treatment of breast cancer is becoming highly dependent on tumor biology such as hormonal status and HER2 status. Epidemiological data regarding these parameters are helpful in decision making in individual basis as well as population basis in relation to breast cancer. Sri Lanka has an aging population with possible implications to biological behavior of breast cancer. There is a lack of data regarding local variations in hormonal and HER2 status among breast cancer patients.

### Methods

Cross sectional study was conducted among oncosurgery clinic patients with breast cancer. 177 Core biopsies of known breast malignancies were analyzed for hormonal status and HER2 status with standard immunohistochemistry and compared with epidemiological data of the cohort.

### Results

Estrogen receptor(ER) status had a steady rise from 35% (10-39 years) to 70% (over 70's) with the aging. Progesterone receptor (PR) status had a bimodal distribution with peaks at 40-49 years (63%) and 70'S (60%). HER2 status was independent of age where it had 28%-37% in all age groups.

### Conclusion

Compared with international literature we have found some variations of the biological behavior of breast cancer among our patients. These finding will aid in resource allocation and policy development in our patients.

PP 28

### IS THERE AN ASSOCIATION BETWEEN AUTOIMMUNE THYROIDITIS AND INCIDENTAL CARCINOMA OF THE THYROID

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### Introduction

An incidental thyroid carcinoma (ITC) is a thyroid malignancy that is not clinically or cytologically detected preoperatively. Autoimmune thyroiditis (AIT) is

associated with neoplastic change in the benign thyroid disease. A study was undertaken to assess the association of AIT in patients found to have ITC at Professorial Surgical Unit, North Colombo Teaching Hospital, Sri Lanka.

### Methods

Prospective cohort study spanning from November, 2002 to October, 2015 on all patients who underwent total thyroidectomy with cytologically Thy 2 benign thyroid disease. FNAC was performed on all palpable lesions to detect presence of malignancy. Data were analysed by Fisher's exact test.

### Results

From a total of 408 Thy 2 patients, 31 were found to have ITC. 12 (38.7%) patients had background thyroiditis and 19 (61.3%) had no thyroiditis. 82 had AIT, out of which 70 patients had benign histopathology. Incidence of ITC in benign thyroid disease with AIT is 14.63% (12/82) with a  $p = 0.0169$ . Out of the 12 patients with ITC and AIT, 9 (75%) had papillary carcinoma, 2 (16.6%) had follicular carcinoma and 1 (8.3%) medullary carcinoma.

### Conclusion

Incidence of ITC in benign thyroid disease with AIT is 14.63%. AIT has a statistically significant association with ITC in this cohort.

PP 29

### FACTORS AFFECTING INADEQUATE AXILLARY LYMPH NODE DISSECTION (ALND) IN BREAST CARCINOMA

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### Introduction

Presence of axillary lymph node metastasis is the most significant prognostic indicator in breast carcinoma. It is accepted that minimal number of 10 lymph nodes are needed for adequate staging of axilla in breast cancer. We observed a higher number of patients in local population with inadequate ALND. This study was conducted to assess factors related to substandard ALND.

### Methods

Retrospective analysis of breast cancer patients referred to a single oncological unit over 18 months was assessed

in this study. Data collected through clinical records. Data were analyzed via SPSS software package.

### Results

Sample population consisted of 124 ALND completed patients. 36(29%) patients had axillary clearance with lymph nodes less than 10. There was an increasing trend of substandard ALND with increasing age. Patients less than 40 years had 81.8% adequate ALND but it dropped to 53.3% in 70's. Tumor stage, luminal stage or pre-operative clinical node positivity did not have a significant relationship to number of lymph nodes resected.

### Conclusion

Compared to international literature we have significantly high substandard ALND. Even though there is a negative trend in elderly population further studies are needed to assess the clinical outcome in this age group.

PP 30

### FOLLICULAR NODULES (THY3) OF THE THYROID: IS TOTAL THYROIDECTOMY THE BEST OPTION?

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### Introduction

Fine-needle aspiration (FNA) biopsy is the cornerstone of assessment of thyroid nodules. Cytological criteria for benign (THY2) and malignant (THY5) aspirates are well established and reliable. When cytology suggests a follicular neoplasm (THY3), only formal histological assessment can differentiate between benign and malignant lesions. Identification of the best management strategy for nodules with Thy3 cytology presents particular problems for clinicians. Our objective was to establish the clinical outcome of patients with thyroid nodules indeterminate at cytology (THY 3) and to identify the features associated with malignancy.

### Methods

Retrospective review of histological data done in a cohort of 134 patients underwent total thyroidectomy following cytological diagnosis of indeterminate nodule at Teaching Hospital Kandy, Sri Lanka for a period of one and half years since 2014 April.

### Results

Of 134 patients, 16 (12%) had thyroid cancer at histology. papillary thyroid carcinoma were seen in 8 (50%) patients, follicular carcinoma in 5 (31%) patients, hurthle cell carcinoma in 2 (12.5%) patients and lymphoma in 1 (6.1%) patient. among these 16 patients 14 (87.5%) were females and 2 (12.5%) were males. The study also identified that none of the cytological reports had adopted the Thy3 sub classifications.

### Conclusion

Proportion of cancer in this study group was low considered with published data most suitable surgery in patient with thy3 nodule has to be decided following evaluation of other risk factors, ultrasound scan findings, associated thyroiditis and sub classification of thy 3.

PP 31

### LONG TERM OUTCOME OF MICRO-VASCULAR RECONSTRUCTION OF FOOT DEGLOVING INJURIES

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### Introduction

Foot degloving injuries are common with motor cycle accidents due to lack of safety foot wear. Plastic surgical unit of Teaching Hospital Kurunegala receives many foot injuries referred by orthopaedic unit. They range from simple heal avulsions to complete foot degloving. Major heel avulsions need micro-surgical reconstructions if the patient's desire is to salvage the limb.

### Method

The study was conducted at Teaching Hospital Kurunegala and designed to evaluate medium and long term outcome of severe foot degloving injuries reconstructed with microsurgical flaps. The patients were reviewed in the clinic and evaluated the outcome using radiology, use of prosthesis and patient satisfaction.

### Results

A total number of 12 micro-vascular reconstructions for degloving injuries were done from 14th of May 2014 to March 2016. One patient was lost to follow up. Three patients had flap loss (25%). Except one patient none of

the successful free flaps had to undergo additional procedures. All three flap failures were due to discrepancy of vessel size. Most of flaps were muscle flaps (66%). All patients are mobile and are not dependent on prosthesis.

### Conclusion

Even very severe degloving injuries patients had good recovery despite having insensate free tissue transfers.

PP 32

### THE LYMPH NODE YIELD IN COLO RECTAL CANCER SPECIMENS: A SINGLE UNIT EXPERIENCE

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### Introduction

Detecting lymph node metastasis in excised colo rectal cancer specimens provides prognostic information and influences the subsequent treatment strategy. International guidelines recommend examining at least 12 lymph nodes per specimen and a lesser lymph node harvest is said to be associated with a worse outcome. The aim of this study was to analyze the lymph node yield in surgeries performed for carcinoma of the large bowel.

### Methods

Histopathology reports of surgeries performed at a single unit for large bowel malignancies over a four year period were retrospectively analyzed.

### Results

Out of 28 total specimens, 19(67.5%) were from males. Majority were rectal cancer specimens (39.3%). The mean lymph node yield was 12(1-35) with 50% of the specimens having 12 or more nodes in them. There was no statistically significant association between the gender of the patient, size, location or T stage of the tumor and harvesting 12 or more nodes at surgery.

### Conclusion

More radical dissection and an active search for lymph nodes during surgery as well as in studying the pathological specimen may improve the yield of lymph nodes. Further studies with a larger study sample are needed to identify factors which influence the node

harvest.

PP 33

### AN EMERGING TREND OF THYROID MALIGNANCY: OUR EXPERIENCE

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### Introduction

Thyroid malignancies have an annual incidence of 5 per 100,000 according to most recent statistics in Sri Lanka. We at provincial general hospital Ratnapura (PGHR), main tertiary care referral center in Sabaragamuwa province increasingly get new patients diagnosed with thyroid malignancies.

### Method

A descriptive retrospective study of patients who underwent total/partial excision of thyroid for a period of 1 year from January 2015 in all surgical departments at PGHR.

### Results

Mean age of study population (n=350) is 44 years and 33.4% had histologically confirmed differentiated thyroid malignancy (DTC), following surgery. Both benign and malignant thyroid disease is commoner in females but among males malignant thyroid disease is significantly more common than benign. Among DTC, papillary thyroid cancer is the commonest (84.2%) and its follicular variant is more common (64.3%) than classical papillary carcinoma. Thyroid micro-carcinoma comprised only 30.8% of DTC and majority of them had a total thyroidectomy. Non-capsulated tumors are seen in 80.3% and vascular invasion in 24%. Lymph node metastasis present in 7.7% of DTC group and undifferentiated malignancies comprised only 1.7% of population. Among DTC patients 69% presented as multi-nodular goiters and background autoimmune thyroiditis present in 22%.

### Conclusion

Among 1 in every 3 patients who underwent thyroidectomy has histologically confirmed malignancy. Further multi-center hospital and community based studies are needed to evaluate whether this is an emerging trend of malignancies in Sabaragamuwa

province or in Sri Lanka.

PP 34

### **ARE YOU READY FOR THE PARADIGM SHIFT? DAY CASE INTERVAL LAPAROSCOPIC CHOLECYSTECTOMY OVER 5 YEARS: AN AUDIT IN UK**

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#### **Introduction**

There is a wide variation of day case interval laparoscopic cholecystectomy rates in UK. The British Association of Day Surgery target is 60% while the best performers are achieving above 70%. The current UK average is about 50%. DGNHSF trust had a less than 3% day case laparoscopic cholecystectomy rate five years ago. After setting up a day case surgical unit it has transformed the delivery of cholecystectomy.

#### **Methods**

A retrospective audit was performed at district general hospital, based on a single surgeon's experience. A total of consecutive 872 cases were included from January 2011 to December 2015. We analysed the ASA grade, BMI, Age and Gender in addition to Length of stay, complications and readmissions.

#### **Results**

In this 5 year period, unit's day case rates were 32%, 52% 74% 77% and 73% respectively, increased the Trust's over all day case laparoscopic cholecystectomy rate above 70% with a 30 day readmission rate less than 6%. The outcome was consistent with current recommendations. Moreover that high BMI, ASA and Age are not absolute contraindications to day case surgery.

#### **Conclusion**

This implies that by setting up a day case unit with available resources, a greater proportion of patients experience same day discharge with satisfactory outcome.

PP 35

### **BLOODLESS PROBELESS FISTULECTOMY; SAFE TECHNIQUE FOR BOTH HIGH AND LOW ANAL FISTULA WITH MINIMAL RECURRENCE**

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#### **Introduction**

Anal fistula, part of the spectrum of perianal sepsis which is one of the most challenging condition to manage surgically. Recurrence is the most worrisome complication associated with high patient discomfort. Using our technique, we have completely excised fistulous tract with electro cautery after injecting methylene blue end up in minimal complications.

#### **Methods**

We have retrospectively and prospectively analysed patients who underwent Fistulectomy from January 2009 to April 2016. Complications and recurrences were assessed at follow up clinic visits.

#### **Results**

Eighty six patients included in the study with male preponderance of 87.2%. According to the park's classification 68 had superficial, 11 had intermediate and 7 had high anal fistulae. Perianal abscess were the etiology of majority (84.3%). Mean follow up period was 18.2 months. Time taken for wound healing in superficial and intermediate fistulae range from 6 weeks to 19 weeks with mean of 10.7 weeks. For high anal fistulae it was 20 weeks to 27 weeks with mean of 23.7 weeks. Average hospital stay was 2.6 days. Recurrent fistulae reported twice and one patient was positive for perianal tuberculosis. None of our patients had faecal incontinence, but 10 (11.62%) patients complained of flatus incontinence.

#### **Conclusion**

Being probeless prevents creation of false tracts and usage of electro cautery make bloodless field, with delineation of the tract using methylene blue injection almost always guarantee complete excision. Our technique shows excellent results with related to both low and high anal fistulae compared to current literature which could be practiced at any institution with basic facilities.

PP 36

**STUDY OF LIMB FRACTURE PATTERN AND MECHANISM AMONG CHILDREN ADMITTED TO TEACHING HOSPITAL KARAPITIYA**SC Ranmuthuge, JGPG Wijerathna, K Umapathy, GR Nishantha

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**Introduction**

Limb fractures are common event in childhood and children are not miniature of adults. Therefore limb fracture patterns, management concepts and outcome are totally differ from adults., Knowledge on epidemiology of children's fracture is essential to develop preventive and management strategies island wide.

**Methods**

All children (384) with limb fracture admitted to Teaching Hospital Karapitiya during study period were included to the study excluding repeated admission with same problem, who were immediately transfer to Intensive Care Unit and other unit such as neurosurgical unit, children with metabolic bone diseases and syndromes.

**Results**

There were 384 children .The overall male to female ratio was 2.75:1. Upper limb Fractures (86%) were more common than lower limb fractures(14%),non dominant side was fractured more than dominant side. Forearm fractures were the most common fracture (38%) next was supracondylar fracture of humerus (28%). Open fractures and major joint dislocation were uncommon. Fractures were most commonly occurred from minor to moderate trauma like fell on ground and fell from height. Most occurred at home(44%) then at playground (33%). 77% of children were admitted hospital same day of injury. 86% were discharged within 3 days.

**Conclusion**

Limb fracture pattern different according to age and the mechanism. This knowledge is useful for implementation of prevention and management protocol in Sri Lanka.

PP 37

**MAXIMUM DEVIATION OF THE MARGINAL MANDIBULAR NERVE FROM THE INFERIOR ANGLE OF THE MANDIBLE: A SRI LANKAN CADAVERIC STUDY**Y Mathangasinghe, DJ Anthony, AP Malalasekera, BMOD Basnayake, NMPG Gagana, YWPP Rathnayake, DKT Kuruwitaarachchi

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**Introduction**

The marginal mandibular branch of the facial nerve (MMBFN) is vulnerable to iatrogenic injuries during surgeries involving the submandibular region. This leads to significant post operative morbidity. Studies assessing accurate anatomical landmarks of the MMBFN are sparse in South Asian countries. Present study was conducted to assess the relationship between the MMBFN and the inferior border of the body of mandible.

**Methods**

Twenty two preserved cadavers of Sri Lankan nationality were selected. Cadavers were positioned dorsal decubitus with necks in extension. The maximum perpendicular distance between the inferior /caudalmost ramus of the MMBFN and the inferior border of the body of the mandible was recorded on both hemifaces.

**Results**

Recorded maximum distance was 17.65 mm on left side and 10.80 mm on right side. Mean maximum distance, was  $7.12 \pm 2.97$  mm. There was no statistically significant difference in the maximum deviation on left ( $7.84 \pm 3.41$  mm) and right sides ( $6.44 \pm 2.37$  mm);  $p > .05$ .

**Conclusion**

Course of the marginal mandibular nerve is complex. If the distance of the incision in the posterior submandibular approach is less than 2 cm from the inferior border of the mandible, there is a high probability of damaging the inferior ramus of the MMBFN.

PP 38

### INCIDENCE OF POSTCHOLECYSTECTOMY SYNDROME AFTER LAPOROSCOPIC CHOLECYSTECTOMY AMONG PATIENTS WITH SYMPTOMATIC GALL STONES IN SRILANKAN SETUP

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#### Introduction

Persistence of Right hypochondriac pain and other abdominal symptoms following surgery for gall bladder pathologies is a well known phenomenon for long period of time. Its prevalence is said to be ranging from 10 – 15% in old era studies. Studies are lacking to check it's occurrence among modern era patients after Laporoscopic cholecystectomy and there is no systematic approach for the management in most of the centers.

#### Methods

A prospective observational cohort study using 100 patients who undergoes Laporoscopic cholecystectomy for symptomatic gall stone disease in NHSL in a callender year. Symptomatology was compared Preoperatively , two and six months post operatively using a standard questionnaire .

#### Results

Among 58 patients in whom we have completed the study so far only 4 patients were found to have persistent symptoms at the end of 2 months and 3 patients at the end of 6 months (incidence = 6.8%, 5.17% respectively).

#### Conclusion

Prevalence of Post cholecystectomy syndrome is significantly low among our patients compared to past day studies . Systematic way of selecting candidates for surgery ,Pre operative patient education , Post operative pain management protocols may be the contributory factors. Small fraction of patients who have got persistent symptoms should be further assessed for the pattern of symptoms , cause and a systemic approach of management should be established.

PP 39

### INTRALESIONAL BLEOMYCIN: AN EFFECTIVE TREATMENT FOR CYSTIC LYMPHANGIOMA OF PAROTID

### AND SUBMANDIBULAR GLAND

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#### Introduction

Cystic lymphangioma commonly involve head and neck region or axilla, involvement of other sites like parotid are very rare. This study was done to assess the role of sclerotherapy in cysticlymphangioma of salivary gland like parotid and submandibular area with relevant review of literature.

#### Methods

All cases of cystic swelling in parotid and submandibular areas presented in the pediatric and plastic surgery were evaluated. The macrocytic lesions consistent with the finding of cystic lymphangioma were included in the study where as those having abscess or hemagiomatous component of ultrasound –doppler were excluded from the study.

#### Results

Five cases were enrolled, three had cystic lymphangioma involving parotid area, and one had involvement of submandibular area and one involving parotid as well as submandibular area. All had multiple cysts, and in majority of cases the aspirate was clear though in one case it was chylous. All except one responded well to the intralesional bleomycin.

#### Conclusion

Cystic lymphangioma should be included in the differential diagnosis of cystic lesion of parotid. Surgical excision within the parotid parenchyma is fraught with dangers and can lead to injury of the facial nerve, parotid duct and parenchyma. Bleomycin sclerotherapy delivered under ultrasound guidance with direct puncture of the individual cysts provide a safe, easy and reproducible treatment modality for the management of this rare entity.

PP 40

### COMPARATIVE VALIDATION OF THREE ONLINE NOMOGRAMS FOR PREDICTING NON-SENTINEL LYMPH NODE POSITIVITY IN SENTINEL LYMPH NODE (SLN) POSITIVE BREAST CANCER PATIENTS

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### Introduction

Completion axillary clearance (AC) is the standard mode of treatment in SLN positive axilla. Recent trials including ACOSOG-Z0011 have challenged this management. High non sentinel negativity (up to 70%) lead to introduce nomograms to assess the non-SLN involvement. These will help to identify the subgroups of non-SLN negative patients, whom can be managed without axillary clearance in future. This study compares and assesses the validity of MD-Anderson (7 variables), MSKCC (9 variables) and Cleveland clinic (8 variables) in Sri Lankan set up.

### Methods

A prospectively maintained database of patients with breast cancer who underwent SLN biopsy from March 2013 at NCI Maharagama was used. Risk of non-SLN metastasis was calculated using each nomogram's online calculator. Results of AC were reviewed for positive non-SLNs. Nomograms were evaluated using the area under the receiver operating characteristic curve (AOC) and positive predictive value. Mean values of prediction percentages of Non-SLN positive and negative groups were compared using independent t-test.

### Results

Out of 56 SLN positive patients 27(48.2%) had positive non-SLN. AOC for MD Anderson, MSKCC and Cleveland Clinic were 0.722, 0.792 and 0.799 respectively. No statistical difference among the AOCs detected. (P=0.500). The positive predictive value for nomogram probabilities of  $\geq 80\%$  were above 85%. The mean probabilities of the non-SLN positive and negative groups were statistically different (P<0.05) in all three nomograms.

### Conclusion

All three nomograms accurately predict the non-SLN positivity of the study population. Further validation is recommended prior to clinical application in axillary staging.

PP 41

**PREVALENCE OF PRESSURE ULCERS AMONG SPINAL TRAUMA PATIENTS IN A TERTIARY CARE CENTRE IN SRI**

### LANKA: ARE EARLY STAGES MISSED?

PCI Wijesinghe, B Parthippan, HMSS De Silva, MN Karunathilaka

### Introduction

Pressure ulcers are a major cause of increased mortality and morbidity among patients with spinal cord trauma. As a result duration of in-hospital-stay and overall healthcare expenditure increases. Therefore it is important to identify pressure ulcers at an early stage to initiate treatment.

### Methods

A descriptive cross-sectional study was carried out among 110 patients with spinal cord trauma at the National Hospital of Sri Lanka. Data was collected using an interviewer administered questionnaire. Pressure ulcer grading was done based on the European Pressure Ulcer Advisory Panel grading system and risk of developing a pressure ulcer was calculated using the Braden Scale.

### Results

76 males and 34 females were included in the study. Mean age of the sample was 44 +/-14 years. Mean Braden Score of the sample was 14.22+/-1.78. 10.9% had pressure ulcers out of which 66.7% had pressure ulcers in the sacro-coccygeal region and 16.67% had ulcers in the lateral aspect of heel. Duration at time of first detection of a pressure ulcer was 11.5 +/-4 days since hospital admission. At time of first detection of a pressure ulcer 11.1 % were grade 1, whereas 66.7% were either grade 3 or grade 4. Presence of a personal caretaker since hospital admission was significantly associated with detection of grade 1 pressure ulcers (p=0.03).

### Conclusion

Majority of grade 1 pressure ulcers are missed and therefore detected at a more severe grade. Prevalence of pressure ulcers can be further reduced if pressure ulcers are identified early.

PP 42

**CHRONIC SUBDURAL HAEMATOMA:A SINGLE CENTRE EXPERIENCE**

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### Introduction

Chronic subdural haematoma (CSDH) is the subdural haematoma presenting 21 days after the initial subdural bleeding. Main aim of this study was to identify patient characteristics and disease characteristics of CSDH. We analyzed 60 cases of CSDH patients over 5 months period in Teaching Hospital Karapitiya.

### Methods

A retrospective descriptive study was conducted among 60 patients with CSDH from 01.12.2015 to 30.04.2016. Data was collected with regard to sociodemographic details, common presenting features, risk factors and distribution pattern in CT imaging. Data source was bed head tickets.

### Results

Among 60 patients with CSDH presented 76% (46) were males and median age of presentation was 64. History of head trauma was identified in 26 (43.3%) cases. Other risk factors were alcohol abuse 35 (58.3%), coagulopathies 5 (8%) and seizures 3 (5%). Presenting symptoms included headache (50%), confusion (30%), language difficulties (10%) and limb weakness (6%). Frontotemporoparietal region was the most frequent site of CSDH (58.3%). In 20% cases CSDH was bilateral. Surgical intervention done in 50 (83%) patients. Overall mortality is 5% (3).

### Conclusion

CSDH generally occur in elderly and a history of head trauma can be identified in many cases. Alcohol abuse is a significant risk factor. Presentation is varied making the diagnosis difficult prior to imaging.

PP 43

### TRAUMA LAPAROTOMY : A SINGLE CENTRE EXPERIENCE

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### Introduction

Laparotomy is the most common operation performed for truncal trauma. Although nonoperative intervention is increasingly used in selected patients, surgical therapy for abdominal trauma remains an essential part of overall management.

### Methods

This study includes 31 consecutive patients who underwent laparotomy for trauma at district general hospital Negombo from 01/08/2015 to 29/02/2016. Each patient was evaluated in terms of age, sex, mechanism of injury, mode of injury, operative findings, post operative care and outcome. Data sources included patient's hospital records, personal phone calls to the patient/family.

### Results

Male:female ratio 5.2 : 1. 58% due to blunt and 42% due to penetrating trauma. Median age was 38 years. Mechanisms of injury included road traffic accident 48% (15), assault 26% (8), fall 16% (5), occupational and sports related injury 10% (3). Intra-abdominal injury pattern was Spleen (32%), liver (26%), small bowel (16%), diaphragm (3%), large bowel (3%), vascular (6%), Stomach (3%), renal (7%), bladder (3%), rectum (3%). There were combined injuries involving more than two organs in 16% (5) and 13% (4) negative laparotomies. IC tubes were inserted in 7% of patients due to additional thoracic injuries 48% (15) had post operative ICU care. There were 4 (12%) deaths.

### Conclusion

Road traffic accident is a major preventable cause for trauma laparotomy. Spleen is the commonest injured organ followed by liver which is similar to the other countries. 13% of negative laparotomy observed despite unavailability of imaging modalities (FAST scan/CT) at night. Almost half of (48%) trauma laparotomy patients admitted to ICU for post operative management.

PP 44

### BACTERIOLOGY AND SENSITIVITY PATTERN OF PUS CULTURE OF APPENDICULAR ABSCESS - SINGLE UNIT STUDY

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### Introduction

Acute appendicitis is a common cause for casualty surgical admission. Antibiotic resistances a significant problem in developing countries. With the emergence of antibiotic resistance bacteria, the traditional choice

of broad spectrum antibiotics may not be effective in complicated appendicitis. This study was conducted to assess the bacteriology and the antibiotic sensitivity pattern.

### Methods

A prospective cross sectional study was conducted, 82 patients who underwent appendectomy were taken to the study. At the time of surgery, pus of the appendicular abscess were sent for culture and antibiotic sensitivity test. We used Co-amoxiclavate as antibiotic for all the patients in this study.

### Results

Out of 82 pus cultures, there were more than one species found in 18.1%, ESBL positive in 33.4%, multi drug resistance in 6% Co-amoxyclova resistance found in 60.6%, cefuroxime resistance 51.5 %, Cefotaxime resistance 42.4 %, Ciprofloxin resistance 54.4 % Amikacin resistance 7 %, Imipenem resistance 1.5 %. The length of average hospital stay ranged from 3 to 12 days, ESBL and multidrug resistance is associated with longer stay and surgical site infection.

### Conclusion

Prevalence of multidrug resistant organisms causing appendicitis is increasing. Therefore identification of antimicrobial susceptibility pattern and use of appropriate antibiotic will be beneficial and will reduce multi drug resistance.

PP 45

### A NEW SURFACE LANDMARK FOR THE DIGITAL NERVES

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### Introduction

The purpose of this study was to identify surface landmarks of digital nerves corresponding to depigmented/pigmented border of digits.

### Methods

A total of 140 digital nerves in fourteen preserved adult cadaveric hands were dissected under magnification.

Distance to each digital nerve from depigmented/pigmented border of digits was measured along the circumference of the finger at the midpoint of the proximal phalanx.

### Results

The digital nerves were constantly located anterior to the depigmented/pigmented border. The mean distances between this border and the digital nerves on radial and ulnar aspects of the digits were: thumb ( $5.37 \pm 1.42$  mm,  $5.08 \pm 1.57$  mm), index finger ( $4.99 \pm 1.65$  mm,  $6.14 \pm 1.74$  mm), middle finger ( $5.31 \pm 1.44$  mm,  $5.14 \pm 1.66$  mm), ring finger ( $4.99 \pm 1.44$  mm,  $4.47 \pm 1.76$  mm) and little finger ( $5.01 \pm 1.16$  mm,  $4.32 \pm 1.52$  mm) respectively. The mean of cumulative distances between the depigmented/pigmented border and the digital nerve was  $5.08 \pm 1.57$  mm. There were no statistically significant difference of these distances between either sides of the digits or among the digits;  $p > .05$ .

### Conclusion

Depigmented/pigmented border of digits is a reliable anatomical landmark to locate digital nerves.

PP 46

### AN ANALYSIS OF SUPRACONDYLAR FRACTURES OF THE HUMERUS IN PEDIATRIC PATIENTS. AN EXPERIENCE OF A TEACHING HOSPITAL GENERAL ORTHOPEDIC UNIT

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### Introduction

Accidental trauma is the major cause of extremity fractures among pediatric and adolescent groups in Sri Lankan context.

### Methods

All pediatric and adolescent patients with supracondylar fracture of the humerus admitted and managed by orthopedic team from 01/11/2014 to 31/03/2015 were included. Children who have been transferred for further management were excluded.

## Results

85 children were admitted with extremity fractures and 19 (22.35%) had extension type supracondylar fractures (SCF) of the humerus; the second commonest extremity fracture in the cohort. Boys were predominantly affected (Males 13 and females 6) and all of them were at or below 12 years. Fall on outstretched hand at home or at school was the mechanism.

According to Gartland classification 7 had type 1, 6 had type 2 and 6 had type 3 fractures. None of them have vascular or neurological deficit on presentation. Non dominant upper limb (13) was commonly involved and 6 had dominant upper limb involvement.

Gartland Type 1 injuries were managed with immobilization only and Type 2 managed with Manipulation under anesthesia (MUA) and immobilization. All type 3 fractures had initial MUA and immobilization and later closed reduction and fixation. Mean hospital stay for type 1 – 24hrs, type 2 – 48hrs and type 3 – 4 days. All had satisfactory reduction on evaluation at 2 weeks post operatively.

## Conclusion

Supracondylar fractures of the humerus in children can be managed effectively at general orthopedic institutions with good outcome.

PP 47

## MACHINERY HAND INJURIES, WHY IT IS AN EPIDEMIC?

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## Introduction

Machinery injuries to hand is a common trauma admission in local population. In average around 60-100 patients per month is admitted to accident service NHSL. This study was conducted to assess the possible risk factors and etiological factors for machinery hand injuries.

## Methods

Cross sectional study of 102 patients with machinery injuries was conducted. Basic epidemiology, educational status, availability of protective equipment, vision and availability of first aid measures were assessed. Data was analyzed with SPSS version 22.

## Results

Majority was males (95/102) and mean age was 46 years. Most of the patients had secondary education. 90.2% of population were unable to read machinery manual or manual was not available. 82.35% of patients didn't have protective gear. Poor lighting was an issue in 52 patients (50.98%) and 28 had impaired vision (27.45%). 80 out 102 had to work more than 8 hours a day and 32(31.3%) had to work in night shifts. 9 patients were under the influence of alcohol. 30 patients had first aid measures available at workplace. Majority (n=79, 77.45%) had been working for more than 1 year in same profession.

## Conclusion

Lack of proper knowledge of machine functionality, paucity of protective gear, poor vision and physical exhaustion are possible risk factors for machinery hand injuries. These issues need to be addressed workplaces where hand held machineries are used to minimize hand injuries.

PP 48

## INCIDENCE OF THYROID CARCINOMA IN SRI LANKA: ANALYSIS OF CANCER REGISTRY DATA AND COMPARISON WITH OTHER SOUTH ASIAN POPULATIONS

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## Introduction

Thyroid carcinoma is the third most common cancer among females, and the sixth most common cancer, overall in Sri Lanka. We reviewed trends in incidence and histology of thyroid cancer in Sri Lanka and, compared these with other Asian populations.

## Methods

Thyroid cancer incidence data for 2005 to 2009 published by the National Cancer Control Program, Sri Lanka were compared with published thyroid cancer data from other Asian populations.

## Results

In Sri Lanka, the incidence of thyroid cancer has risen by approximately 30% from 2005 to 2009 (ASR from 3.6 to 4.7/100000). This rise is observed mainly in females (from 5.6 to 7.4/100000) while the incidence has

remained static among males. Incidences of thyroid cancer were observed to be significantly lower in India (men 1.99 and women 0.98/100000) and Pakistan (men 1.0 and women 3.3/100000). Incidences similar to Sri Lanka were observed in China (7.2/100000) and Singapore (6.6/100000) while it was significantly lower in Japan (3.3/100000). Papillary carcinoma was the commonest histological variety among Sri Lankans (approximately 70%). This rate is substantially higher compared with India (53%), although much higher proportions of papillary carcinomas were observed in China, Singapore and Japan (range between 80% and 90%).

### Conclusion

The incidence of thyroid cancer in Sri Lanka, especially among the females is rising, which is similar to other Asian populations. Major differences in incidence and histology are observed in comparison with other Asian populations. Further research is needed to identify reasons for rising incidence and these regional variations.

PP 49

### VALUE OF SIGMOIDOSCOPIC EVALUATION OF PATIENTS PRESENTED WITH PER RECTAL BLEEDING AND DIAGNOSED HAEMORRHOIDS ON PROCTOSCOPY

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### Introduction

Sigmoidoscopy routinely recommended for all patients presenting with per rectal bleeding as a screening investigation. Value of sigmoidoscopy and associated risks of procedure in patients presented with per rectal bleeding and diagnosed hemorrhoids on proctoscopic examination in our population is uncertain. Study was carried out to review the diagnostic yield and risk of flexible sigmoidoscopy in patients presenting with rectal bleeding and diagnosed hemorrhoids on proctoscopy

### Methods

A total of 386 patients with hemorrhoids underwent flexible sigmoidoscopy in Teaching Hospital Kurunegala, for a period of 10 months starting from 2015 June were recruited. Complications, and endoscopic findings were recorded.

### Results

264(68.3%) patients were males and 122(31.7%) were females. 116(30%) patients were over 65 years, 121(31.3%) were between 65-50 years and 249(38%) were less than 50 years old. interestingly none of them had malignancy. 6 patients age more than 65 and 2 patients aged between 50 and 65 had colonic polyps. All of them were benign. Two patients over 65 years had sigmoid perforations and one patient developed cardiac arrest which needed ICU care.

### Conclusion

Being an invasive test sigmoidoscopy is associated with major complications such as bowel perforations. Risk and benefits of sigmoidoscopic examination in diagnosed patients with hemorrhoids in all age groups (especially in this geographical area with less colorectal carcinoma prevalence) have to be evaluated with a larger sample size.

PP 50

### IS BILIARY DRAINAGE IS BENEFICIAL IN CASES OF COMPLICATED CHOLEDOCHAL CYST?

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### Introduction

The choledochal cysts, which refer to the cystic dilatation of the biliary duct, are rare lesions generally seen in children. The aim of the study was to observe the effect of biliary drainage in cases of choledochal cyst.

### Methods

All the patients of choledochal cyst presented with features of cholangitis, severe abdominal pain without fever, hyperbilirubinemia or with very large cyst with calculi managed by one unit during January 2013 to December 2015 were included in the study. Patients who responded within 72 hours of intravenous antibiotics were excluded. Patients were evaluated with hematological, biochemical, coagulation profile, ultrasonic and MRCP. Depending on the age, MRCP finding and availability of logistic patients were managed with per cutaneous transhepatic biliary drainage (PTBD), cholecystostomy (external drainage) or papillotomy with stent placement (internal

drainage). In all cases the drained bile was sent for culture and fluid amylase. All patients either operated or in pipeline for operation after 6-8 weeks of drainage procedure.

### Results

A total of 21 children of choledochal cyst were treated during this period of which 8 patients were included in the study. Age ranged from 3 months to 15 years. Three patients underwent internal drainage (age >4 years) whereas 4 patient underwent PTBD (age, 1- 4 year) and in one patient open cholecystostomy (<1 year). The duration of time between drainage procedure and definitive surgery was ranged between 7 – 10 weeks. Drain fluid culture was sterile in 3 cases, and drain fluid amylase was less than 100 IU in 5 cases. Low serum bicarbonate level and metabolic acidosis in cases who underwent external drainage which was evident on day 3 of the procedure. Complete cyst excision and roux – en – Y hepaticojejunostomy with minimal blood loss was done in 5 cases where as 3 still waiting for surgery. No major complication observed during drainage procedure or during the definitive surgery.

### Conclusion

Our preliminary study suggest that biliary drainage help in controlling the infection and leads to better recovery of patients due to better plane of dissection and relatively less tissue adhesion during definitive procedure and hence complete excision of cyst in all cases. Though definitive conclusion will be reached only after well designed study.

PP51

### MANAGEMENT OF ACUTE APPENDICITIS IN TRINCOMALEE - SRI LANKA IN 2014/15

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### Introduction

Acute appendicitis is a frequently encountered abdominal emergency. Therefore proper clinical diagnosis and appendicectomy with minimal post operative complications are of paramount importance. Aim of this study was to ascertain whether the management of acute appendicitis in Trincomalee district during post-war era, complies with local and international treatment algorithms.

### Methods

Data was collected prospectively from 155 patients who underwent appendicectomy following clinical diagnosis and radiological diagnosis (with ultrasonography). All specimens were histologically assessed. All wounds with perforated appendices were managed with delayed primary closure. Patients were followed up for 28 days to assess complications.

### Results

Mean age of presentation-27 years; Mean pre-operative waiting time following admission was 24 hours; average hospital stay was 3 days; Clinical diagnostic accuracy as confirmed by histology was 87.1%; Post operative wound infection rate was 8.3% and among them 5% had perforated appendices; 4 patients had post operative complications managed without reopening; no fistula formation or mortality was reported. Compared to a Sri Lankan-UK comparative study on appendicitis, diagnosis was equally accurate in our setting but post operative complications were significantly lesser (Trincomalee-9.6%, Sri Lankan study-16.4%, UK-14.1%).

### Conclusion

As a developing region in Sri Lanka in post war era, diagnostic accuracy, treatment algorithms and outcome of acute appendicitis in Trincomalee comply with local and international figures. Delayed primary closure may have lessened post operative wound infection rate in ruptured appendices, therefore we suggest further research to study this fact as well.

PP52

### A DESCRIPTIVE ANALYSIS OF THE CHARACTERISTICS OF COMPLEX FISTULA IN ANO & THEIR TREATMENT IN A COHORT OF PATIENTS ATTENDING A TERTIARY CARE UNIT

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### Introduction

Complex fistula in ano is a frequent source of concern for both patients and surgeons because of its high rate of recurrence and potential for postoperative anal incontinence. The aim of this study was to determine demographic and operative data of complex anal

fistulae.

### Methods

A retrospective analysis of 75 patients with complex anal fistulae, treated at the University Surgical Unit of the National Hospital of Sri Lanka, between January 2007 and January 2016 was done. Patients with complex anal fistulae were selected according to the modified Park's classification.

### Results

This study has revealed male predominance (n=67, 89.3%) with a mean age of 42.06 (SD±13.98, range19-78) years. The inter-sphincteric tract was the commonest primary tract detected (n=56, 74.7%) Among them two Crohn's disease associated fistulae were noted. Drainage/Cutting seton was applied to (n=65, 86.7%, cutting-14, drainage-23, both-28) patients. Nine patients were offered fistula plugs, out of which, four patients were successfully treated while four patients defaulted follow up. A total number of 259 surgeries were performed (median 3, range1-11).Majority of them had undergone at least two operative procedures (n=23, 30.7%) and four (5.3%) patients have been exposed to one surgery.

### Conclusion

The incidence of fistula in ano was more prominent in males. Application of drainage setons was the commonest procedure. More than one modality of intervention may be needed to treat complex fistulae. Further studies should be formulated regarding post surgical complications like faecal incontinence.

PP 53

### THE QUALITY, READABILITY AND RELIABILITY OF PATIENT EDUCATION WEBSITES RELATED TO OESOPHAGEAL CANCER

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#### Introduction

Accessing health-related information on the internet has increased significantly over the last few decades. This study was aimed to assess the quality and readability of the websites related to oesophageal cancer.

#### Methods

Top three search engines Google, Yahoo, Bing were used to search for patient education websites. A total of 300

websites were reviewed. Readability was assessed using Flesch Reading Ease Score (FRES), while design, content and quality of websites were assessed using LIDA tool and DISCERN respectively. The independent samples t-test was used for comparison.

#### Results

Thirty-one websites related to oesophageal cancer fulfilled the inclusion criteria. Of which, eight (25.8%) were certified by HONcode and 27 (87.1%) were non-governmental. The mean FRES score was 51.44 (range: 26.5-86.5), the overall mean LIDA tool score was 72.19 (range: 43- 103), and the mean DISCERN score was 45.93 (range: 26-70). Although certified websites have higher overall scores in all categories, the difference noted was not statistically significant. Government websites were superior to non-governmental websites.

#### Conclusion

Overall, the quality of patient education websites were acceptable in 61.3%. Government and certified sites were superior to non-certified sites. Further, patient education sites should be standardised and improved to provide reliable information.

PP 54

### A CLINICOPATHOLOGICAL REVIEW OF APPENDICES REMOVED FOR ACUTE APPENDICITIS IN PERIPHERAL HOSPITAL

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#### Introduction

The difference between clinical and histopathological finding in acute appendicitis always challenging to the surgeon, the aim of this study to correlate the histological, operative and clinical diagnosis of acute appendicitis.

#### Methods

This is retrospective analysis of patients who had appendectomy for acute appendicitis at GH/Kalutara for a period of 6 months starting from November 2015. Data collected through clinical records and were analyzed via SPSS software package.

#### Results

Total of 114 patients had appendectomy, 100 were

available for analysis. Mean age was 24.31 (range 4-75) with 55% male and 45% female. Macroscopic appendicitis noted in 94% while microscopic was 80%, among microscopic appendicitis 35% were severe form such as abscess, mass or perforation. 28.5% of abscess detected in the age group of 0-9, 67.8% of abscess formation associated with elevated leukocytes count more than 15000. No association between duration of symptoms and complications in this study.

### Conclusion

Compared to international figures negative appendicectomy is in the upper limit of normal value, but considerable difference between macroscopic and microscopic appearance. Pediatric group has to be further analyzed for high percentage of complicated appendicitis.

PP 55

### A NEW APPROACH TO LAPAROSCOPIC SPLENECTOMY

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### Introduction

Laparoscopic splenectomy is not an uncommon procedure at present, with routine and emergency splenectomies being performed laparoscopically. The aim of our study is to introduce a new surgical technique to perform Laparoscopic splenectomy. We present our experience with 10 patients included in this study.

### Methods

The patient was placed in the right semi-lateral decubitus position. Three to 4 trocars were used, with a 10mm camera-port. A sling placed around the spleen facilitated maneuvering the organ allowing better access to infero-medial surfaces and hilum for safe and rapid dissection.

### Results

Seven out of nine emergency splenectomies and the elective splenectomy for ITP were performed successfully. One of the remaining two had torrential bleeding and was converted to an open splenectomy. The other had continuous bleeding after successful Laparoscopic splenectomy and upon opening was found to have a liver laceration. There were no deaths, post-op abscesses or pancreatic and bowel injuries and the

patient with ITP has recovered and is currently not on steroids.

### Conclusion

Laparoscopic splenectomy can be performed safely in trauma. Use of a sling around the spleen expedites the procedure and increases the safety of the surgery. It allows easier manipulation while avoiding trauma to the spleen from direct handling with rigid instruments. The dissection is easier and simultaneous control of the vascular pedicle is possible. There is less risk of damaging surrounding organs. Therefore the sling technique can be recommended for performing routine and emergency Laparoscopic splenectomy.

PP 56

### THE INCIDENCE OF THYROIDITIS IN PATIENTS UNDERGONE TOTAL THYROIDECTOMY FOR MULTINODULAR GOITERS

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### Introduction

Multinodular goiter (MNG) is the commonest thyroid disease encountered in routine surgical practice. The incidence of autoimmune thyroiditis (AIT) in MNG is not well documented. A study designed to assess the incidence of AIT in MNG and its association to toxicity.

### Methods

This cohort study was undertaken on patients who underwent total thyroidectomy for MNG between January 2003 and December 2015 at professorial surgical unit, Ragama. All data collected prospectively and analyzed using SPSS-V.20. Fine Needle Aspiration Cytology (FNAC) was performed preoperatively in all MNGs. All thyroidectomy specimens sent for histopathological diagnosis to the department of pathology, University of Kelaniya, Sri Lanka. Chi-square test used to detect statistical significant differences in identifying association of toxicity in AIT with non-AIT MNGs and thyroiditis in FNAC with post-surgical histology.

### Results

Data of 268 MNG patients were assessed. 49(18.3%)

MNG's histology revealed AIT, toxic features identified only in 6(12.2%). Out of Non-AIT patients 36(16.4%) had toxic features. There was no statistically significant association between AIT and toxic features(P=0.46). Out of total MNGs FNAC reports were available only in 243 patients. 34(13.9%) identified as thyroiditis preoperatively and 47 histologically confirmed as AIT. There was a statistically significant difference in identifying thyroiditis in pre-operative FNAC and post-operative histology(P<0.01).

### Conclusion

Incidence of thyroiditis in patients who had total thyroidectomy for MNG is 18.3% in this series. Detection of thyroiditis in patients with MNG is higher in post operative specimens than preoperative FNAC(P<0.01). There is no significant association between AIT and toxicity in MNGs.

PP57

### STUDY OF LIMB FRACTURE PATTERN AND MECHANISM AMONG CHILDREN ADMITTED TO TEACHING HOSPITAL KARAPITIYA

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### Introduction

Limb fractures are common event in childhood and children are not miniature adults. Therefore limb fracture patterns, management concepts and outcome are totally differ from adults., Knowledge on epidemiology of children's fracture is essential to develop preventive and management strategies island wide.

### Methods

Descriptive cross sectional study was carried out using interviewer administered questioner. 384 children with limb fracture admitted to TH Karapitiya during study period were included by simple random sampling to the study. Excluding repeated admission with same problem, who were immediately transfer to Intensive Care Unit, children with metabolic bone diseases and syndromes. Data were analyzed with SPSS software

### Results

There were 384 children. The overall male to female ratio

was 2.75:1 .upper limb fractures(86%) were more common than lower limb fractures(14%),non dominant side was fractured more than dominant side. Forearm fractures were the most common fracture (38%) next was supracondylar fracture of humerus (28%). Open fractures and major joint dislocation were uncommon. Fractures were most commonly occurred from minor to moderate trauma like fell on ground and fell from height. Most occurred at home (44%) then at playground (33%). 77% of children were admitted hospital same day of injury. 86% were discharged within 3days.

### Conclusion

Limb fracture pattern differ according to age and the mechanism. This knowledge is useful for implementation of prevention and management protocol.

PP58

### DESCRIPTIVE STUDY OF PEDIATRIC SOLID TUMORS PRESENTED TO A SINGLE UNIT IN LADY RIDGEWAY HOSPITAL

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### Introduction

Pediatric tumors are special entity as they differ markedly in clinical behavior, tissue of origin and histology. Childhood deaths from infections and congenital defects have been reduced significantly and the cancers are the second cause of death.

### Methods

Retrospective analysis was done in all the patients treated for a solid tumor in the period of April 2015 to April 2016 from the clinical records.

### Results

Total of 18 patients were treated for childhood cancers. Age at presentation ranged from day 2 to 10 years. There were 10 female patients. Abdominal pain and distension were the commonest presentation and accounted for 27.8% each. Among these nephroblastoma and teratoma accounted for 7(38.9%) and 4(22.2%) each. pancreatoblastoma, hepatoblastoma, embryonal prostatic

rhabdomyosarcoma and neuroblastoma accounted for 1(5.6%) each. Neoadjuvant treatment was given to 8(44.4%) patients. All the patients underwent surgery for excision of tumor. RO resection was performed in 17(94.4%) and R2 resection was done only in 1.

### Conclusion

Nephroblastoma was the commonest childhood cancer as previous studies revealed excluding retinoblastoma and brain tumors. Surgery has been the mainstay of treatment in our study, especially because of the nature of the tumor and as our unit is a surgical unit most of the patients are referred for surgery.

PP 59

### Study of knowledge and attitude of healthcare workers on needle stick injury- Teaching Hospital Karapitiya.

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### Introduction

Healthcare workers are at high risk of needle stick injury due to day today clinical and surgical exposure. The purpose of the study is to explore the prevalence, knowledge and attitude on needle prick injury and to evaluate awareness of blood borne diseases and importance of reporting the true incidence

### Methods

Cross-sectional study was carried out using interviewer administered questioner. 80 healthcare workers in teaching hospital karapitiya were chosen by simple random sampling method including doctors nurses minor staff and lab technicians. Data analysed by SPSS software.

### Results

Out of 80 healthcare workers 67 ( 83.7 %) had at least one needle stick injury during their career. 52 out of 67 (77%) not reported the incident. Needle prick injury most commonly occurred during recapping needle 44.7%. followed by during surgical procedures 32.8%. 65.6% washed the site with soap and water or sprite. 82% did not use gloves during phlebotomy procedure. 96 % used sharp bin for needle disposal. 855 received hepatitis B vaccine.

### Conclusion

Needle stick injury was found to be quite common. education of health care workers about prevention, importance of reporting and availability of post exposure prophylaxis is essential to increase safety of them.

PP 60

### RELATION BETWEEN RECURRENT LARYNGEAL NERVE AND INFERIOR THYROID ARTERY; INTRAOPERATIVE FINDINGS

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### Introduction

Recurrent laryngeal nerve (RLN) is closely related to the inferior thyroid artery and vulnerable at thyroidectomy. Intraoperative damage to RLN can increase the morbidity of the surgery. The relationship between these two structures is highly variable.

### Methods

A consecutive sample of patients undergoing total thyroidectomy and hemi thyroidectomy from June 2014 to November 2014 was studied. Both males and females with age range of 20 to 76 years (mean 39.4 years and SD – 19.6 years), admitted to ward 32 and 40A were included to the study.

### Results

32 total thyroidectomies, 12 left lobectomies and 07 right lobectomies were performed in the study period including 47 females and 4 males. Results were analyzed right and left side separately. A total of 71 right RLNs were examined and out of them 18 (25.3%) were posterior, 19 (26.8%) were anterior and 34 (47.9%) were going through the branches of the left inferior thyroid artery. A total of 76 left RLNs were examined and out of them 26 (36.6%) were posterior, 21 (29.6%) were anterior and 24 (33.8%) were going through the branches of the left inferior thyroid artery.

### Conclusion

Large scale studies show that the posterior relation is the commonest. There is a deviation in the results in our study. Reason may be a regional deviation, and to confirm that, we suggest further large scale studies.

PP 61

**DESCRIPTIVE ANALYSIS OF PATIENTS DIAGNOSED WITH ESOPHAGEAL CARCINOMA**NJ Nawarathna, SACS Sapurugala, KUA Dalpatadu, CT Keppetiyagama

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**Introduction**

Esophageal cancer is recognized as one of the most challenging pathological conditions confronting the surgeon. Multiple demographic factors affect the development of esophageal carcinoma and gastroesophageal junction carcinoma as well as its histopathological features. Purposes of this study was to evaluate the demographic factors involving esophageal carcinoma and histopathological features of eosophageal and gastroesophageal junction carcinoma.

**Methods**

We retrospectively reviewed 57 cases of esophageal carcinoma seen at the gastrointestinal surgery unit teaching hospital Kandy for three years since 2013 January. The patients were pathologically confirmed as having esophageal malignancy. The demographic and histopathological features of these cases were analyzed subsequently.

**Results**

32(56%) were male and 25(44%) were female. 46(80.7%) had Squamous cell carcinoma, 7(12.3%) had adenocarcinoma and 4(7%) had other malignancies. 28 male patients had Squamous cell carcinoma and 2 had adenocarcinoma. 18 female had Squamous cell carcinoma and 5 had adenocarcinoma. In 8(14%) patients had tumor in gastroesophageal junction. Mean age at diagnosis of male patients was 62 and female patients was 61. Average age of patients with squamous cell carcinoma was 63 years and adenocarcinoma was 56 years ( $P=0.12$ ). Out of all malignant tumors 2 (3.5%) were well differentiated, 37(65%) were moderately differentiated and 18(31%) were poorly differentiated tumors.

**Conclusion**

However, this is a limited retrospective analysis; we therefore recommend that Demographic factors affecting each histological types of esophageal carcinoma in our population should be evaluated with a

larger sample size.

PP 62

**VALUE OF UPPER GASTROINTESTINAL ENDOSCOPY IN EVALUATING PATIENTS PRESENTING WITH DYSPEPSIA**IS Almeida, AS Prasanth, MVC de Silva, DN Samarasekera

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**Introduction**

Dyspepsia is a common symptom that is encountered in clinical practice. Upper gastrointestinal endoscopy (UGIE) has gained wide acceptance to evaluate dyspepsia. The aim of this study was to determine the frequency of diagnosis of significant disease by UGIE in patients presenting with dyspepsia in relation to age.

**Methods**

A retrospective analysis of 491 patients who were attending to the UGIE due to dyspepsia between January 2007 to January 2016 was carried out. Patients with additional symptoms like dysphagia, loss of weight, loss of appetite and pancreato-biliary pathology were not included. The frequency of significant upper GI disease (i.e. peptic ulcer, gastritis, polyp, cancer) was analysed with the histological findings for two age groups ( $\leq 40$  years and  $> 40$  years).

**Results**

491 patients were assessed (male:female:260:231) with a mean age of 44.49 years ( $SD \pm 23.63$ ). Among them, 35.03% were younger than 40 years of age. In 320 patients (65.17%) significant disease was detected (peptic ulcer-1.8%, gastritis-18.5%, polyp-3.9%, malignant-looking lesions-3.1%). There was a positive correlation between disease frequency and increasing age. In the  $\leq 40$  age group, 61.04% had significant findings (i.e. peptic ulcer-1.2%, gastritis-21.5%, polyp-1.7%, malignant-looking lesions-1.7%) while in the  $> 40$  year group, 67.4% had significant findings (i.e. peptic ulcer-2.2%, gastritis-16.9%, polyp-5%, malignant-looking lesions-3.8%). Histology was normal in 12 patients even though their UGIE has significant findings. Chronic gastritis was the commonest histology finding encountered (46.96%).

**Conclusion**

We detected that the incidence of peptic ulcer, polyps and malignant lesions significantly increased with increasing age. Therefore, the age threshold for endoscopy should be lowered to decrease the risk of missing cancers.

PP 63

### **STUDY ON PATTERN OF HEAD INJURY IN A SINGLE SURGICAL UNIT, TEACHING HOSPITAL, JAFFNA**

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#### **Introduction**

Head injury is one of the leading causes of death and disability in worldwide and road traffic accidents is the leading etiology. Early admission and identification of pattern of injury is vital for the successful management and it will prevent secondary head injuries.

#### **Methods**

Data were collected from all the patients with head injury who were admitted to professorial surgical casualty wards from September 2015 to February 2016 and data was collected by interviewer administered questionnaire, from the findings of imaging and analyzed by SPSS 21.

#### **Results**

Mainly males (72%), age between 21 to 40. RTA (56.8%) is the leading cause, followed by assault (19.8%). Motorbike(21%) and bicycle(21%) accidents are common RTAs. Main presenting complains is external injury with neurological symptoms (49%). scalp lacerations found in 105 victims, 55 had ENT bleeding and 5 had CSF leaking. Frontal and parietal regions (53%) are the leading direct impact sites. Nausea, vomiting and headache are main neurological symptoms (43%). 65% of victims complained LOC. 83% of patients had mild head injury and 10 had severe injury. 30 % had influence of alcohol on admission. CT scan was done to 118 patients, 25 had skull fractures, ICH is the leading bleeding pattern (14) and most of them are < 2cm in size. 40% had isolated head injury and 28 % associated with limb trauma.

#### **Conclusion**

Knowledge in pattern of head injury and effective primary resuscitation will improve the survival in head

trauma.

PP 64

### **OUTCOME OF SMALL AND LARGE HEPATOCELLULAR CARCINOMA AFTER SURGICAL RESECTION**

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#### **Introduction**

Hepatic resection is the treatment of choice for patients with hepatocellular carcinoma. Tumour size is considered a poor prognostic marker. This study looks into the survival among patient groups based on tumour size <5cm and <10 cm.

#### **Methods**

Fifty seven patients with hepatocellular carcinoma who underwent hepatic resection with curative intention over four years were analyzed. 43 patients fulfilled the inclusion criteria. They were divided into two groups (small and large tumours) based on totaltumour diameter, considering 5 cm and 10 cm as cut off values. Recurrence, overall survival and mean time taken for recurrence between small and large groups were analyzed.

#### **Results**

When considering 5cm as cut off value, recurrence (40% and 33.3%  $p= 0.698$ ), overall survival (15 and 12.79 months,  $p= 0.602$ ) and mean time taken for recurrence (5.25 and 9.73 months,  $p = 0.406$ ) was similar. For the 10 cm cut off value, small tumours had better overall survival (15.86 and 8 months,  $p = 0.035$ ), but no difference in recurrence (34.5% and 35.7%,  $p = 0.937$ ) time taken for recurrence ( 10.4 and 4.8 months,  $p = 0.265$ ). A multivariate analysis indicated that tumour size less than 10 cm and absence of portal vein invasion, independently influence overall survival (HR = 6.419,  $p = 0.003$ , CI = 1.868 – 22.055 and HR = 3.558,  $P=0.044$ , CI = 1.034 – 12.238 respectively) but did not have any impact on recurrence free survival. ( $p = 0.287$  and  $p=0.679$ )

#### **Conclusion**

Larger HCC has poor outcome once they develop a recurrence.

PP 65

### **EFFECT OF LUMINAL STAGE IN AXILLARY LYMPH NODE METASTASIS IN A COHORT OF BREAST CANCER PATIENTS**

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#### **Introduction**

Lymph node metastasis is the most significant prognostic indicator in breast carcinoma. There is a controversy regarding the association between hormonal and HER-2 status and lymph node metastasis. We have conducted a study to assess the association between these two factors in a local cohort of patients.

#### **Methods**

Descriptive cross sectional study of breast cancer patients admitted to a single oncological unit over 3 months were included in this study. Data collected through clinical records. Data were analyzed via SPSS software package.

#### **Results**

Out of 124 patients with breast carcinoma 66 had positive axillary lymph node metastasis. Sentinel node biopsy was done in 18 patients and was positive in only one patient. 36(29%) patients had axillary clearance with lymph nodes less than 10. Both luminal and nonluminal groups had comparable tumor size and histological features. Luminal A patients (n=54) had a higher percentage of lymph node positivity (61.1%) than luminal B (42.8%, n=21), HER-2 (50%, n=20) or triple negative (50%, n=18%). However these trends were not statistically significant.

#### **Conclusion**

Compared to international literature we have comparable results regarding the association between these two factors. Several calculators derived from SEER database also predict a higher trend in luminal cancers for lymph node metastasis. Our study improves the applicability of these calculators to our local population.

PP 66

### **LAPAROSCOPIC ADRENALECTOMY FOR ADRENAL TUMOURS: A SINGLE UNIT EXPERIENCE IN A PERIOD OF EIGHTEEN MONTHS**

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#### **Introduction**

In this minimally access era of surgery, laparoscopic Adrenalectomy has become the preferred option over open approach and it is proven as safe and effective in terms of radical resection, perioperative outcome and hormonal response. Comprehensive visibility renders the laparoscopy a superior option over open.

#### **Methods**

We have done a retrospective and prospective analysis on the past and present patients who have undergone Adrenalectomy in our unit from 1st of January 2015.

#### **Results**

Eight Adrenalectomies were performed in a period of eighteen months. Out of eight, seven were laparoscopic and one was open. Four female and four male patients were operated in an age distribution of 33-79 years, of which four were left and four were right. Two nonfunctioning, three Aldosterone secreting, one Cortisol secreting, one Pheochromocytoma and one malignant tumour were operated. The largest was malignant tumour (12cm) that was performed open. Largest tumour operated laparoscopically was 9cm in size. All were four ports approach. All were performed with minimal blood loss, uneventful peri-operative course and with the average hospital stay of three days. Most of the patients were managed in ward without ICU stay except the malignant case. Long term clinical outcome of all patients were excellent.

#### **Conclusion**

Laparoscopic approach of adrenal tumour is a safe procedure with excellent visualization and multi directional approach with minimal tissue handling. Hence, the open approach is to be reserved only for large and extensive malignant tumours.

PP 67

### **INCIDENCE OF PANCREATIC CARCINOMA IN SRI LANKA: ANALYSIS OF CANCER REGISTRY DATA AND COMPARISON WITH OTHER SOUTH ASIAN POPULATIONS**

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### Introduction

This study was aimed to report the incidence of Carcinoma of Pancreas (CaP) in Sri Lanka and to compare with other South Asian and migrant populations.

### Methods

Data from the National Cancer Control Program from 2001 to 2009 were used to determine the crude rates and the age-standardised rate (ASR) of CaP in Sri Lanka. The results were compared with populations from India, Pakistan, Bangladesh and also those who have migrated to the UK, USA and Singapore from South Asian countries.

### Results

A total of 701 new cases of CaP were diagnosed from 2001 to 2009. Males were predominately affected than females (male: female: 392:309). Cancer incidence rates were seen to rise with age in both sexes, with a peak in the 50-60 age group. Furthermore, the detection rate of CaP was also on the rise. The commonest histological type was adenocarcinoma. Of the South Asian countries, we observed the highest ASR in Sri Lanka. Cancer incidence rates among the migrant South Asian population were highest in the UK followed by USA and Singapore. All migratory populations had considerably higher rates of CaP compared to their native counterparts.

### Conclusion

The incidences of CaP in the migrant South Asians were considerably higher than their native counterparts. Furthermore, the ASR of Sri Lankan population is considerably higher than other South Asian populations. Further studies are necessary to analyse the risk factors in the migrant populations and to analyse the reason for the considerably higher rates of CaP in Sri Lankans.

PP 68

**IATROGENIC BILE DUCT INJURIES OBSERVED DURING ENDOSCOPIC RETROGRADE CHOLANGIOGRAM; IS THERE A CHANGE WITH MORE FORMAL TRAINING IN LAPAROSCOPIC SURGERY?**

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### Introduction

The incidence of iatrogenic bile duct Injuries (IBDI) has changed in the recent past. In Sri Lanka the current generation of surgeons have had formal training in laparoscopy cholecystectomy (LC) compared to those in the introductory period. We analyzed the patterns of IBDI detected during ERC during two time periods (2003-2010 and 2011 to date) for any significant differences in injury patterns.

### Methods

Retrospective analysis of the ERC findings of patients with IBDI from 2003 to 2016 was done in a tertiary care unit. Injuries were categorized by Bismuth-Strasberg classification (A-E). E(1-5) were considered as major injuries.

### Results

Over 13 years, 87 patients with IBDI were referred for ERC. Majority (80%) were females. Mean age was 45 years (range 17-81). In the early period (2003-2010) only 55% of injuries were due to LC, while 77% were with LC in the latter period ( $p=0.02$ ). In the early period 67% were major injuries (Bismuth E 1-5) while 45% were major in the post-2010 group ( $p=0.047$ ) on univariate analysis. However in a multifactorial analysis there was no difference in the injury severity based on the time period ( $p=0.068$ ) or the type of surgery ( $p=0.271$ ). Conversion rates to open surgery and the fraction of injuries needing surgical reconstruction were not significantly different between periods.

### Conclusion

The proportion of IBDI due to LC, compared to open surgery has risen significantly. Formal training in LC appears not to have affected the severity of IBDI, conversion rate or the percentage of patients requiring surgical reconstruction. The study is limited by including only IBDIs diagnosed by ERC.

PP 69

**OUTCOMES FOLLOWING LAPAROTOMY AND LAPAROSCOPIC ABDOMINAL SURGERIES:**

## PRELIMINARY RESULTS FROM 3 SURGICAL UNITS IN NATIONAL HOSPITAL OF SRI LANKA

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### Introduction

Laparotomy and laparoscopic abdominal surgeries are commonly known to be followed by complications resulting in significant morbidity and mortality in patients.

### Methods

All in-ward patients, who had undergone intraperitoneal surgeries of three surgical units of the National Hospital, Sri Lanka were interviewed on admission, post-operative day 1, day 3, day 7, on discharge and 30 days after the surgery from March to May 2016. Demographic data, clinical and investigation finding and functional outcomes (using EQ5D and QoR-15 questionnaires) were collected.

### Results

There were 67 abdominal surgeries [elective 80.6%(n=54), emergency 19.4%(n=13)]. Mean age was 46.6±20.0 years. Majority (60.6%,n=40) were male. Forty one (61.1%) of the patients were obese (BMI>25kg/m<sup>2</sup>). Fifteen (55.5%) females and 22(55.0%) males were anaemic pre-operatively. Thirty five (52.2%) had co-morbidities. Of 67 (84.8%) patients that had surgery [61.1%(n=41) had a laparotomy, 31.3%(n=21) a laparoscopic procedure and 7.4%(n=5) laparoscopy converted to laparotomy]., 26(38.8%) and 16(23.9%) stayed for 3days and 7 days in the ward respectively. Thirty two patients were followed-up after 30 days with one mortality. In the preliminary data there were no statistically significant associations between pre-operative haemoglobin, BMI, operative approach and co-morbidities with post-operative complications and functional outcome at day 30 (p>0.05).

### Conclusion

This is preliminary data with follow up for 30 days. A larger number followed up for a longer period is

indicated to produce significant conclusions.

PP 70

## QUALITY OF LIFE AMONG PATIENTS WITH CHRONIC VENOUS ULCERS, SRI LANKAN EXPERIENCE

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### Introduction

Chronic venous ulceration is a common problem which has a significant effect on Quality of Life (QoL). The degree of affliction may vary across the globe and this has rarely been assessed in our population.

### Methods

We involved 141 consenting patients presenting to the OPD, National Hospital with a venous ulcer lasting one month or more. Data was collected using an interviewer administered questionnaire, a clinical interview and a lower limb duplex scan. Short Form 36 questionnaire was used for QoL assessment.

### Results

Majority were elderly (median age 53years) men (n=9[69.5%]). Fifty four(38.3%) were unemployed at the time of study and 28(19.9%) directly attributed the ulcer as the cause for unemployment. Median duration of ulcer was 10[1-360] months and mean Venous Clinical Severity Score (VCSS) was 13.85(4-24). Family history (44[31.2%]), previous trauma or non-venous surgery to the limb (24[17.0%]), smoking among men (57 [58.2%]) and history of pregnancy among females (34[79.1%]) were identified as risk factors. Role limitation due to physical health (28.4[SD 42.8]) and emotional problems (40.9 [SD 46.7]) had a mean SF-36 score below 50. Factors such as pain, duration of ulcer, older age and higher BMI significantly affected many domains of QoL (p<0.05). Sixty six(46.8%) patients continued to have ulcers despite having had surgical treatment for varicose veins.

### Conclusion

Venous ulcers have a considerable impact on the quality of life in Sri Lankan population. The need for providing preventive and rapid healing methods to our patients must be emphasized.

PP 71

**INCIDENCE OF LIVER CANCER IN SRI LANKA: ANALYSIS OF CANCER REGISTRY DATA AND COMPARISON WITH OTHER ASIAN POPULATIONS**BR Weerakoon, S Sivaganesh

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**Introduction**

Carcinoma of the liver (CaL) is among the 20 most leading cancer sites in Sri Lanka (SL). This study reports on the incidence of CaL in SL and compares the data with cancer registry data of South and South East Asia region (SEA).

**Methods**

Cancer incidence data published by the National Cancer Control Programme from the year 2001 to 2009 was analysed and compared with the population based cancer registries of Mumbai, Karachi, Malaysia and Singapore.

**Results**

A total of 1308 patients (female: male= 1: 2.7) with CaL have been reported. The incidence rises with age in both sexes to reach a peak in the 60-64 year age group. The overall AAR in 2009 was 0.93 per 100,000 population. The incidence of CaL in SL is significantly lower compared to other countries in the study where Singaporean Chinese population had the highest rates (AAR=18). A slight reduction of incidence of CaL from 2005 to 2009 is observed in SL. There is a disproportionately lower incidence of CaL in the Tamil ethnic group ( $p < 0.00001$ ). The commonest histological type of CaL reported from 2001-2005 is hepatocellular Ca, NOS ( $n=514$ , 74.4%) followed by cholangiocarcinoma ( $n=67$ , 9.7%). This histological pattern was comparable with other SEA countries.

**Conclusion**

SL has a lower incidence of CaL compared to other countries in the region. This can be a result of low Hepatitis B & C virus infection rates in SL. The low incidence seen in Tamil ethnic group could be due to under-reporting of cases from war affected areas.

PP 72

**WHAT IS THE BEST BOWEL PREPARATION FOR LOWER GI ENDOSCOPY IN SRI LANKA**KPVR de Silva, M Gunasekara, L Perera, K Kumaran, CTR Kasturi, M Hettiarachchi

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**Introduction**

With the utilization of a flexible sigmoidoscopy to evaluate colorectal pathologies, optimal bowel preparation is of paramount importance. Therefore, the bowel preparation providing optimum cleansing of the bowel with the least associated inconvenience for the patient has to be identified.

**Methods**

1216 outpatients with 40 to 80 years of age were selected. All anti platelets and iron supplements were withheld one week prior to procedure. Patients were kept fasting after midnight. Bisacodyl 4 tablets were given orally in the previous night at 10pm. One kit (KLEEN ENEMA 100ml) was administered rectally in the morning. Those who couldn't afford phosphate enema and had poor bowel preparation following phosphate enema were given 100ml of tap water enema. All were undergone flexible sigmoidoscopy.

**Results**

Out of 1216 patients, 1015 patients were received phosphate enemas as the initial step, following that, 782 patients had satisfactory bowel preparation. However those who had unsatisfactory bowel preparation (233 patients) were given tap water enema as the next step. Except 3 patients, others ended up in satisfactory bowel preparation. In addition, 199 out of 201 patients, who received tap water enema alone, ended up in satisfactory bowel preparation. In addition, 07 patients developed minor allergic reactions to phosphate enema.

**Conclusion**

Thus using tap water enema alone was shown statistically significant (Chi test 105.3 with df 2;  $p < 0.001$ ) when compared with phosphate enema alone

and phosphate with tap water enema. Furthermore, Tap water enema is cost effective, as well as having least complications.

PP 73

### **A PROSPECTIVE STUDY TO ASSESS THE DISABILITY OF UPPER LIMB FOLLOWING FRACTURE**

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#### **Introduction**

The upper limb of humans is built for pretension. Fractures disable the upper limb, but the data is lacking to which extent fractures cause the disability.

#### **Methods**

The data was collected by physical examination, observation at surgery and the disability of upper limb was assessed by self answered questionnaire based on the disabilities of the arm, shoulder and hand (DASH) score at 2,6,12 weeks following fracture from 160 patients who admitted with fractures of upper limb to TH Batticaloa from September 2014 to March 2015

#### **Results**

Out of 160 patients studied 56.3% was male. The mean age was 42.5 years (Range 2-88). The main causes of fractures were road traffic accidents (52.5%), falls (18.75%), assaults (18.75%). The fractures in descending order occurred with radius (38.12%), ulnar (21.2%), clavicle (16.8%), phalanges (14.3%), metacarpals (10%), humerus (6.8%), carpal bones (1.8%) and scapula (1.6%). The percentages of close and open fractures were 62.5% and 37.5% respectively. Out of these open fractures. 5.6%, 5.6%, 3.7%, 2.1%, 1.2% were type 1,2,3a,3b,3c respectively.

#### **Conclusion**

At initial period the disability of fracture was substantial although at 12 week it came to normal range. The disabilities of upper limb can be reduced as most fractures occur with preventable causes. Eg road traffic accidents.

PP 74

### **WEARING GLOVES DURING RIDING MOTORBIKE, DOES IT PROTECT YOUR HAND?**

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#### **Introduction**

Injuries related to motor bicycle accidents are on the rise. Hand injuries are common among motorbike riders and there is a lack of data with regard to hand injuries and its severity. This study was carried out to evaluate and assess the difference of severity of hand injuries that occurred in riders wearing and not wearing gloves.

#### **Methods**

A total of 161 patients who had hand injuries following motor bike accidents admitted to Teaching Hospital Kandy, Sri Lanka for a period of one and a half years from 2014 April were reviewed. The severity of hand injury was assessed using the 'hand injury severity scoring system (HISS)' score.

#### **Results**

Among the study group 148(91.9%) were males and 13(8.1%) were females. Only 33(20.5%) riders wore gloves. Among them 9 (27.27%) had minor injuries, 13(39.4%) had moderate injuries, 8(24.24%) had severe injuries and 3 (9.1%) had major injuries. Average HISS score in this group was 58.2. Among 128 people who did not wear gloves 16(12.5%) had minor injuries, 25(19.5%) had moderate injuries, 62(48.43%) had severe injuries and 24(18.75%) had major injuries. Independent sample t test was applied to compare the score between the two groups, t value was 2.426 and the p value was 0.009 which was statistically significant.

#### **Conclusion**

Wearing of gloves in motorbike riders significantly reduce the severity of hand injuries.

PP 75

### **AN ONGOING AUDIT ON LAPAROSCOPIC INGUINAL HERNIA MESH REPAIR**

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#### **Introduction**

Laparoscopic surgery is the gold standard treatment for

inguinal hernia repair

### Methods

24 laparoscopic hernia repairs were performed during study period 1/10/2015 to 14/05/2016, 6 total extra peritoneal (TEP) and 18 Trans abdominal pre peritoneal (TAPP) repairs. All 24 patients were reviewed in day1, day7, and day90. Severity of pain was assessed with numeric pain scale and, complications recurrences and return to work was noted.

### Results

On D1 8 patients had mild pain, 7 moderate pain, 2 severe pain, and 1 patient was pain free. On D7 11 had mild pain, 3 with moderate pain and,5 without pain. On day 90 14 patients were pain free, and 3 had mild pain. 21 out of 24 were discharged on the same day and rest of them discharged on day 1 and they underwent bilateral hernia repair.2 patients returned to work within 1 week, 4 on 2nd week, 6 on 3rd and 4th week each, and 2 after a month.1 is retired person and 1 died due to natural cause. 1 out of 24 got suture side infection. 2 out of 24 got recurrence on their 1st month and both of them underwent TEP repair.

### Conclusion

Laparoscopic hernia repair shows a faster recovery, less hospital stay, less pain and, early return to work, in spite of age, job and fitness.

PP 76

### FREQUENCY, CAUSES AND PATTERN OF INTRA-ABDOMINAL INJURIES IN PATIENT WITH BLUNT ABDOMINAL TRAUMA

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Teaching Hospital Kandy

### Introduction

Trauma is a common cause of mortality among young age group, causing loss of productive days more than other notorious diseases, such as cardiovascular diseases and malignancies. This study was conducted to describe the frequency, causes and pattern of intra-abdominal injuries in patients with blunt abdominal trauma.

### Methods

An observational study done on 78 patients who underwent exploratory laparotomy following blunt abdominal injury, at Teaching Hospital Kandy for one and half years since 2014 April.

### Results

Study included 74 (94%) male and 4 (6%) female. 68(87%) following road traffic accidents and 10(13%) following fall from height. Out of 30(38%) patient with bowel injuries small Intestine was injured in 22(-).12 (40%) were ileal 10(33%) were jejunal and 2(6.6%) were duodenal injuries.1(3.3%) had stomach and sigmoid colon injury each.22(28%) patients had hepatic injuries.12(15.4%) patients had splenic injuries. Renal injury was recorded in 6 (7.6%) patients and 3(3.8%) patients had bladder injuries. liver was injured together with bowel in 2(2.5%) and with spleen in 3(3.8%).4(13.2%) had both small bowel and mesentery injuries.

### Conclusion

Road traffic accidents were the most common cause of blunt abdominal trauma, followed by fallen from height. Males were commonly involved. No abdominal organ is safe from blunt injury. In this study, bowel was the organ most commonly injured followed by liver, spleen, kidney, bladder and other organs. Although early recognition of intestinal injuries from blunt abdominal trauma is difficult, it is very important due to its tremendous infectious potential.

PP 77

### PREVALENCE AND RISK FACTORS ASSOCIATED WITH PIN SITE INFECTION AMONG TRAUMA PATIENTS WHO UNDERGO EXTERNAL FIXATION IN A TERTIARY CARE CENTER IN SRI LANKA.

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National Hospital of Sri Lanka

### Introduction

External fixation is an essential component in the management of patients with fractures. However external fixation is associated with a high rate of pin site infection (PSI). This study aims to identify the prevalence and risk factors associated with pin site infection in a tertiary care center in Sri Lanka.

### Methods

A prospective cohort study was conducted among 186 in-ward patients who underwent external fixation at the National Hospital of Sri Lanka. Data was collected using an interviewer administered questionnaire. PSI was classified according to the Checketts-Otterburn classification.

### Results

83.3% of the sample were male. Mean age was 39+/-16 years. 50% developed pin site infection. 86.66% were minor infection whereas 13.33% developed major PSI. 86.7% of PSI developed between 5-7th day following pin insertion. Closed fractures were significantly associated with high risk of infection ( $p=0.031$ ). PSI of the femur (75%) and tibia (60%) were significantly high relative to upper limb fractures ( $p=0.001$ ). Gustilo-Anderson grade, types of dressings used and degree of contamination was not associated with high risk of PSI ( $p>0.05$ ). The commonest organism isolated was MRSA (60%) followed by pseudomonas (20%). 70% of patients were administered 3 or more antibiotics. PSI was significantly associated with pre-operative use of aminopenicillins relative to 2nd generation cephalosporin ( $p=0.004$ ).

### Conclusion

Prevalence of pin site infection is high. Closed fractures of the lower limb are at high risk for pin site infection within the first week of insertion. Prescribing pre-operative antibiotics according to sensitivity patterns will reduce the incidence of infection.

PP 78

### SAFE APPROACH TO TREATMENT IN LOWER TRANSSPHINCTERIC ANAL FISTULA

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### Introduction

Fistula in ano is a common and debilitating anal condition. Surgical management of the fistula is not free from risks. Recurrence and fecal incontinence are the most common complication after surgery. For many years the treatment of choice was to lay open the fistula. Here we present a study of extended safer length of dividing external anal sphincter in lower transsphincteric fistula.

### Methods

This is done as a prospective observational study in patients with fistula in ano. Patients treated with fistulotomy over 8 months from April 2015. Length of the anal sphincter assessed before anesthesia. Fistula tract assessed and fistulotomy performed to lower transsphincteric fistula. 1/3 of the sphincter length is divided safely.

### Results

We evaluated 48 patients who undergo fistulotomy in lower transsphincteric fistula and followed up for 4 months. 3 patients (6.2%) complain of incontinence to flatus but none of them have fecal incontinence. 5 patients (10.4%) found to develop recurrent fistula.

### Conclusion

Conventional fistulotomy gives a good outcome in lower transsphincteric fistula. Extended length of external anal sphincter can be divided safely provided proper assessment of fistula and length of anal sphincter done prior to fistulotomy.

PP 79

### A NOVEL TECHNIQUE FOR PERFORMING CRANIOTOMIES IN IMPROVISED SITUATIONS

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Teaching Hospital Batticaloa, Sri Lanka

### Introduction

Neurosurgical Unit at Teaching Hospital Batticaloa is the only centre for the entire Eastern Province serving 2.7 million population. Unit started to function 24/7 since May 2014 even without basic facilities. Irrespective of severe scarcity of resources, demand for the service was huge necessitating several adaptations. One major challenge was to perform craniotomies, an essential neurosurgical procedure. Forgetting about an advanced neurosurgical drill, even a complete 'basic craniotomy set' was not available. In this background, we adapt a new technique to perform different craniotomies safely and time-effectively.

### Methods

During craniotomy, burr holes were made and 'De Martel Gigli wire saw conductor' was passed. Available damaged one did not have a hook to conduct the wire saw hence orthopaedic power saw was used to cut the skull keeping conductor as a 'dural protector'. This

posed danger to underlying brain as saw does not have safety mechanisms a proper drill should have. However technique was initially started for life saving emergency craniotomies, and once it was felt to be safe, same technique was used for different surgeries.

### Results

Over 60 craniotomies were performed including patients from all age groups and a wide range of pterional, bifrontal, convexity, parasagittal and posterior fossa craniotomies. Only two adverse events were encountered (two tears in calcified adherent dura) which would have happened even with a formal drill.

### Conclusion

Although power saw is a sub-optimal instrument in neurosurgery, this can be safely used in skilled hands to serve patients when service is needed without adequate facilities.

PP 80

### STUDY ABOUT APPENDICITIS IN PATIENTS ADMITTED WITH ACUTE ONSET RIGHT ILIAC FOSSA(RIF) PAIN ADMITTED TO DISTRICT GENERAL HOSPITAL MATHARA

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### Introduction

Acute appendicitis is mainly a clinical diagnosis. Objectives of the study were to find out validity of alvarado score in diagnosing acute appendicitis and few other characteristics of appendicitis.

### Methods

A prospective study was carried out for four months in surgical unit at general hospital Mathara. All the patients with acute onset RIF pain were included. Intraoperative data were collected in patients who underwent appendectomy.

### Results

All of 200 patients were participated. Male:female ratio was 145(72.5%):55(27.5%). Appendectomy was performed in 108 patients. Alvarado score was <4 in 37 patients and 14(37.8%) patients were underwent appendectomy. Score was 4-7 in 125 patients and appendectomy was done in 60(48%) patients. Score was >7 in 38 patients and 34(89.4%) patients underwent

appendectomy. USS Abdomen was done in 125 patients and appendicitis was diagnosed only in 30(24%) cases. Retrocaecal appendix was found in 74(68.3%) cases. Superficial surgical site infection occurred in 8 patients and one had deep infection which was complicated with caecal fistula.

### Conclusion

Alvarado score has a strong association with diagnosis of acute appendicitis and USS abdomen is not a sensitive investigation to diagnose appendicitis.

PP 81

### IS THERE A PLACE FOR OPEN CHOLECYSTECTOMY IN THE LAPAROSCOPIC ERA?

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### Introduction

Laparoscopic cholecystectomy has become the procedure of choice for cholecystectomy. Conversion to open procedure based on intraoperative assessment of anatomy and surgeon's skill in laparoscopy.

### Methods

Retrospective and prospective data analysis was performed on 170 consecutive laparoscopic cholecystectomies in a single surgical unit at NHSL from September 2012 to 25th May 2016.

### Results

126 were women and 44 were men. Commonest indication was symptomatic gall stone disease (39.41%) and 18 patients with CBD stones underwent choledochoscopic exploration simultaneously. There were 14 patients with empyema, 8 patients with mucocele and a patient with cholecystoduodenal fistula. 3 ports were used in 79.41% of cases. Retrograde dissection used in 32 difficult cases and 4 subtotal cholecystectomies and 1 cholecystostomy performed. One patient had a cystic duct leakage and while another had bile leak from the gall bladder fossa and needed an open CBD exploration later. Average hospital stay was 2.79 days. There were no conversions to open procedure.

### Conclusion

Gall bladder should be held to expose both anterior and

posterior aspects of Calot's triangle and cystic duct and cystic artery delineate before applying clips. Dissecting from the posterior aspect of the triangle results less force on cystic duct and minimize bleeding. When there is a significant bleeding appropriate usage of suction and irrigation prevents major injury. Prior emptying of the gall bladder in conditions like empyema and mucocele prevents contamination due to perforation. In cases where the anatomy of the Calot's triangle is not clearly demonstrated retrograde approach is preferred.

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