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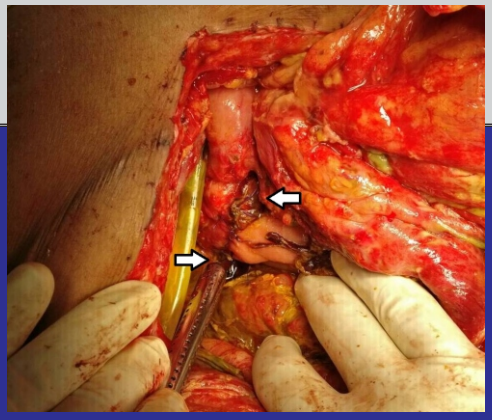

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A centre dedicated for men's health and wellbeing for the first time in Sri Lanka - End your suffering with an effective treatment for Erectile Dysfunction

Lanka Hospitals PLC, a premier health care provider in Sri Lanka, announces its latest addition to the Centres of Excellence- the Male Wellness Centre (MWC) – in a bid to offer services to improve health and wellbeing of men. It's also significant that a fully-fledged wellness centre dedicated solely for men has been established for the first time in Sri Lanka.

The MWC caters to a host of services including Personnel fitness scheduling and programming, Sport health and injury management, Dietary & Nutritional advices, Pre-marital counseling and health screening, Management of premature ejaculation, Management of Erectile dysfunction, Cosmetic surgeries (Bariatric / Ocular / Dental). In addition to the General health screening, patients can obtain screening for Liver, Kidney, Respiratory, Cardiac, Diabetic, Endocrine-Hormonal, Cancer and Sexually Transmitted Diseases in addition to Substances and Alcohol abuses. Furthermore, apart from leading physicians MWC offers the service of competent consultant specialists such as Cardiologist, Endocrinologist, Diabetologist, Venerologist, Urologist, Nephrologist, Oncologist, Surgeon, Vascular Surgeon, Psychiatrist as well as Counsellor.

Erectile Dysfunction (Impotence) is a common health issue suffered by men, defined by the difficulty in achieving and maintaining a penile erection during sexual intercourse. In the Sri Lankan context, the issue is hardly brought into light especially by those who suffer and often show reluctance to seeking proper medical attention. Often, incorrect and misleading advice not only aggravates the issue, but also lead them to face unwanted complications. A special Shock Wave Therapy unit was established within the Male Wellness Centre by the Lanka Hospitals to specifically treat impotence.

The Centre conducts in-depth studies and comprehensive medical analysis to precisely identify the causes for impotence such as Vascular, Psychogenic, Neurological, Hormonal, Structural and others. Being a newer and less invasive way to treat this common sexual challenge shock wave therapy has proven to be effective even when oral medication has failed. Also known as penile extracorporeal low-intensity shockwave therapy, this method involves the use of low intensity acoustic pulse waves that lead to release of factors which promote growth of new blood vessels in the penis Therapy compromises of a handheld device being angled towards the shaft of the penis. One of the main advantages of this treatment method is that it has no clinically relevant side effects. Each treatment session can last approximately 20 minutes.

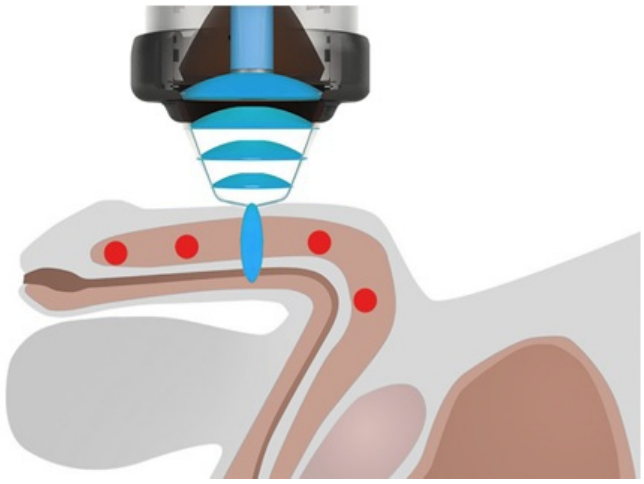

Figure 1. Shock wave therapy

Shock wave treatment is a completely painless way to treat what can be a life altering condition and a regular course of treatment usually comprises of six sessions. The frequency of these session can be tailor made as below and would be decided by the consultant:

1) Every day for 6 days
2) Every second day over an 11 day period
3) Twice a week for 3 weeks

The outcomes include gaining of more frequent erections, more rigid erections, ability to maintain an erection and perform entire act of sexual intercourse and freedom to reduce or omit medication. Therefore the use of a treatment which researchers claim is “really a breakthrough” could be good news for men who have erectile dysfunction.

As a hospital staying abreast with latest medical technology, Lanka Hospitals established Male Wellness Centre in a bid to provide world class health care services to Sri Lankan as well as International patients. Moreover, when catering to health issues and conditions that are highly sensitive and personal, Lanka Hospitals delivers complete confidentiality to its patients with the assistance of its specially trained staff.

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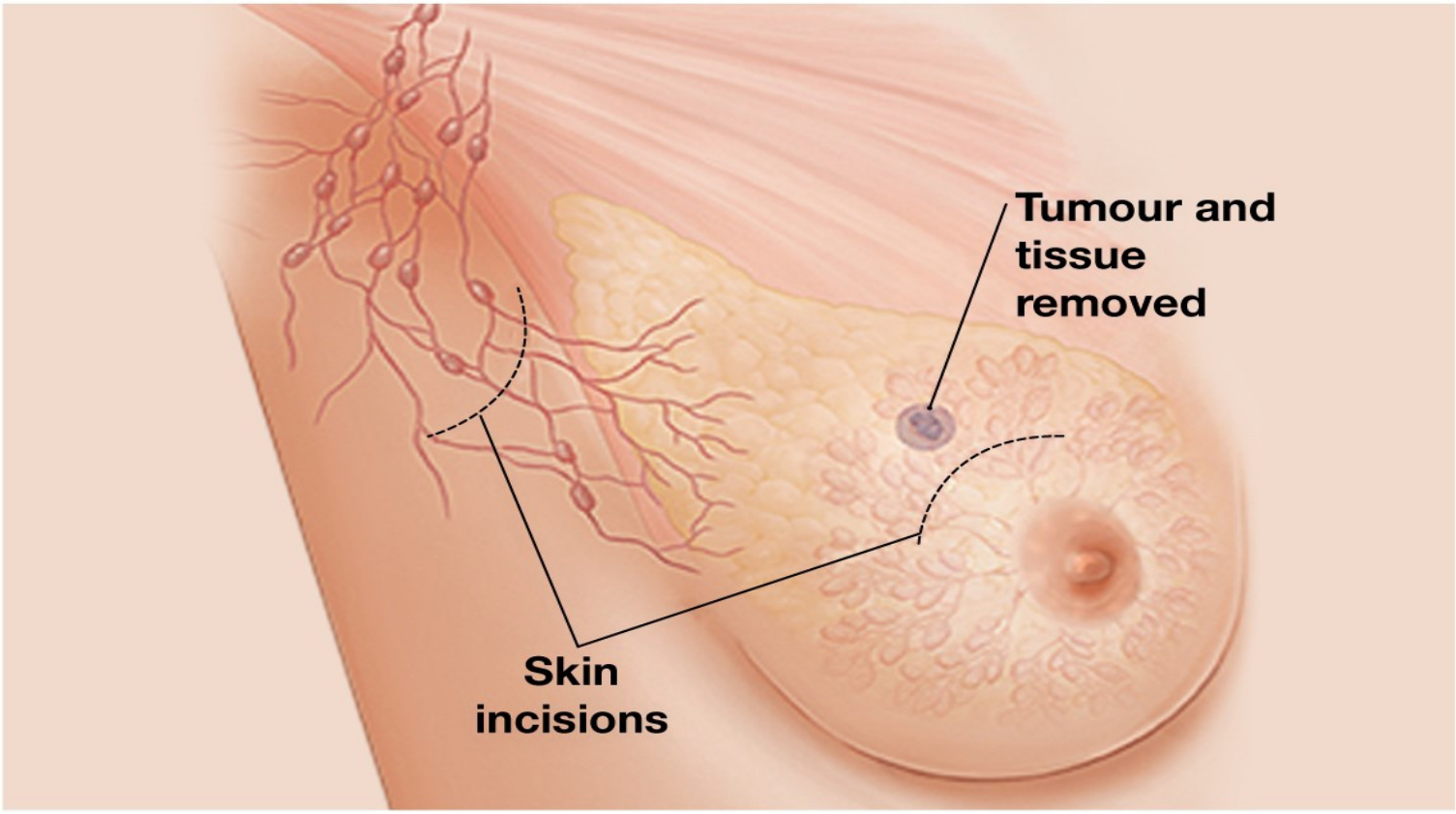

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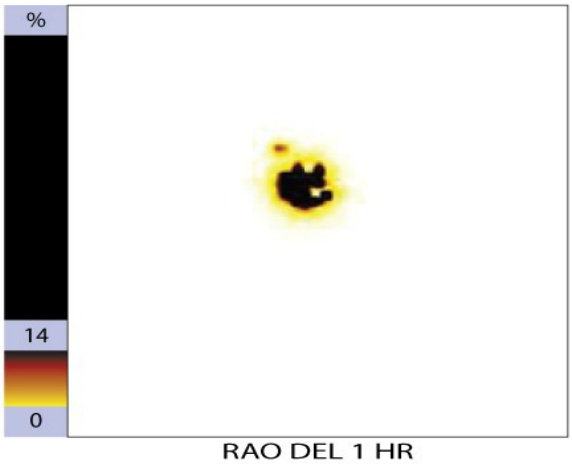

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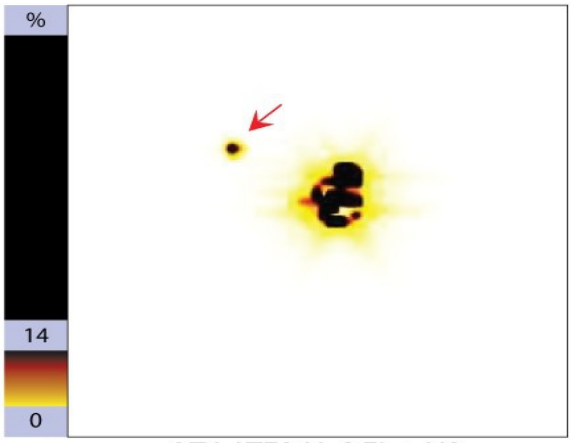

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Contents

SCIENTIFIC ARTICLE

Survey on trainees' perception on creation of special interests within the domain of general surgery in Sri Lanka: is it the way forward?

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Keywords: Postgraduate medical training; surgical curricular revision

Abstract

Introduction

Sri Lankan surgical training curriculum underwent a major revision in 2012 with the introduction of special interests within the domain of general surgery. The main employers are yet to recognize this transformation into the employment structure. In such a setting, evaluation of the trainees' perspective is important as their careers may be negatively affected.

Methods

A pre-tested questionnaire was sent electronically to all fifty-one general surgery senior registrars (SR) who started their post-MD general surgery training after February 2012. Gathered data were reviewed during an observational study.

Results

Among twenty-four (47%) respondents, eight (33%), seven (29%) and nine (38%) were second years SRs, SRs in overseas training and acting consultant surgeons (aCS) respectively. Four, nine, five, four and two trainees have declared upper-gastrointestinal surgery, coloproctology, hepato-pancreaticobiliary surgery, breast surgery and endocrine surgery. Eight (33.3%), thirteen (54.2%) and three (12.5%) had their speciality training at a university unit, a ministry unit and an overseas unit respectively. Eleven (46%) believed they had adequate special interest training during local or overseas training. Six out of nine (66.7%) colorectal trainees believed they had adequate special interest training during local training compared to other categories. Trainees who had speciality training in university units (7/8) were more satisfied compared to those in the ministry units (3/13). Three (12.5%) said their employer recognizes this system and two (8.3%) believed that they can practice the special interest in future. Seven (29%) each believed that there are career benefits and patient care improvement with the new system but only three (12.5%) believed it is better than the previous one. Five of nine aCSs who have completed training thought they would opt for general surgery without a special interest if the option was available compared to SRs on training (1/15).

Discussion and conclusions

Colorectal speciality and trainees selected to university units were more satisfied with the local special interest training circumstances. Non-recognition of the new system by the employer was a major concern for them. A limited minority of trainees believed to have the opportunity to function with a trained speciality. Trainees doubted personal career benefits or patient care improvement from this change and this as a better system overall.

Introduction

From its inception, Sri Lankan allopathic surgical training scheme was a descendant from the English counterpart. With such colonial influences, from the late nineteenth century to the early 1980s, most of Sri Lankans obtained their higher surgical training according to the old FRCS curriculum from the United Kingdom. [1, 2]Following the establishment of the Post Graduate Institution of Medicine (PGIM) by 1980, training curricula were created for specialities including general surgery. [2] Prevailing training curriculum for general surgery in Sri Lanka underwent a major revision in 2012 in view of keeping up with the world trends. During the process, the total pre-MD (Doctor of Medicine) training period was kept unchanged but subtle changes were made to the training and evaluation structure. [3] Main modifications were done to the MD examination and post-MD training segment with the introduction of seven 'special interest' sub-domains namely Upper Gastro-Intestinal, Hepatopancreaticobiliary, Lower Gastro Intestinal/ Colorectal, Breast, Vascular, Endocrine and Trauma within the domain of general surgery. The post-MD general surgery training period was extended by one year and more focused criteria were laid for overseas training to facilitate the special interest training. By 2018, general surgical trainees who commenced their training after the implementation of the new syllabus have been board certified as General Surgeons with one of the above special interest

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areas and have become eligible for employment.

The majority of general surgeons in Sri Lanka are employed by the Ministry of Health, which is the largest provider of surgical care in the country. Although it has been stated in the curriculum prospectus that the PGIM, Ministry of Health, College of Surgeons of Sri Lanka and Association of General Surgeons of Sri Lanka as allied agencies in the process of this transformation, [3] ministry has not acted to accept the new system into the `employment structure up to date.

Other stakeholders appear to be keeping a blind eye towards the whole process. The inability of the main employer to recognize and implement this transformation for the benefit of the patients may easily lead the entire process to failure. In such a background, evaluation of the trainees' perspective on this conundrum is important as their careers would be significantly affected by this shift.

Methods

A pre-tested questionnaire was sent electronically to all fifty-one general surgery senior registrars (SR) who started their post-MD General Surgery training after February 2012 up to February 2017 in April 2017. Data were collected anonymously to be reviewed during the observational study.

Results

Among twenty-four (47%) respondents, eight (33%), seven (29%) and nine (38%) were second years SRs, SRs in overseas training and acting consultant surgeons respectively. Nine, five, four, four and two trainees have declared lower gastrointestinal surgery, hepato-pancreaticobiliary surgery, upper gastrointestinal surgery, breast surgery and endocrine surgery as their special interest.

A genuine interest in the given field was the main reason for the selection in 14(58%) respondents. Availability of training slots - 3 (12.5%), Compulsion for selection at the end of the first year - 3 (12.5%), Non-training related reasons - 2 (8.3%) and in view of easily finding an overseas training slot - 2 (8.3%) were the other reasons. Eight (33.3%), thirteen (54.2%) and three (12.5%) had their special interest training at a university unit, a ministry unit and an overseas unit respectively.

Eleven out of 24 (46%) believed they had adequate special interest training during local or overseas training. Trainee satisfaction of special interest training was varied depending on the training station. Satisfaction on special interest training against the place of training is summarized in Table -1.

Table 1. Satisfaction on special interest training against the place of training

		Place of special interest training			
		University Unit	Ministry Unit	Overseas Unit	Total
Satisfaction on special interest training	Satisfied	7	3	1	11
	Neutral	0	9	1	10
	Unsatisfied	1	1	1	3
	Total	8	13	3	24

Six out of nine (66.7%) colorectal trainees believed that they had adequate special interest training during local training compared to other specialities and satisfaction of local special interest training was dependent on speciality. Table -2 details the satisfaction of special interest training against speciality.

Only three trainees (12.5%) employed by the universities believed that their employer recognizes this system. Only two (8.3%) believed that they would be able to practice the special interest in future. Seven (29%) each believed that there are career benefits and patient care improvement with the new system but only three (12.5%) believed it is better than the previous one. Five of nine (55.6%) acting Consultant Surgeons who have completed the entire training stated that in retrospect they would have opted for general surgery without a special interest as per the previous curriculum if the option was available compared to one out of 15 (6.7%) SRs in training. Consideration of such potential opinion was dependent on the position of the respondents' surgical career.

Table 2. Satisfaction on special interest training against specialty

		Specialty					
		Colo-rectal	UGI	HPB	Breast	Endo-crine	Total
Satisfaction on local special interest training	Satisfied	6	2	3	0	0	11
	Neutral	2	0	0	4	1	7
	Unsatisfied	1	2	3	0	0	6
	Total	9	4	6	4	1	24

Discussion and conclusions

In summary, half the study population believed that they received satisfactory special interest training either in Sri Lanka or overseas; and trainees who selected colorectal surgery as a special interest domain and trainees who got selected to university units for training were more satisfied with the local special interest training circumstances. Availability of adequate caseload for operative management was the main reason the relative values to be higher for colorectal surgery and the university units. The paucity of the number of cases encountered during the training period for management in hepatobiliary and upper gastrointestinal surgery was the main reason for the trainee dissatisfaction.

The majority of the study population (21/24) was employed by the Ministry of Health and they were aware that this system is yet to be recognized by the employer. Ministry of Health as the main employer, not recognizing this system was the major concern for them. Thus, only a limited minority of trainees believed to have the opportunity to function with special interests in the future as specialists within the existing employment structure. Therefore trainees doubted personal career benefits or patient care improvement from this change. The majority did not believe this as a better system overall. The low response rate of 47% in a small study population, was a limitation in this survey which precluded a statistical evaluation.

Revision of any medical curriculum should aim not only to upgrade the quality of training but also to uplift the quality of provided patient care in the system. [4] This basic fact has been accepted in the prospectus related to the current surgical curricular revision. [3]It is a positive move from the PGIM, as the training regulatory body to revise the general surgery curriculum par with the current global trend. Still, there may be relative inadequacies in training structure and training stations during this initial transit period and it is important to rectify them rapidly. Most of the training related concerns on the implementation of the new curriculum have been successfully dealt by the training authority, The PGIM and further queries made by upper gastrointestinal surgery and hepatobiliary surgery trainees on local training positions require prompt attention.

The highlight of this survey is the significant negative retrospect of the trainees who have completed the program towards the transformation. The majority of them are current consultant general surgeons in the Ministry of Health whose speciality training has not been recognized by the main stakeholder. Their concern about the lack of opportunities to utilize the obtained special interest training of an additional year to personal and/ or patient care benefit within the prevailing structure is reasonable. The two main sectors employing general surgeons in Sri Lanka are the Ministry of Health and the Universities, and the Ministry of Health is by far the largest provider of general surgical services.

The university system, by virtue of the department structure, allows and encourages general surgeons to engage in their area of interest. However, in the public health sector, the existing process of expansion of surgical services and the transfer system do not seem to be in resonance with the specialization within general surgery. Hence, it is of paramount importance for the stakeholders (including PGIM, Ministry of Health, College of Surgeons of Sri Lanka and Association of General Surgeons of Sri Lanka) to analyse the current system and identify the ways to utilize the additional training and knowledge received by general surgeons with special interests. Such a move is vital for the betterment of the profession of general surgeons as well as for the consumers of the service, the patients within the general public.

This study was presented as an oral presentation at Annual Scientific Session of the College of Surgeons of Sri Lanka and joint academic meeting with Royal College of Surgeons of Edinburgh, 17th - 19th August 2017, Kandy.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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SCIENTIFIC ARTICLE

Descriptive study on socio-demographic profile, pattern of injuries, aetiology and outcome of domestic violence at a tertiary care centre of Batticaloa district

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Keywords: Domestic violence;females; sociodemographics; perceptions; injuries

Abstract

Introduction

Domestic violence is common serious health problem in South Asian countries including Sri Lanka which has an immense impact on people's physical, psychological and social health in a community.

Objectives

To determine the socio-demographic characteristics, the pattern of injuries and outcome among patients with domestic violence injuries at a tertiary care centre in Batticaloa, Sri Lanka.

Methods

Fifty nine female patients with domestic violence injuries were recruited in our descriptive, cross-sectional study. A pre-designed interviewer based questionnaire was used to collect data from the participants and was analysed statistically by simple proportions and percentage using SPSS analytical package (version 21). The Ethical Review Committee, Faculty of Health Care Sciences, Eastern University granted the ethical approval for the study.

Results

Fifty nine female respondents were recruited. The common demographic characteristic observed were the 21 to 40 years age group was poor socio-economic and educational status. The husbands acted as the perpetrators among most victims (42.4%). Majority of the respondents (71.2%) reported that their husbands abuse them under the influence of alcohol. Most respondents had sustained minor injuries including contusion (64.4%), laceration (15.3%) and fractures (18.6%) among them. The common reasons for violence encountered among them were arguments (67.8%) and financial reasons (16.9%). Even though 45.8% of respondents had been abused on multiple occasions, 86.4 % of them have not reported previous abuse legally. Most people denied seeking medico-legal action due to fear of family separation and poor knowledge of services available for domestic violence.

Conclusion

Domestic violence commonly affects the young female and is associated with illiteracy and poor socio-economic status of the victims. Arguments and financial issues are the commonest reason for violence. Most people are not aware of the potential of seeking medico-legal action and available services to help them.

Introduction

Domestic violence is the most prevalent form of violence against females globally [1] and is a grave socio-clinical concern in every community and culture in Sri Lanka leading to attention from the medical community. Kalokhe et al recently proposed a culturally tailored operational definition of domestic violence which seeks to expand on the existing WHO definition by taking in to consideration several key themes regarding behaviours and acts constituting domestic violence. It includes control over decision-making ability of women, social relationship with society members, financial issues related to food and property, sexual abuse and sexual relationship with others, physical abuse, psychological abuse and the perpetration of domestic violence [1]. Domestic violence has an immense impact on people's physical, psychological and social health in a community [2]. The prevalence of domestic violence in South-East Asia and Sri Lanka is 37.8% [2] and 25-30% [3] respectively. 45% of women are exposed to violence by their husbands in India [2]. 24-34% of women have affected domestic violence in different parts of Sri Lanka [3]. The highest prevalence was noted in the Northern and Eastern parts of Sri Lanka during the civil war for the last three decades [3].

Gathering data on domestic violence from patients is difficult as they think that disclosing information is an intimate, sensitive and confidential issue. Our study aimed to describe the socio-demographic characteristics, the pattern of injuries, and the outcome of female patients with domestic violence injuries presenting to a tertiary care centre, in Batticaloa district, Sri Lanka.

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Materials and Methods

Study settings

A descriptive cross-sectional study was carried in a tertiary care centre, Batticaloa district, Sri Lanka. Female patients who were victims of domestic violence were included. The Batticaloa Teaching hospital is the only tertiary care hospital in Batticaloa district. Therefore, the majority of the patients with domestic violence injuries from all over the Batticaloa district admit to the general surgical wards of Teaching Hospital, Batticaloa.

Sampling procedure and sample size

Fifty nine female patients with injuries associated with domestic violence were recruited from all surgical units, at the Teaching hospital Batticaloa by convenient sampling method. The study was conducted for a period of 6 months from January 2017 to June 2017.

Ethics approval

The ethical approval was obtained from the Ethical Review Committee, Faculty of Health Care Sciences, and Eastern University. After proper approval, a hudred patients with their informed written consent were included in the study. The subjects were interviewed to gather clinical and demographic details.

Inclusion and exclusion criteria

A cohort of 59 female patients who had physical injuries exposed to domestic violence from minor to major injuries admitted to general surgical wards, Teaching hospital, Batticaloa were further analysed in this descriptive cross-sectional, qualitative phenomenological survey. The patients who were

pregnant or below 18 years of age were excluded from the study.

Development of Questionnaires

Domestic violence Fact Questionnaire was designed as a tool, using the existing literature to assess the socio-demographic, pattern of injuries, awareness and outcome of domestic violence among those patients. The questionnaire was prepared and expert validated in English and was translated into Tamil and Sinhala language. The questionnaire consists of several questions to assess the patients' socio-demographic characteristics, a pattern of injuries, reasons, awareness and outcome of domestic violence. The patients who met the inclusion criteria were interviewed to assess socio-demographic character-istics, pattern of injuries, and possible causes of domestic violence.

Data analysis

Data were collected and were entered in Microsoft Excel sheet. All data were analysed using SPSS analytical package. The results were represented as numbers and percentages for continuous variables. A P value of < 0.05 was considered statistically significant.

Results

Fifty nine patients with injuries associated with domestic violence were recruited from the surgical units, Teaching Hospital, Batticaloa.

Demographic characteristics

The basic demographic characteristics of patients with domestic violence are shown in Table 1. Most of the domestic violence occurred among patients with an age of 21- 40 years (55.9%), while low prevalence was noticed among the patients with age of 61-80 years (6.8%). The patients with low literacy rates or below primary education (59.3%) were most vulnerable to domestic violence injuries in our study. Besides, high prevalence was noticed among married females (91.5%). Housewives (74.6%) and labourers (13.6%) were commonly affected by domestic violence (Table1). Moreover, it was higher among the patients with low monthly income (91.5%) compared to patients with higher monthly income (8.5%)..

The characteristic pattern of injuries

The injuries were mild to major in severity. Injuries commonly involved head, limb and multiple body areas (Table 2). Most people sustained minor injuries which were contusion (64.4%) and laceration (15.3%) (Table 2). The

Table 1. Sociodemographic characteristics of the respondents (Nos: 59)

Socio-demographic characteristics		Nos	Percentage (%)
Age	<20 years	7	11.9
	21-40 years	33	55.9
	41-60 years	15	25.4
	60-80 years	4	6.8
Marital Status	Single	54	91.5
	Married	5	8.5
Educational Status	No schooling	9	15.2
	Primary level	26	44.1
	Ordinary Level	19	32.2
	Advanced level	5	8.5
Occupation	Business	3	5.1
	Labourers	8	13.6
	Students	4	6.8
	Housewife	44	74.6
Monthly income	Rs. <9,999	7	11.9
	Rs 10,000-19,999	21	35.6
	Rs 20,000-29,999	26	44.1
	Rs 30,000-39,999	4	6.8
	Rs 40,000-49,999	1	1.7

victims were injured by several weapons such as wooden stick (Nos-18), metal bar (Nos-3), stone (Nos-7), door bar (Nos-6), metal bar (Nos-3) broomstick (Nos-3), knife (Nos-1), helmet (Nos-1). Husbands (42.4%), male siblings (26.1%), partner's family members (16.9%), acted as the perpetrators (Table 3).

Reasons for perpetration of domestic violence

Arguments (67.8%) and financial issues (16.9%) were common reasons encountered among them (Table 4). Even though 45.8% of respondents had been abused several times, 86.4 % of them have not reported previous abuse to the authorities. Sixty-eight percent had suffered domestic violence several times in the previous year. 48 % of the victims lived with their abusers and avoided seeking medico-legal action due to fear of family separation and isolation from the community (Nos- 9), future of children (Nos- 11), financial dependence (Nos- 7), and poor knowledge of services available for domestic violence (Nos-31). Majority

Table 2. Characteristic pattern of injuries associated with domestic violence reported by the respondents (Nos: 59)

Pattern of injuries	NOs	Percentage (%)
Head injuries	13	22
Chest and abdominal injuries	13	22
Upper limb injuries	18	30.5
Lower limb injuries	2	3.4
Multiple injuries	13	22

Type of injuries	NOs	Percentage (%)
Contusions	38	64.4
Lacerations	9	15.3
Stab injuries	1	1.7
Limb Fractures	11	18.6

Table 3. Perpetrators of violence reported by the respondents (Nos-59)

Perpetrators	No's	Percentage (%)
Husband	25	42.4
Children	3	5.1
Grandchildren	2	3.4
Male Siblings	16	27.1
Female siblings	2	3.4
Other relatives	1	1.7
Partners Family members	10	16.9

of the respondents (71.2%) reported that their husbands abuse them under the influence of alcohol.

The outcome of domestic violence of patients

All patients had mild to severe physical injuries and psychological consequences. Minor injuries were managed with suturing of laceration among 15.3% of cases and observation of head injuries. The major abdominal injury required exploratory laparotomy and thoracotomy among 3.4% of cases. Orthopaedic interventions were required for fractures and dislocations among 17.6% of cases. Medico-legal action was required in most cases. They were managed with a consultation with a gender-based violence team and psychiatric counselling. There were no deaths reported in our study. A statistically significant association was observed among domestic violence injuries and the socio-demographic characteristic pattern of respondents in our study especially age, marital status and educational status.

Table 4. Reasons of violence reported by the respondents (Nos-59)

Reasons	NOs	Percentage (%)
Arguments	40	67.8
Love affairs	2	3.4
Financial issues	10	16.9
Competition for properties	6	10.2
Accidental	2	3.4

Discussion

Domestic violence is the form of abuse which ranges from physical, psychological or sexual acts usually against females by partners, boyfriends or family members. A higher proportion of domestic violence was observed among females (59%) than males (41%) in our study. The studies conducted in Turkey [4] and in rural Bangladesh [5] have revealed that the occurrence of domestic violence was 38.3% and 67% among females respectively. A study done in 2013 has shown that 22% of females have suffered from domestic violence from their sex partner. Also, it revealed that 24% of male participants perpetrated domestic violence during their lifetime [6]. A significant number of women (22%) were exposed to recurrent domestic violence in the preceding year in a previous study done in 2001 in Sri Lanka [7]. Our study also revealed that 68% of our study population had experienced multiple instances of domestic violence in the last year.

The socio-demographic background of respondents had associations with the prevalence of domestic violence in our study. Most importantly, domestic violence was observed among patients with 20-40 years of age and poor educational status. Also, married women have suffered from frequent and severe domestic violence injuries than unmarried women. Low educational status and low family -income level showed a positive correlation with the rate of domestic violence in a study conducted in the Sivas province of Turkey [4] and our study also supported the same finding.

The males were the perpetrators among most of the female victims (79%). 42.4% of victims were housewives whose husbands were the perpetrators. Majority of the respondents (71.2%) reported that their husbands abuse them under the influence of alcohol. A study carried out in Batticaloa revealed that alcoholism and drug abuse had influences among domestic violence injuries [6]. Most females have reported that slapping was the specific act of physical assault in domestic violence injuries. It was also noted among abusers of siblings.

Also, slapping (80%) and kicking/punching/ hitting (74%) were reported as common types of physical abuse in a study done in Gujarat [8].

Arguments (67.8%) and economic factors (16.9%) were common causes of domestic violence in our study whereas economic problems (31.4%) were reported as the most important reason for domestic violence in previous studies[8]. Arguments, poor socio-economic status, poor educational status and love affairs have been reported as reasons for domestic violence in Sri Lanka [9, 10]. Arguments were reported the reason for violence among husband and wife in our study.

The physical injuries following domestic violence vary from mild to severe in severity in the form of contusions, laceration, cut injury, burn injury, fractures and head injury [11, 12]. Most people have sustained minor injuries such as contusion (64.4%), laceration (15.3%) in our study.

The prevalence of domestic injuries is high in South Asian countries especially among females in the community [9]. It also been observed that the prevalence of domestic violence has increased in Northern and Eastern provinces of Sri Lanka following the end of war in 2009 [14]. Several studies reported that most of the people seeking healthcare services do not disclose domestic violence [9]. Most housewives usually do not want to report their harassments due to several reasons, particularly concern about their children, lack of social and economic support and dependence on husband [3]. Lack of education and economic dependence also make them less confident to disclose their problems to medical professionals. The majority of females who have been exposed to domestic violence do not seek medical attention and have continued to live with their abusers for long years in Sri Lanka [13]. Our study showed that 47.5 % of the victims lived with their abusers and avoided seeking medico-legal action various reasons such as fear of family separation, isolation from community and future of children. Most of the women believed that they have to be obedient to their husbands and that the husband is the sole authority of the matrimonial household.

In summary, recently, there is a positive attitude towards prevention of domestic violence in Sri Lanka. However, it is necessary to encourage females to seek medical attention and outside services if they are exposed to domestic violence [11]. There are still several barriers which discourage women from seeking attention following domestic violence. These barriers should be addressed by society, medical professionals and women themselves. Most of the victims have reported that good knowledge, leadership skills and adequate family income would encourage them to overcome sufferings from domestic violence which is also reported in our study. The empowerment and leadership ability of women especially in the form of economic productivity, higher education and breaking up poor cultural background will help to reduce the prevalence of domestic violence near future in Sri Lanka [11].

Conclusion

Domestic violence is common among young females and was associated with illiteracy, the poor socioeconomic status of the victims. Arguments and financial problems are the commonest reason for violence. Most of the people are not aware of seeking medico-legal action due to fear of separation and future of children. Husbands are the main perpetrators of violence against their wives. We emphasize the urgent requirement of multidisciplinary interventional approach to improve public health measures, which would most effectively address this issue, and create awareness and bring new alteration in attitudes among society.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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REVIEW ARTICLE

Diversion following rectal cancer surgery

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Keywords: Stoma; ileostomy; colostomy; anastomotic leak; rectal cancer; proximal diversion; defunctioning stoma; percutaneous ileostomy; ghost ileostomy

Abstract

Rectal cancer surgery is moving from organ sacrificing abdominoperineal resection (APR) to organ-preserving anterior resection (AR). Neoadjuvant chemoradiation, low anterior resection and coloanal anastomosis play a major role in this context. Anastomotic leakage (AL) is the most feared complication of these procedures. Therefore, much importance is given to proximal diversions to protect anastomosis. This review has critically analysed the indications, various methods available, challenges, complications, benefits and patient selection for proximal diversions.

Introduction

Rectal cancer surgery has developed from organ sacrificing abdominoperineal resection to organ-preserving procedures with the introduction of Total Mesorectal Excision (TME), neoadjuvant chemoradiation and Trans-anal TME (TaTME). As a result of this, more rectal tumours in the distal rectum end up with restored continuity of the bowel with even lower anastomosis in the pelvis.

An anastomotic leak (AL) is the most dreaded complication for a surgeon as it can lead to the death of a patient. Introduction of proximal diversion of the faecal stream by various methods is considered protective of AL. However, this is not without debate on exact indications, methods of diversion, the morbidity associated with diversion and issues on the reversal of proximal diversion as well. This review aims to ascertain/assess the available evidence on these issues to find answers for them.

Protection of the anastomotic site is achieved by the temporary diversion of the faecal stream before reaching it and bringing it out as a stoma through the anterior abdominal wall. Defunctioning or diverting stoma is created to minimize the impact of a subsequent anastomotic leak.

The International Study Group of Rectal Cancer (ISREC) have defined an anastomotic leak(AL) as 'a communication between the intra- and extra-luminal compartments owing to a defect of the integrity of the intestinal wall at the anastomotic site'[1]. Demonstration of a pelvic abscess in the vicinity of an anastomosis, without demonstrable communication with the bowel lumen, is also considered as originated from a leak. This definition does not include microscopic leaks which are not clinically evident in most of the time.

Diversion or no diversion

Whether to divert patients undergoing rectal cancer surgery or not was debated but has come up with mixed conclusions. A meta-analysis of four randomized clinical trials and 21 non-randomized trials including 11 429 patients by Tan, W.S et al[2] concluded as; a defunctioning stoma would reduce the clinical anastomotic leak rate and reoperation rates. Further, in the same analysis, they found a statistically significant reduction of mortality among patients with a stoma in the non-randomized group. Same conclusions were made on anastomotic leaks and reoperations by another meta-analysis of 11 studies by Sheng-Wen Wu et al[3] as well.

A contrary report was published 2017 by Yuchen Wu et al [4] in Nature conclude 'diverting stoma does not delay or reduce the AL but it reduces the recovery time of non-severe AL'. Further, they did not detect a positive impact on the occurrence or recovery of sever AL and its manifestation on distant or local recurrence rates or relapse-free survival as well. By this publication, Yuchen Wu et al have challenged the popular belief of reduction of consequences of AL by a diverting stoma.

Minimal invasive methods have established its place in colorectal surgery and proven to have technical advantages in rectal cancer surgery[5,6,7]. Peter Ihnat et al[8]concluded in a publication in 2016 that diverting ileostomy does protect the anastomosis following laparoscopic rectal cancer surgery but at a high price in terms of ileostomy related complications and

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morbidity.

Considering all the evidence in front of us it is fair to conclude proximal diversion after rectal cancer surgery should be individualized.

What is the method to divert?

A proximal diverting loop ileostomy is the most popular method of diversion owing to advantages over colostomy [9]. However meta-analysis on 5 randomized trials has failed to appreciate any significant advantage between these two methods; diverting ileostomy or colostomy [10]. Even though fewer incidents associated with ileostomy prolapse is seen as an advantage over colostomy in this meta-analysis, some may consider this as helpful in a reversal of stoma. Another randomized trial looked at the more significant complication of intestinal obstruction and concluded that colostomy is associated with less incidence of obstruction [11].

With all the above evidence and considering that AL rate following TME and LAR is around 7.5 -10% [12,13]; we may be creating stomas in 90% or more patients subjecting them to stoma related complications and morbidity without a real advantage. Should we create diverting stoma at all or is there a less invasive and convenient way to mature a stoma if the need arises? There are two methods described and practised i.e. Temporary percutaneous ileostomy(TPI)[14, 15]and Ghost ileostomy(GI)[16,17].

Patients with TPI will have a feeding jejunostomy tube inserted into the proximal limb of an ileal loop and will obliterate the lumen by inflating the balloon of the tube. Other end of the tube will be delivered out through the anterior abdominal wall[15]. Advantage of this method is the ability to reverse it without another surgery on an average of 9 days against 106 days on average for a conventional loop ileostomy(CLI) availing the CLI related complications [14].

GI is the least invasive method to mature an ileostomy in the event an AL is suspected. This will mark and facilitate the site to create an ileostomy in the unfortunate occurrence of an AL[16,17]. Therefore, GI will prevent all complications related to CLI and minimize the morbidity as well.

Challenges, Issues and Limitations

Diverting stomas are also not without complications and there is a certain amount of reduction of quality of life simply due to stoma related complications and morbidity in relation to skin excoriation, stoma leakage, stoma obstruction and retraction [18]. However, when it comes to other patients who would end up having LAR, decision making can be governed by various other factors like preceding chemoradiation, general fitness, and co-morbidities. Besides, we have to take into consideration the possibility to reverse the stoma as well and the consequences of stoma reversal. Some of the temporary stomas will become permanent due to the simple fact they never get reversed [19]. Other stomas will not be reversed because patients were given preoperative chemoradiation [20] or started on adjuvant chemotherapy. However the evidence support that reversal could be carried out safely while patients on chemotherapy [21] without additional risk for complications. Reversal of temporary stomas can give rise to complications in about 32% of patients i.e. wound sepsis, small bowel obstruction and incisional hernia [18].

Patient selection

It is not necessary to mature a diverting stoma on every patient undergoing LAR. Only those who can outweigh the risk of complications and morbidity of a stoma to the benefits of having it, should be given a stoma [22, 23]. Following a retrospective and prospective review of articles spanning over 50yrs M. Hanna et al reported low colo-rectal anastomosis, colo-anal anastomosis, difficult resections, malnutrition and male patients would be benefitted by a diverting stoma [24, 25, 26].

Pre-operative chemoradiation, low rectal anastomosis and male gender are predisposing for AL [27]. The proximal diverting stoma will reduce the incidence of AL, the manifestations of AL and reduce the need for immediate reoperation rates [3, 24, 25]. However, evidence of proximal faecal diversion on the reduction of mortality is inconclusive [2]

Those patients with obstructing colorectal cancer resection and anastomosis with a proximal diverting ileostomy would have higher complication rates, deep wound infections, sepsis and readmission rates [28].

With contradicting opinions as above, it is challenging to decide who would benefit from a diverting stoma. We can safely conclude it would be beneficial to mature a diverting stoma in a male; whose anastomosis is located within 6cm from the anal verge [25].

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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REVIEW ARTICLE

Evidence based mammography screening: is evidence changing?

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Keywords: Breast cancer; mammography; population screening

Abstract

Population-based mammography screening programmes were launched by developed countries in the latter half of the twentieth century based on the promising evidence on mortality benefits reported by the earliest randomised control trials (RCTs). It was widely accepted that screening mammography significantly reduced breast cancer mortality in women invited for screening. However, since the first RCT in the 1960s, varying evidence has been tabled by many researchers, sometimes alarming the public, drawing attention to the harms of screening mammography, mainly identified as overdiagnosis and false positives. While overtreatment is recognised as a consequence of over diagnosis, a relatively newer set of harms categorized under psychological distress have been highlighted as resultant from false positive screening tests. Currently, the magnitude of the harms of screening mammography remains uncertain. The most turbulent reviews on breast screening, however, were the queries into the well and long believed mortality benefits of mammography screening first tabled in the 1970s by the Canadian national breast screening study. A Cochrane review by Gøtzsche and Jørgensen further added to the negative attributes of mammography screening as they concluded that the actual current mortality benefits are non-significant and smaller than that claimed by many RCTs which were poorly randomised. Although heavily criticized, sparks ignited by these reports have led many countries worldwide to conduct their panel discussions on evidence on population screening mammography. While many countries have decided to continue their programmes understanding the harms involved, Switzerland in this light has discontinued their population-based mammography screening programme. The debate continues; currently while not overlooking the mortality benefits of mammography, it is also understood that the mortality benefits are not solely due to mammography but are also contributed by other factors such as advancement in therapeutic measures and awareness on breast cancer created among the females. In this regard, critical evaluation of global literature is imperative to make country-specific policy decisions for middle-income countries such as Sri Lanka, who are contemplating the options for expanding opportunistic mammography screening services to reach wider population screening targets.

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Introduction

In the latter half of the 20th century, many developed countries invested in population-based mammography breast cancer screening programmes with varying national policies between countries. Many middle-income countries, not investing in expensive organized national programmes, went on to offer mammography as an opportunistic screening method for breast cancer. Embarking on mass screening mammography occurred as recommended by world's leading guideline groups, largely supported by the scientific evidence which was tabled at that time highlighting the mortality benefits of screening mammography. It is not an exaggeration to state that screening mammography has drawn more global attention than any other cancer-screening programme, subject to intense scrutiny over the last few decades [1]. Since the first randomized trial in the early 1960s, variable evidence has been tabled on harms against benefits of screening mammography. Recently, some authors have even challenged the earlier evidence of mortality benefits creating turbulence among different stakeholders of screening programmes. Such differential evidence and emerging controversies have sparked heated debates challenging some conventional global views on mammographic breast screening.

History of screening mammography: How different countries of the world embarked on mammography-based breast screening programmes

Benefits of using mammography for early detection of breast cancer was researched as early as in the mid-twentieth century. The first randomized trial programme on breast cancer screening which was called the "Health Insurance Plan of New York City", was commenced in 1963 by Shapiro, Strax, and Venet. The results of this trial which evaluated benefits of mammography and clinical breast examination were first reported in 1966 followed by updates in 1971 and 1982 which showed a reduction of breast cancer mortality

rates in the intervention group over controls [2].

Considering positive evidence on the benefits of screening mammography, the Canadian task force initiated their national breast cancer screening programme in 1976 [1]. In 1986, "Europe against Cancer" programme was launched with a population-based screening in a target group of 50 to 59-year females per reported mortality benefits in mammography of age specific groups [3]. The Forrest report (1986) [4], which led to wide acceptance of screening mammography in UK, mainly considered evidence form two RCTs of that time, the Health Insurance Plan of New York City [2]and the Swedish two county study [5]. The report suggested that screening would reduce breast cancer mortality by almost one third with more benefits than the costs involved [4]. Costs and benefits were considered in terms of quality adjusted life years (QALYs) and overdiagnosis was not considered an obstacle but follow up was suggested to find out its magnitude as the Swedish trial suggested overdiagnosis of 20% [4]. The Forrest report resulted in the introduction of population screening mammography in the UK. Australia started breast cancer screening of women aged 50 to 69 years only during the early 1990s [6]. The continent of Asia has relatively lower the number of breast cancer deaths compared to the rest of the world [7]. However, upper-middle income Asian countries such as Malaysia and Taiwan initiated population-based mammographic screening (since 2004) considering the rising incidence and death rates due to breast cancer in those countries [8]. Japan began clinical breast examination in 1987, followed by recommendations to use mammography in combination with clinical breast examination as a population-based program in the year 2000 [9].

In most countries, the initial screening programs included a combination of mammography with clinical or self-breast examination [9]. Nevertheless, the World Health Organization (WHO) guidelines do not recommend self-breast examination as an effective method of breast cancer screening [10].

Changes in breast cancer incidence and mortality in the screening era

- **Rising incidence of breast cancer**

  Incidence of breast cancer increased by nearly 30% worldwide between the periods of 1973 to 1997 with some variations in the pattern of increase among the regions [7]. A rise in incidence was observed in North America in the 1980s, which slowed down during the mid-1990s, while a continued marked rise was seen in rest of the world including developing countries since mid-1980s [7]. Asian countries, despite being among the regions with the lowest breast incidence, showed the highest rise in breast cancer incidence with most marked rates seen in Japan amounting to 78% [7]. The rise in incidence in breast cancer in the western countries is largely attributed to detection of more and more small localized cancers by screening mammography [7], expressed as an 'artefactual increase' [11]. Some authors have sceptically expressed this association, which is common to many other cancers with specific screening programmes, 'as if screening was causing cancer' because a paralleled rise in incidence was not seen in control groups in randomized trials [1]. This rise in breast cancer incidence was marked among women of perimenopausal age group, who were the main participants at mammographic screening programmes.

  Unlike in developed Western countries, factors such as westernisation of lifestyle and affluent living standards [12] have been counted for the rise in incidence in Asian countries, since a major contribution from screening was unlikely in the absence of population screening except in countries like Japan [7].

- **Changes in breast cancer mortality**

  Despite rising incidence in breast cancer between 1973 to 1997, worldwide breast cancer mortality remained stable or decreased during the same period [7]. From the year 1989 to 1993, age standardized breast cancer mortality rates dropped by 6.8% in US white women of all ages (13), while in the UK breast cancer death rates declined by 22% in both 20 to 49 year and 50 to 69- year age groups from 1987 to 1997 [11]. This decline in mortality in US and UK was considered statistically too rapid to be a sole effect of mammography and was attributed to result from both screening mammography and improvements in cancer therapy [11, 13, 14].

- **Harms of screening mammography**

  Evidence on the harms of screening mammography has been brought up and increasingly highlighted by many researchers over the past decades raising concerns both among the public and the policymaking authorities.

- **False positive screening tests**

  A false positive screening test results when a woman is recalled for assessment following an abnormal screening mammogram but is proven cancer-free following assessment with no evidence of cancer up to one year. False positive rates vary between countries. The highest rates are reported in the US where the recall rate of 50 to 54-year age group reached 13% - 14% after the first mammogram [15]. More than 90% of such recalled mammograms are eventually declared cancer free [1].

However, assessment and follow up of these abnormal mammograms add a burden to the health budget. The cost for follow-up of these false positives is reported to be as high as 33% of the cost of breast screening [16].

More recently, patient anxiety triggered by false positive mammograms, identified as a notable harmful outcome of screening mammography, has drawn much attention of the scientific community and the public [1]. In addition to mere anxiety, other negative psychological attributes such as worry, sadness, sleep issues, impact on sexuality have been observed in these women identifying a significant psychological burden resulting from false positive mammograms [17, 18]. Even though the false positive rates decline with subsequent screenings [19], the overall chance of a woman being recalled during 10 years of annual screening in US can be as high as 50% [16], which further highlights the chance of women being subjected to undue stress by screening. The worry of having a missed cancer is observed to remain in some women even after the mammogram is cleared cancer free, amounting to sustained stress [1, 17].

- **Overdiagnosis and overtreatment of breast cancer**

  Overdiagnosis is the detection of cancer which, if not for screening, would not have clinically manifested during the lifespan of a patient. It is a negative attribute common to many other specific cancer screening programmes as well [1]. Overdiagnosis leads to overtreatment including surgery and radiotherapy. Radiotherapy has been postulated to cause increased mortality in the screened group of women [17]. Varying rates have been estimated for overdiagnosis form population screening mammography by different research groups (ranging from 0 to 54% in different age groups), however, its exact magnitude is uncertain [10]. Marmot et al. [20], and Paci et al.[21] have estimated that for every one or two cases of overdiagnosis, at least one death due to breast cancer was prevented suggesting a balance between harms and benefits of population screening mammography [10].

Debates and recent controversies on mammographic breast screening

Although it has been widely accepted over decades that mammographic screening leads to reduced breast cancer mortality both in the invited for screening and screened populations, more recently some authors have challenged these results questioning the very foundation of mammographic screening.

The Canadian national breast screening study (1980 to 1996) was the first to report no mortality benefits in the intervention group over controls with screening mammography both in 40-49 year and in the 50 to 59-year females [22]. This study, which caused an uproar, was however criticized by many as not suitable for evidence based conclusions due to considerable drawbacks such as poor randomization, not excluding women with physical examination findings such as palpable lumps, palpable axillary nodes and nipple retraction during screening trials, use of poor-quality mammography images and inadequate statistical rigor [23]. It has also been suggested that screening mammography may increase mortality due to increased use of radiotherapy for management of screening detected small tumours [17].

Olsen & Gøtzsche's Cochrane review has led to much controversy with their recommendation to abandon breast cancer screening concluding that there is a lack of reliable evidence on the claimed mortality benefits [17]. They also declared that breast cancer mortality was a biased factor towards mammographic screening. The review was heavily condemned by many as the reviewers discarded the majority of the randomized control trials available at the time, stating that the excluded studies were inadequately randomized but ignoring flaws in the two studies with no mortality benefits of mammography and for using cancer registry data instead of patient records (8). Furthermore, the Cochrane review considered a total number of invited women for breast cancer screening to be the participant numbers, which could generate inconclusive evidence on overdiagnosis rate. The review also gave increased attention to the harms of screening mammography. It was highlighted that when one breast cancer is diagnosed, ten females are overdiagnosed of having cancer resulting in overtreatment suggesting a 30% overdiagnosis rate [17].

Decisions made following controversies: Current perspective on breast cancer screening

Despite differential views on detection methodology, breast cancer remains the commonest cancer among women. It is also the second commonest cancer worldwide after lung cancer [24]. Of the total new cancer cases globally, 11.6% were breast cancer and accounted for 6.6% of all cancer death rates in the year 2018 [24].

In light of new conflicting evidence on benefits and harmful effects of population-based screening mammography, many countries conducted their discussions regarding the use of screening mammography with panels of expertise in the area revisiting their national guidelines.

United Kingdom panel of experts concluded that out of women aged between 50 to 69 years who are invited for screening, 129 per 10,000 screened would have overdiagnosis (when estimated with a 19% cumulative incidence of overdiagnosis) [20]. They also reported that of 100 women screened and 2000 women invited for screening, one breast cancer death was prevented: The panel concluded a 20%

reduction in mortality from breast cancer among women who were invited for screening, taking into consideration 11 RCTs on breast cancer [20]. Therefore, a decision was made to continue population-based breast cancer screening in UK. Swiss Medical Board (Switzerland) in 2014 advised against screening mammography considering principally Olsen and Gøtzsche's Cochrane review evidence of inconclusive mortality benefits [25]. Nevertheless, a leading cancer association in Switzerland, "La Ligue Suisse Contre le Cancer" criticized the conclusion in Cochrane review to abandon population-based screening completely and recommended implementing quality control measure to uplift their existing practice [25].

It is agreed by many panels that the applicability of old clinical trial findings to the current screening practice remains uncertain [20]. Changes are made regarding the screening interval in countries considering the risks including radiation, cost and availability of resources. There continues to be a difference in opinions on the age at which screening should commence. WHO position paper on mammography screening 2014 concludes that mammography is the only method so far proven to be effective for organized mass screening for breast cancer and that there is a 20% reduction in mortality across all screened age groups in a well-planned population screening programme [10]. They also state that currently, the magnitude of the harms of screening mammography remains uncertain and that there appears to be a narrow trade-off between harms and benefits in the youngest (40-49 years) and older most (70-75 years) age groups [10]. Also understood is that early detection of breast cancer depends not only on screening mammography but also on many other factors such as breast cancer awareness and clinical breast examination carried out by a trained professional. At present, early recognition of breast cancer symptoms by patients, improved treatment methods and multidisciplinary approach to breast cancer treatment also have contributed to breast cancer mortality reduction, with mammography [26].

Should low- middle income countries start population screening; Sri Lankan perspective on breast cancer screening

- **Breast cancer burden in Sri Lanka**

  Breast cancer is the commonest cancer next to oral cancer in Sri Lanka, with 3091 new cases diagnosed during 2018 (13.1% of newly diagnosed breast cancers out of the total) [27]. Breast cancer was ranked as the second leading cause of cancer deaths after lung cancer in Sri Lanka [27]. Over the past decade (from 2001 to 2010) a 1.4-fold rise in the incidence of breast cancer was recorded in an island-wide study indicating a rising disease burden [28].

- **Applicability of population-based screening to middle income countries**

  WHO breast cancer screening guidelines state that national breast cancer screening programmes are cost-effective for upper-middle income countries as opposed to the low-middle income countries [10]. Population screening mammography is considered non-cost effective for limited resource settings which include low and low-middle income countries [10].

- **A place for opportunistic screening**

  Currently, there are opportunistic mammography screening facilities in a limited number of centres in Sri Lanka which are mostly distributed in the private sector. NCCP guidelines recommend screening women aged between 50 to 69 years [29] which is in concurrence with the current rising breast cancer incidence seen in the women over 50 years [28]. How well these guidelines are reached and practised by the individual centres remain unexplored.

It is imperative to note that WHO breast cancer screening guidelines [10] are brisk to remind that opportunistic screening can tip off the tight balance between benefits and harms of mammography screening towards the harms, especially if such opportunistic programmes are not properly organized and controlled. Validated protocols, para-clinical staff experienced in communication with patients and quality assurance are some of the key features that may need to be strengthened in individual opportunistic screening centres in Sri Lanka among many other criteria specified by the WHO.

Early recognition of breast cancer and timely interventions is considered the most important aspect in the reduction of breast cancer deaths [10]. Therefore, considering the resources available, efforts should be directed at increasing breast cancer awareness especially among the post-menopausal age group, promotion of accurate clinical breast examination and optimising diagnostic facilities, staging and improved access to treatment [30].

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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BRIEF ARTICLE

Sri Lankan perspective of combat extremity vascular trauma: lessons learned and implications for future directives

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Keywords: Combat vascular trauma; limb fasciotomy; temporary intraluminal shunting; field tourniquets

There were more than 5000 casualties admitted to Anuradhapura Military Base Hospital (MBH) during the last phase of Sri Lanka civil war (November 2008 –June 2009). Out of these casualties, there were 129 vascular injuries. The circumstances of each injury were meticulously recorded and later examined for patterns of injury and outcomes.

The key findings were published in journals and textbooks [1, 2]. This communication is to share the salient points that the authors consider invaluable for future surgeons who will take up the challenging field of combat surgery.

Of the 129 vascular injured limbs analysed, gunshots and explosive devices were responsible for 50% and 42% vascular injuries respectively. In this study group, 58 (44%) had combined arterial and venous injuries, 53 (42%) had isolated arterial injuries and 12 (9%) had only venous injuries. Four non axial injuries were managed by ligation and two popliteal branch injuries with popliteal artery spasm were managed expectantly. Most commonly injured vessels were femoral (35%), popliteal (34%) and brachial (18%) while the most frequent procedure performed was an interposition vein graft at 62%. The adverse outcomes for the 129 vascular injuries included 17 primary amputations, 5 secondary amputations, 10 post-operative thrombosis, and 5 arterial anastomotic disruptions. Out of 87 procedures for arterial injury, in 80 both life and limb could be saved upon discharge from MBH with an average 17 days institutional follow-up. Vascular reconstruction directly contributed to 2 deaths due to ischemic rhabdomyolysis in one case and severe shock in the other. Both of those could have been prevented with primary amputation. Amputation rate following arterial reconstruction only was 5% (4/87).

This high intensity war was fought in harsh terrains under unpredictable weather conditions which affected casualty retrieval and transport to definitive care often exceeding 5 hours. Casualties were transported either by ground or air evacuation from role 2 to role 3 care at MBH.

At role 2 (Main Dressing Station), they lack consistency in equipment and surgeons trained to perform limb fasciotomies and vascular shunting of damaged vessels. Although these are not frequently used skills outside combat situations, these are core damage control components of contemporary combat vascular trauma management[3]. Arterial shunts at role 2 may have prevented 17 amputations in the study population.

There is no local data on deaths due to exsanguination from extremity injuries that may have benefitted from a tourniquet. Nevertheless, a notable difference in front line extremity trauma management strategy was the lack of liberal implementation of the emergency application of tourniquets, which was proven to be a life saving measure in the conflicts in the Middle East [4].

Sri Lanka lacked the facilities for dedicated data collection, analysis hence protocol-based management of casualties could not be established during the war. The U.S. military established the Joint Theatre Trauma Registry (JTTR) which was modelled after the U.S. National Trauma Data Bank, during Operation Iraqi Freedom and Operation Enduring Freedom. This is the data by which the U.S. military creates and disseminates clinical practice guidelines and informs future required training of military providers [5].

Based on the author's experience, training military surgeons in limb fasciotomies and vascular shunting to practice at role 1 and 2 would lead to more limbs salvaged. Perhaps the early and more liberal use of tourniquets could lead to more patients reaching role 1 and role 2 alive. Establishing a trauma registry is imperative to gather data on timing and causes of deaths in theatres of war and to establish procedural improvement and quality of care.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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BRIEF ARTICLE

Bilateral giant fibroadenoma in a nulliparous lady: challenges in management

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Keywords: Breast; giant fibroadenoma; periareolar incision; "Saw tooth" technique

Introduction

Fibroadenomas are the most common type of breast lump found in young women. Giant fibroadenoma (GF) refers to fibroadenomas, that are either >5cm in size or >500 gram in weight [1]. There are a few important issues that have to be considered during the surgical management of these breast lumps. Through this report of bilateral giant fibroadenoma in a young nulliparous lady, we try to emphasize these management issues.

Presentation

A 23-year-old, married, nulliparous woman presented to us with chief complaints of gradually progressive, painless, bilateral breast lump for 8 years. There were no symptoms or signs suggestive of malignancy. On examination right breast had two lumps measuring 10x6 cm and 5x4 cm at 9 O'clock and 3 O'clock position respectively. Left breast had a benign-appearing lump of 6x5 cm size at 4 O'clock position. All lumps were firm, mobile and had smooth margins. On imaging with ultrasound, all lumps had lobulated margins, were hypoechoic and reported as BIRADS III. We did a core needle biopsy from all three lumps for pathologic assessment and they were reported as fibroadenomas.

After confirming the diagnosis of benign lump, we planned for excision. Left breast lump was relatively easily excised through a periareolar incision. Excision of right breast lumps was done through a periareolar incision (Figure 1), after careful planning during which consideration was given to various approaches described for such large masses including submammary, axillary, directly over the lump, round block and inverted "T" incision. The final histology revealed the lesion to be fibroadenoma and the patient had a good cosmetic outcome with little deformity at 6 months of follow-up (Figure 2).

Figure 1. Giant fibroadenomas excised through a periareolar incision from right breast

Figure 2. Excellent cosmetic result after 6 months following surgery

Discussion

Most fibroadenomas larger than 3 cm in size require excision, although there are no uniformly accepted guidelines or cut off size recommended for these benign tumours. Similarly, there are no universally accepted guidelines for the surgical approach and incision. Giant fibroadenomas present some unique challenges in management like obtaining an accurate preoperative diagnosis of benignity, choice of anaesthesia (local versus general), preservation of milk ducts to allow breastfeeding in future and providing a cosmetically acceptable result.

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Preoperative evaluation

A diagnosis of benignity is usually easy to obtain with the help of imaging (ultrasound or mammogram depending on the breast density) and fine needle aspiration cytology (FNAC), but the most important differential diagnosis that one should try and rule out is phyllodes tumour. Hence, the pathological evaluation in cases of giant fibroadenoma should preferably be done by a core needle biopsy, because FNAC is associated with more chances of false negative and indeed, even core biopsy can be misleading in some cases. The reported sensitivity of core biopsy in distinguishing fibroadenomas from phyllodes is about 70% [2]. This is of major concern to the patient and surgeon since missing a diagnosis of phyllodes, usually means a re-operation.

Choice of anaesthesia

Most of the fibroadenomas can be excised under local infiltration anaesthesia but giant fibroadenomas usually will require a large dose of local anaesthetic and hence general anaesthesia is required. Another issue that should be considered before a decision regarding the anaesthetic is made, is the surgical approach. If one plans an incision that is much smaller than the size of the lump, surgery under local anaesthesia is a bad option. In such situations, the patient will have discomfort/pain due to stretching and manipulation of the incision.

Preservation of milk ducts

This issue is of paramount importance in patients who are desirous of pregnancy and lactation in future, and is also an issue which is often overlooked. Fibroadenomas arise from the terminal duct lobular units and if peripherally located, excision using a proper technique rarely interrupts any major duct. After incising the areolar margin, tunnelling/ creation of skin flaps is done in the subcutaneous plane and breast parenchyma should not be incised to avoid any injury to the milk ducts. In case of centrally located tumours, a careful sharp dissection of the tumour away from the ducts usually allows the milk ducts to be preserved. Any attempt at blunt dissection may avulse the major ducts and hence should be avoided in centrally located tumours.

Cosmesis

For excision of giant fibroadenomas, various approaches are possible and have been described. The periareolar incision provides the most acceptable cosmetic result [3] and we believe that all benign lumps can be excised through this approach. In our case, we used a periareolar incision in the upper half of the areolar margin on the right side and dissected the tumour all around. After dissecting the tumour from its attachments to the surrounding breast we delivered it by retracting the incision. During the tumour delivery, we made multiple incisions on the tumour to deliver it out of the wound. This "Saw Tooth" technique of tumour delivery was recently published by Naraynsingh et al although it has been in use for years [4]. This technique allows the delivery of even massive tumours through a small incision. In addition it minimizes the likelihood of other complications like keloid/ hypertrophic scarring and decreased skin sensitivity by minimizing the length of the skin incision. The complications associated with periareolar incisions are paraesthesia of the nipple and nipple collapse. Nipple collapse can occur after removal of central breast lumps using any incision, but nipple paraesthesias are more often transient [5].

For tumours located in the vicinity of areolar margin, round block technique allows wider access and acceptable cosmesis but has the risk of nipple necrosis. Nipple necrosis can also occur with large periareolar incisions but it can be reliably avoided if no more than half of the circumference of the areola is incised.

An axillary skin crease incision is utilized for tumours in the upper outer quadrant and provides excellent cosmesis because of the absence of any scar on the breast. Similarly, a submammary approach also provides an invisible scar. Another advantage of a submammary incision is that almost whole of the breast can be lifted off the chest wall and any tumour can be excised, although it has a disadvantage of requiring a relatively larger incision for exposure of the tumour. The pedicle mammoplasty approach as described by Ribeiro can also be used but is more commonly reserved for multiple small fibroadenomas as it is more time consuming and tedious.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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CASE REPORT

Rectal arteriovenous malformation: an unusual emergency

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Key words: Arteriovenous malformation; rectum; per rectal bleed; CT angiography; low anterior resection

Introduction

We herein report a case of rectal arteriovenous malformation (AVM) presented to us with massive bleeding per rectum with haemorrhagic shock. He was admitted and resuscitated with intravenous fluid and blood transfusion. Colonoscopic control of bleeding was unsuccessful and the patient was successfully treated with laparoscopic low anterior resection and diversion ileostoma. He did not have rebleeding after 6 months follow up. Rectal AVM is rare and bleeding rectal AVM requiring emergency is very rare. So this case has been reported.

Presentation

A 52 year male patient presented with bleeding per rectum for 3 months. Bleeding was painless, intermittent and large in quantity requiring multiple blood transfusions. He had a history of haemorrhoidectomy 3 years back. In the emergency room, he had tachycardia, pallor and hypotension. He doesn't have any history of anticoagulant therapy. Abdominal examination was unremarkable. Per rectal examination did not reveal any mass or haemorrhoids. Urgent colonoscopy was planned. It revealed dilated submucosal vessels in rectum with multiple active bleeding points. Rest of the large bowel was normal. He was admitted and resuscitated with intravenous fluid and blood transfusion. Blood investigations revealed Haemoglobin 7.8g/dL, Platelet 200 000/dL, Creatinine 0.9mg/dl. CT angiography abdomen revealed multiple dilated vascular lesion in the mesorectum (Figure 1).

No mass lesion found in CT scan. Laparoscopic Low anterior resection was done with a diversion loop ileostomy. Gross specimen revealed dilated vascular lesion in the rectum (Figure 2). Intraoperatively no vascular anomaly found in the pelvis. Histopathology confirms arteriovenous malformation (AVM) of the rectum. Postoperatively he recovered well and after 6 months of surgery, he doesn't have any bleeding episode.

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Figure 1. Axial cut in CT scan showing active blushing of contrast

Discussion

Arteriovenous malformation (AVM) in the GI tract is also known as vascular ectasia or angiodysplasia. It is commonly seen in children, but cases in adults are also being reported. Incidence of AVM is reported 1.4-3 % in cases of lower GI bleeding - out of this figure, only 0.9% AVM has been reported in the rectum. This figure is quite high – 8% according to Japanese literature [1]. No data are available regarding the incidence in India. Most common location of AVM is caecum (74%), other sites are rectum, jejunum, duodenum and stomach according to decreasing order of frequency. In the paediatric population, the incidence of rectal AVM is as high as 14 %.

Considering the high incidence in the paediatric population, aetiology of rectal AVM is supposed to be congenital. Japanese literature showed many cases of rectal AVM are associated with hypertension, cardiovascular disease and pulmonary fibrosis, suggesting vascular degeneration as a probable aetiology in the development of AVM. They also reported that many patients had a history of haemorrhoidectomy in the past, like in our case. Goenka et al. Showed

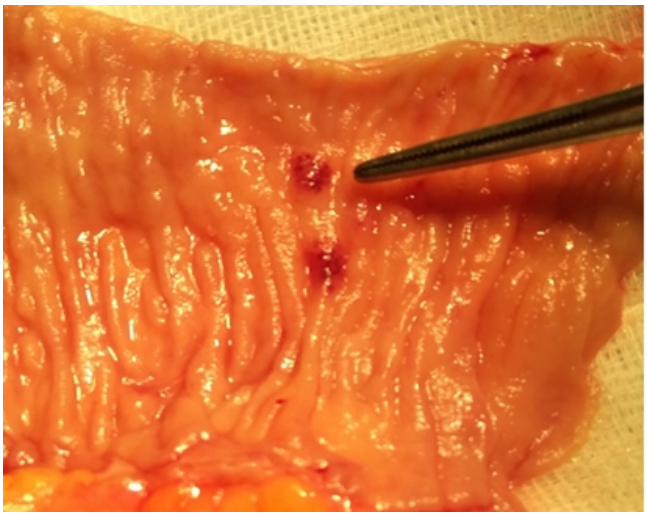

Figure 2. Surgical specimen with AVM pointed by tip of forceps

89% of patients of cirrhosis with portal hypertension have recto sigmoid AVM [2].

A most common presentation of rectal AVM is bleeding per rectum, although a significant number of patients are asymptomatic and diagnosed incidentally. Often patient gives a history of haemorrhoidectomy but considering patient age and other symptoms, a colonoscopy may be warranted to diagnose rectal AVM. Moore et al. Proposed a classification of GI AVM based on their experience: Type1 AVM is solitary, small lesion not palpable from the serosal side, usually in the right colon and occurs in an elderly patient with age more than 50 years. Type 2 AVM are larger, congenital and usually occurs in children and young patients. Type 3 AVM is associated with hereditary haemorrhagic telangiectasia.[3] This classification does not include rectal AVM which is common in children(14%) and cirrhotic patients and we proposed Type 4 AVM which includes the rectosigmoid AVM.

Recommended treatment options for rectal AVM are surgical resection, laser photocoagulation [4], transarterial embolization and Balloon-occluded retrograde transvenous embolization [5]. Surgical treatment is preferred in hemodynamically unstable patients and if other facilities are not available. Available surgical treatment options are Low anterior resection, trans-sacral resection, transanal resection and transanal suture ligation. Nishimuta Y et al. Demonstrated the efficacy of laser photocoagulation in the treatment of GI AVM in 59 patients, he showed 82% success rate in controlling bleeding. Rate of rebleeding is higher in multiple lesions and lesions associated with Osler Weber Rendu syndrome and von Willebrand disease. Modalities of treatment should be judged based on the available expertise and clinical condition of the patient.

Conclusion

Gastrointestinal AVM is a rare disease which often causes significant bleeding and hemodynamic instability. Various surgical and nonsurgical treatment options are available. Depending on the patient condition and availability of expertise, treatment should be individualised. Proper reporting and documentation needed for determining the prevalence of rectal AVM.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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Learning Points:

- Per rectal bleeding may be massive and the cause may often be very unusual
- Surgical management is the last resort if bleeding is not controlled by endoscopy or radiological interventions

CASE REPORT

Narayanan's bipolar scalp flap revisited

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Key words: Narayanan's flap; Scalp flap; oral cancer; head-neck reconstruction

Introduction

Oral and oropharyngeal cancers are the major cause of cancer related deaths contributing to 18.3% of all deaths in men and 6.8% of all deaths in women in India . The high incidence of oral cancer in India is mostly due to the abundant consumption of tobacco in its various forms . Surgery , usually done with wide local excision and neck dissection as and when required , is always somewhat disfiguring , requiring reconstruction to make up the significant loss of soft tissue . Attempt for adequate oncological clearance leaves the patient with mutilated and disfigured contour and deranged physiology of the oral cavity. Proper reconstruction and rehabilitation mandates closure of the oral gap by some method giving a tolerable resemblance to the original face , if not the original contour . Quality of life after surgery greatly depends on the skill and expertise of the surgeon [1] .

In 1970, Narayanan M described a novel method of reconstruction with bipolar scalp flaps in post-irradiation-recurrence cases , cases too locally advanced for radiotherapy and in cases too advanced for classical surgery because of bone involvement [2].

Case presentation I

A 60 years old male patient presented with a huge ulceroproliferative growth over right cheek (T4N2bM0) fungating through the skin with intermittent bleeding , offensive smell and intolerable pain . Upfront resection of the tumour was done including part of the upper lip and lower lip with segmental mandibulectomy and right-sided modified radical neck dissection (MRND) followed by reconstruction with Narayanan's bipolar scalp flap. Pedicles were detached after 4 weeks. Final biopsy report was moderately differentiated squamous cell carcinoma with free margins but with lymphovascular and perineural invasions, hence the patient was treated with adjuvant radiotherapy . The patient is surviving without any evidence of disease even after 3 years .

Case presentation II

A 35-year-old female presented with carcinoma of right gingivobuccal sulcus for which she was treated with wide local excision of the growth, right-sided MRND, right

Figure 1. Pre operation

Figure 2. During follow up after the operation

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hemimandibulectomy followed by reconstruction with Pectoralis. Major myocutaneous flap which unfortunately underwent necrosis leading to a huge defect. Histopathologically it was poorly differentiated squamous cell carcinoma with close anterior margin and presence of perineural, lymphovascular invasions and extracapsular extensions. 4 out of 20 lymph nodes were positive for malignancy. The patient also started developing nodules at the periphery of the resection margin which were proven histopathologically as malignant nodules. Hence a decision was taken in the multidisciplinary tumour board for re-resection and reconstruction by Narayanan's flap as a salvage procedure. The wound was refashioned including all the newly developed nodules and the resultant defect was covered by bipolar scalp flap. In the postoperative period, the patient developed oro-cutaneous fistula which was managed conservatively. She received radiation after recovery from surgical interventions but succumbed within 1 year out of metastatic disease.

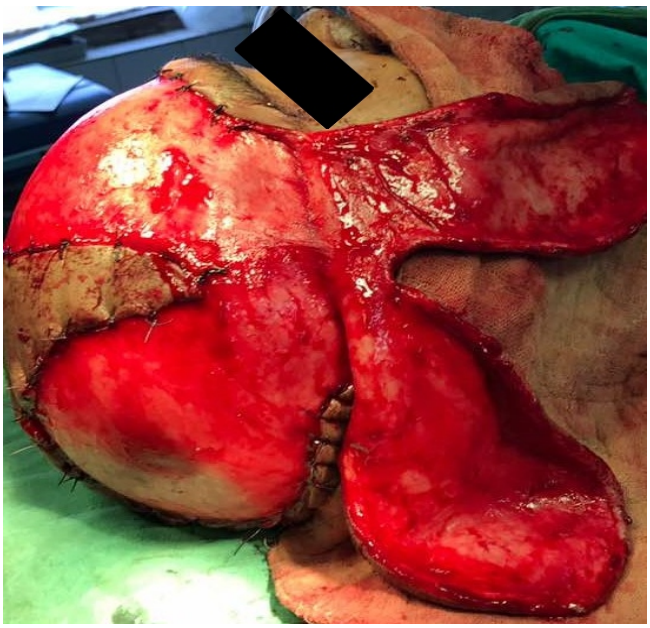

Figure 3. Raising of flap

Figure 4. Reconstruction

Case presentation III

A 42 years old male presented with carcinoma of right buccal mucosa for which wide excision, right-sided MRND and primary closure was done. The patient received adjuvant radiotherapy as 3 out of 21 lymph nodes were positive and lymphovascular invasion was present. The patient lost to follow up after that and returned to us after 8 months with a huge fungated ulceroproliferative mass over the right cheek . Narayanan's flap appeared to be a salvage procedure for this patient in the tumour board. Therefore he was treated with re-resection and reconstruction with bipolar scalp flap . Pedicles were detached and repositioned after 6 weeks. Recovery was uneventful. The patient is surviving at 9 months now without any feature of loco-regional recurrence or distant metastasis.

Figure 5. Reconstruction

Discussion

Gilles first described the use of pedicle scalp flap based on the superficial temporal artery for the reconstruction of defects in lip and eyebrow. Extensive work has been done with the layers and blood supply of the scalp, resulting in advances and refinements in the use of tissue from this area. Scalp tissues can be used as random local fascial flaps or as axial flaps due to rich vascularity, proximity and similarity in texture for complex head and neck reconstructions. These can be used as a pedicle , free or composite flaps with calvarium or hair-bearing skin to reconstruct defects all over the body especially auricle, orbit, cheek and oral cavity. They have also been used to treat Frey's syndrome, osteoradionecrosis, nasal septal perforations and temporal bone pathologies . Plentiful of options are available for reconstruction of the defect in early cases of head-neck cancers like primary closure, local flap , free flap etc. but very few of them can be applied

actually in highly advanced or radiotherapy -failure cases which makes Narayanan's flap so useful and handy [3] .

Optimal post-surgical reconstruction in the head-neck region should be performed with local tissues that best mimics the facial complexion, texture and hair-bearing attributes. Simultaneously, the capacity of articulation and maintenance of oral and oropharyngeal functions like mastication and swallowing are also to be kept in mind while performing the reconstruction. Ideal reconstructive procedure mandates adequate tissue bulk, volume, texture , contour , pliability , innervation , colour , mobility and sensation .

The bilobed flap was first described by Esser in 1918 who used it for nasal reconstruction. Later on it was used by Zimany (1953) , Elliot (1969) , Tardy et al. (1972), Dean et al. (1975) , Haas (1977) , Kastenbauer (1977) , Babin and Krause (1978) , Gunter (1978) and Weerda (1978) in various areas all over the body . More relevant use of bilobed flaps in head and neck reconstructions was described by Narayanan in 1970 who used a bipolar scalp flap based on superficial temporal artery territory. The lobes are based on the anterior division of superficial temporal artery (non-hair bearing) and posterior division of superficial temporal artery (hair-bearing) which are sandwiched with each other. Non-hair bearing lobe (forehead) is placed intraorally and the hair-bearing lobe (scalp) is placed extra orally. The flap can be islanded and is mostly suitable for male patients.

Narayanan's flap has some distinct advantages like reliable blood supply due to high vascularity, proximity to the face, excellent match of complexion for cheek and lip , concealment of facial asymmetry by beard in male patients , less operating time , no need of special infrastructure (e.g.- free flap) and easy reproducibility . The main disadvantage, besides being a multistage procedure , is that it causes growth of hair over face in females . All other reconstructive measures have their shortcomings – skin grafts have poor tissue texture and thickness, non-hair bearing and contracts to a great extent, local advancement, transposition and rotational flaps can be used in small to medium-sized defects, myofascial flaps are too bulky, time-consuming, non-hair bearing and have significant donor-site morbidity.

In comparison, Narayanan's flap actually acts as a salvage method with much less morbidities. Therefore it can be considered as an optimal choice in locally advanced, recurrent or refractory oral cancers [4].

Bipolar scalp flaps offer great flexibility in the use of available local tissue than many other regional flaps. Golomb and Neumann (1958) hypothesised that the bilobed flap uses less tissue than any other method of wound closure minimising local stretch and tissue tension. In head -neck reconstruction it is very much important to avoid tissue distortion as it simultaneously distorts functions. The length of both the lobes can be adjusted according to the need and size of the defect and these two arms can be moved in different planes helping in one-stage reconstruction. The stress imposed on the flap appears to be transferred to the long axis of each lobe making this technique very safe in the face. If proper attention is paid to the thickness of the flaps then an excellent facial contour can be achieved far superior to skin grafts or loco-regional flaps [5].

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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Learning Points:

- Narayanan's flap has some distinct advantages like reliable blood supply, proximity to face, match of complexion for cheek and lip, concealment of facial asymmetry by beard in male patients, less operating time, no need of special infrastructure and easy reproducibility .

CASE REPORT

A rare case of sigmoid colon duplication in an adult man

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Key words: Colonic duplication; adult man; constipation; abdominal pain

Introduction

Intestinal duplication is a rare congenital abnormality with the incidence rate of 1 in 4000-5000 births. The ileum is the most common site for intestinal duplication. The Colonic duplications are the rarest condition among Intestinal duplications. It representing less than 10 -15% of all intestinal duplications [2]. The colonic duplication in an adult is an extremely rare condition. It commonly occurs in children and may proceed unrecognized until adulthood as in this patient. The preoperative diagnosis was uncertain as in this patient and the definitive diagnosis was only made during the laparotomy and later confirmed with the histopathology report.

Case presentation

A 34 years old man presented to the surgical clinic with a history of right sided abdominal pain for 3 months duration. He had abdominal colic pain in the right side abdomen and these episodes usually associated with decreased bowel opening for 4-5 days then subsequently relieved by passage of hard stools. The pain was severe and colicky. During this period he noted mild distension of lower abdomen. He denied the history of diarrhoea with blood or mucus in the past. He underwent a lower midline laparotomy at the age of 10 years for recurrent abdominal pain. The patient was not aware of the details regarding this laparotomy and also didn't have any documents regarding this past illness. Even after this surgery, he continued to have similar symptoms with the same intensity.

Examination revealed a non-distended and mildly tender abdomen with lower midline scar. Abdominal examination and a digital rectal examination were within the normal limits. Other systemic examinations were found to be normal.

His blood investigation including WBC, Hb, renal function tests and liver function tests were within the normal range. Plain abdomen X-ray was inconclusive. Ultrasonic examination of Abdomen and pelvis revealed a segment of dilated bowel loop without any other significant findings. He underwent for Contrast-Enhanced Computed Tomography of abdomen and pelvis which revealed a dilated small bowel loops seen probably in an ileal area with a collapsed rectum and large bowel. The conclusion made by consultant radiologist was highly suspicious of chronic intussusception.

An exploratory laparotomy was carried out and there was a distended blind bowel loop with impacted faeces found to be extending from the sigmoid colon to the right side of the abdomen retroperitoneally. This loop was large enough to cross the midline and extending towards the right side of the abdomen retroperitoneally. There was no thickened fibrotic area was noted between the blind loop and the sigmoid junction to suggest a previous anastomosis. This blind bowel loop was mobilized from other retroperitoneal structures and it was resected along with the part of the sigmoid colon from which the loop was arising. Y shaped loop was resected out and end to end anastomosis was carried out between the two ends of the sigmoid colon.

Discussion

Alimentary tract duplication is a very rare congenital abnormality. The small intestine is the most common region in the gastrointestinal tract which will be affected by Intestinal Duplication. Colorectal duplication is the least common type among gastrointestinal duplication. A wide spectrum of clinical presentation and radiological features of colonic duplication is creating diagnostic difficulties for surgeons and radiologist [1].

The symptoms of colonic duplication are usually nonspecific and also depend on the type of duplication and also depend on the associated abnormalities [3]. This congenital condition remains frequently silent for several years if there is no complication. The few of the presentations of colonic duplications are intra-abdominal mass, chronic abdominal pain [as in this patient], constipation [as in this patient] and intestinal obstruction due to the impact of faeces or compressing adjacent bowel by faecal loaded distended duplication of the colon. Rarely these patients can present with volvulus, intussusception, bleeding or perforation.

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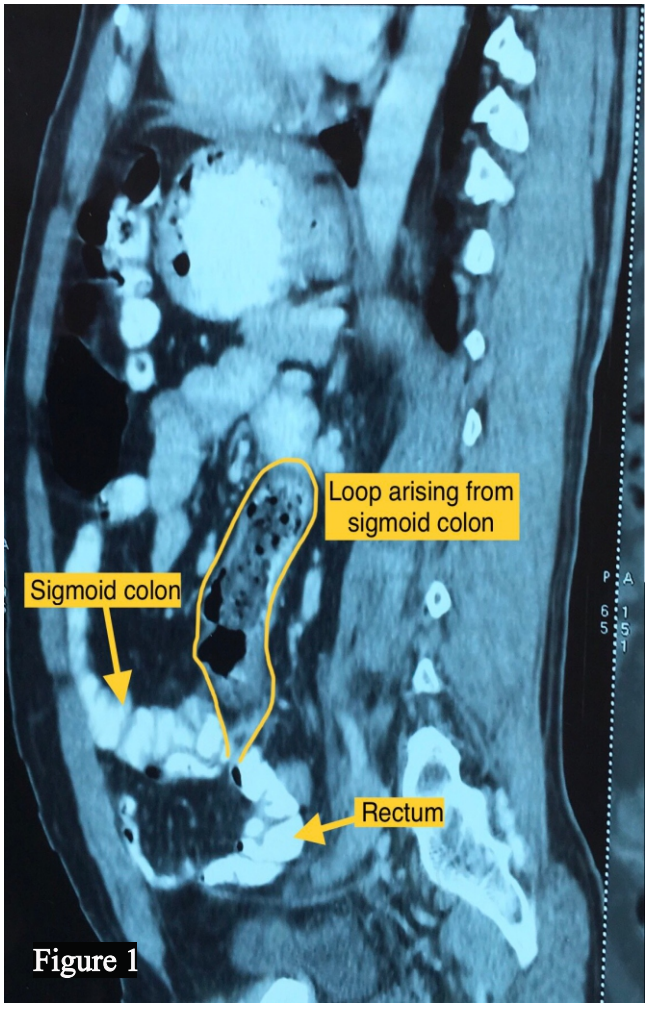
If there is no associated malformation in a patient with colonic duplication, most of them remain silent for several years until they developed a complication. The real challenge for the surgeon is the clinical and radiological diagnosis before the definite treatment. It's more applicable in the case of Y shape colonic duplication as in this patient [1]

The CT or MRI after Barium enema administration demonstrating the additional intestinal loop arising from the native colon or the bifurcation of colonic lumen detected during colonoscopy examination will help to diagnose the colonic duplication before definitive treatment. The radiological diagnosis was made as highly suspicious of chronic intussusception of the small intestine in this patient. We didn't proceed with further radiological investigations such as MRI or CEST and decided for laparotomy.

The possibility of a bowel anastomosis and a blind loop left inside during the previous childhood surgery is unlikely since there was no intraoperative evidence of previous scarring or thickened area in the Junction of Y loop and histological features of biopsy specimen suggesting of colonic duplication.

Once the diagnosis is confirmed or suspected, the recommended management plan is surgical resection of the duplication together with the attached normal colonic segment. The complete resection of duplication with the attached normal colon will prevent the minor potential risk of future malignancy, the effect of ectopic gastric mucosa and mucoviscidosis [1], [2].



Conclusion

We conclude the blind loop arising from the sigmoid colon is a sigmoid colonic duplication. The vague presentation, previous laparotomy and Radiological Suspicious of intussusception of small intestine made us difficulty in marking the definite diagnosis before Surgery.

The suspicious of colonic duplication should be borne in mind When treating an adult patient with chronic abdominal and constipation even though it's a rare condition. The CT and MRI combined with barium enema may solve the diagnostic dilemma before Surgery.

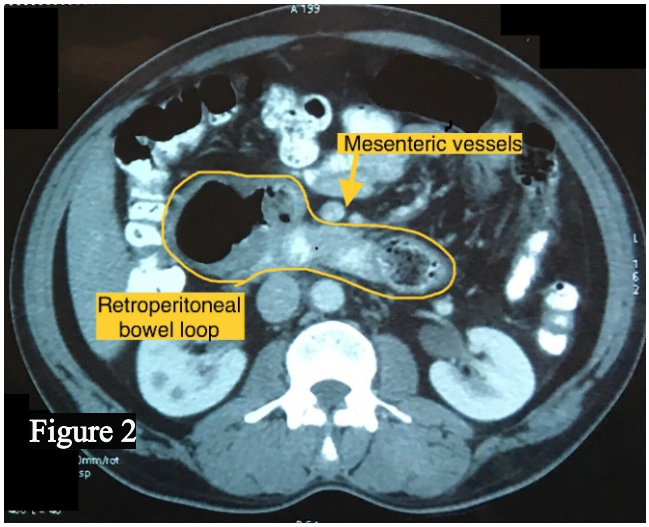


Figure 1 and 2. CT images show the bowel loop arising form sigmoid colon

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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Learning Points:

- Colonic duplication in an adult is an extremely rare condition.
- The presentation of colonic duplication is usually nonspecific.
- MRI, CT colonoscopy combined with barium enema will be considered in these patients to achieve a definite diagnosis

CASE REPORT

Afferent loop syndrome caused by stenosis of jejunojejunal anastomosis of Roux-en-Y reconstruction

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Key words: Afferent loop; roux-en-Y; billroth II; exploratory laparotomy

Introduction

Afferent loop syndrome (ALS) is an infrequent complication originally described with Billroth II gastrojejunostomy. It is caused by mechanical obstruction owing to internal herniation, volvulus or narrowing of the anastomosis. Similarly, an obstruction of the biliopancreatic limb of Roux-en-Y reconstruction can rarely cause ALS. Early diagnosis and surgical intervention are crucial to decrease morbidity and mortality in acute ALS.

Case presentation

We present a case of a 32 years old woman presented with moderate to severe epigastric pain and non-bilious vomiting for the one-day duration. The pain was radiated to the back and slightly relieved with bending forward. She had opened bowel as usual. She has undergone gastrojejunostomy with a Roux-en-Y reconstruction 2 years ago due to stricture at the gastric antrum following corrosive ingestion. She described similar less severe episodes over the past year for which she used to take outpatient treatment. She was tachycardic but neither febrile nor icteric. Abdominal examination revealed epigastric tenderness with localized guarding without a positive Murphy's sign.

Laboratory data showed very high serum amylase and C reactive protein with marginally elevated leucocyte count. Plain radiography showed a sentinel loop of the small intestine at the upper abdomen without features of pneumoperitoneum. Ultrasonography revealed features of acute pancreatitis, a close by aperistaltic loop of the small bowel and a normal biliary tree. Based on these findings, the patient was diagnosed and treated as acute pancreatitis. Despite the treatment, her condition was deteriorated and required intensive care after 48 hours of admission. Contrast-enhanced CT abdomen was performed at the nearest centre where the facilities were available. It revealed a dilated afferent loop and a concealed perforation. Emergency exploratory laparotomy was performed and detected a stenosed jejunojejunal anastomosis site (Figure 1) and grossly dilated afferent loop with a perforation at first part of the duodenum opening into the less sac. Perforation was sutured primarily with an omental patch. Stenosed Jejunojejunostomy was disconnected and new jejunojejunal anastomosis was created.

Despite the surgery, she continued to have a high output biliary drain through the surgical site drain. She was managed as for high output enterocutaneous fistula with sepsis control, total parenteral nutrition. The decision was made for the re-exploration as there was no significant recovery. Re-exploration revealed two further perforations at the first and second parts of the duodenum (Figure 2). Duodenoj-ejunostomy was created at the larger perforation site with a loop of the jejunum and smaller perforation was repaired primarily after intra-operative hepatobiliary opinion. The patient expired on the tenth day after admission despite continued intensive care.

Discussion

ALS is a mechanical complication that occurs in 1% of the afferent loops of Billroth II gastrojejunostomy. It has been

Figure 1. Stenosed jejunojejunal anastomosis

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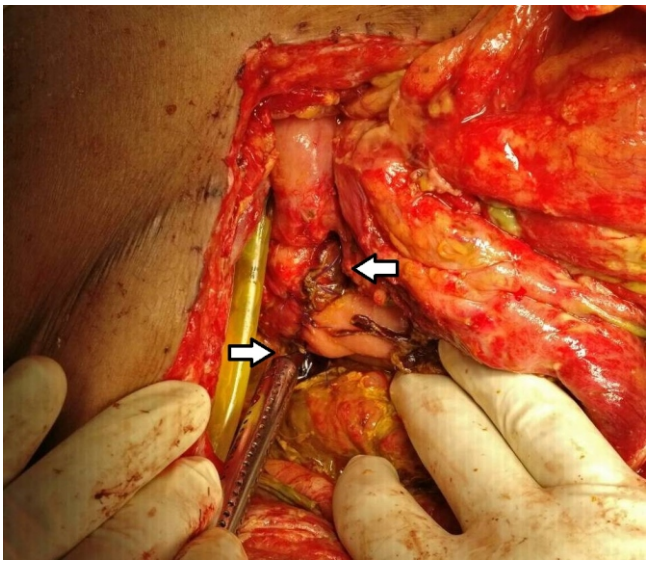

Figure 2. Duodenal perforations (marked with arrowheads) detected during re-exploration

reported similarly with mechanical obstruction of the biliopancreatic loop of the Roux-en-Y reconstruction as in our patient [1].

The afferent loop consists of the duodenum and proximal jejunum, lying upstream from the gastrojejunostomy/ jejunojejunostomy. This conveys about 1l of bile, pancreatic juice and proximal intestinal secretions to the jejunum per day under gastrointestinal hormonal influence. When there is a distal mechanical obstruction, accumulation of enteric secretions increases the intraluminal pressure resulting distension of the segment, if unrelieved can lead to ischemia, gangrene with subsequent perforation. In addition, the transmission of high luminal pressure may impair the sphincter mechanisms of biliopancreatic duct system resulting in ascending cholangitis and acute pancreatitis. Causes for the obstruction can be compression by post-operative adhesions, internal hernia, volvulus, enteroenteral intussusception, kinking or stenosis of jejunojejunostomy anastomosis, recurrent malignancy and rarely the enterolith or bezoars [2]. Our patient had a stenosis of the jejuno-jejunostomy which could be due to chronic ischemia caused by tension or malposition. Some studies have shown that longer, redundant and antecolic afferent limbs are more prone to ALS [3]. Even though the early diagnosis and intervention are critical to decreasing the mortality in acute ALS, the diagnosis is challenging due to its rarity and non-specific symptoms [3]. ALS can manifest as acute or chronic presentations. Acute ALS presents with complete obstruction of the loop as in our patient. Vomiting may not be profuse and non-bilious due to the complete obstruction of the loop. The chronic form is associated with partial obstruction and manifests as postprandial epigastric pain, projectile bilious vomiting and nutritional deficiencies. Acute pancreatitis or obstructive jaundice may coexist as described above making the diagnosis more challenging. Early use of CT imaging would have been ideal in our case, but again it is a challenge in a resource-poor setting. Treatment includes initial resuscitation and surgery for relieving of the cause for obstruction and reconstruction of the afferent limb in benign conditions. If the afferent loop is redundant, it needs to be shortened to 20-30cm [3]. If the obstruction is of malignant in origin, the aim of treatment would be the palliation. Image-guided percutaneous drainage and endoscopic stent placement have been reported as palliative methods for malignant causes in specialized centres. [4]

Conclusion

Even though acute ALS is a rare complication, it must be considered as a differential diagnosis for acute abdomen in patients who have previously undergone Roux-en-Y reconstruction considering the necessity of early diagnosis and surgical intervention to reduce the mortality.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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Learning Points:

- Afferent loop syndrome (ALS) is a rare complication of Billroth II gastrojejunostomy and Roux-en-Y reconstruction.
- Diagnosis of acute ALS is challenging.
- Early surgical intervention is needed for acute ALS to reduce mortality.

LETTER TO THE EDITOR

Judicious use of frozen section in parathyroid surgery

Serozsha A.S. Goonewardena
Nawaloka Hospital, Colombo

I read with great interest the article by Seneviratne and Gamage [1]. We should set the record straight with regard to the history of parathyroid (PT) surgery. Dr Felix Mandl performed the first parathyroidectomy for primary hyperparathyroidism (PHPT) on July 30, 1925, in Vienna on Herr Albert Jahne, a 38-year-old man with incapacitating osteitis fibrosa cystica [2]. This was a bilateral neck exploration (BNE). I have referred several PHPT patients with bilateral renal stones to reputed surgeons for PT surgery with eventual operative failure in most cases. In this context, the authors should be highly praised for the excellent results achieved. However, I beg to differ with the authors on a few salient facts [1].

(1) Title of the paper stating '….. in a resource poor setting' is very misleading. The authors worked in a modern health facility with facilities for neck ultrasonography and 99m Tc sestamibi scanning for preoperative localization, and frozen section (FS) and PTH assay for intraoperative assessment. In Sri Lanka, even if preoperative localization studies are negative, a common occurrence, BNE (a 4-gland exploration) is performed for PHPT. Although not stated, I assume that nearly all patients in the present series had had BNE. Preoperative localization studies are not necessary when planning a BNE [2, 3].

(2) Intraoperative PTH (IOPTH) assay determines the completeness of removal of hyperfunctioning PT gland(s). Therefore, a postoperative PTH (15 min after surgery) in lieu of IOPTH is superfluous. Acceptable turnaround time for IOPTH is 20-30 min.

(3) The authors have documented without elaborating, instances of incorrect gross identification of PT tissue by the surgeon. They should state the frequency of non-PT tissue removal associated with the gross examination (GE): PT misidentification rate, and how many were a lymph node, fat etc. If the details of GE in PT adenoma was stated, such as mahogany red-brown tissue / yellow-tan tissue, soft consistency, "fleshy" on cut surface etc. it would be more credible and scientific.

(4) Rather than stating that patients were followed up during the last 5 years with no evidence of recurrence, when the last patient was treated in December 2018 (a 4-month follow-up), it would be meaningful to state the mean / median follow-up in months. Recurrent hyperparathyroidism occurs after a few years.

(5) Dewan et al.concluded that FS is not recommended for typical PT appearance: large (> 1 cm), tan-mahogany, soft, "fleshy" on the cut surface. They emphasize the situations that warrant the judicious use of FS: inexperienced PT surgeon, multiple gland disease, ectopic gland location, technically difficult primary surgeries and revision surgery [4].

(6) The authors fail to explain why intraoperative FS during PT surgery became obsolete in high-volume centres. Parathyroid surgeons should do their ultrasonography (surgeon-performed) if focused parathyroidectomy is their ultimate goal since 85-88 % of cases are single PT adenoma and until then do FS selectively.

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The Authors' Reply:

23/07/2019
Editor,
The Sri Lanka Journal of Surgery,
College of Surgeons of Sri Lanka

Dear Editor,

Thank you for forwarding the comments of the scientific article on "Role of routine frozen sections for parathyroid exploration in a resource poor setting" co-authored by Bimalka Seneviratne and Bawantha Gamage. This was an inspiring topic that motivated us to compile our data and disseminate the scientific findings.

We are pleased to submit the following clarifications;

(01) It is interesting to note that we have found intraoperative frozen sections as a valuable guide for parathyroid exploration. Novel imaging studies are far too costly, non-functional time to time due to technical issues and unavailable without prior notice due to the shortage of human resources. Intraoperative frozen section is cost effective, accurate and can be easily arranged within a short period of time.

The correspondent has mentioned that he/she has referred several patients with primary hyperparathyroidism (PHPT) for reputed surgeons for surgery but there were operative failures in most cases. We assume this is mostly due to the inaccurate identification of parathyroid adenoma. Despite preoperative localization by imaging modalities, we have also got several patients referred to us for re-explorations. We are in the opinion that this problem could have been easily avoided by intraoperative frozen section (FS) by an experienced pathologist. Our main objective is to highlight this point, as FS can be done in almost all laboratories where consultant surgeons and pathologist are working even though those centres are lacking sophisticated facilities like Sestamibi scan facility or intraoperative PTH assays. Although the study was done in a center with all those facilities, we have shown that FS is to confirm the accurate removal of Parathyroid adenoma. Therefore, in resource poor settings FS can be used to avoid reoperations.

We did not do bilateral neck exploration (BNE) in our 22 patients with parathyroid adenoma. They all had local exploration of the affected gland. All patients with adenoma had preoperative USS neck a few hours prior to surgery and out of them adenoma was identified in 20 patients. On those patients, skin overlying the corresponding adenoma was marked with the document-ation of the depth of the tumour from the skin.

(02) In the current study frozen section diagnosis was complemented by post-operative parathyroid levels. There was a statistically significant association with the intraoperative diagnosis and post-operative parathyroid hormone level.

We have mentioned in the discussion that we took blood samples for parathhormone levels 15mintues after successful parathyroid removal. This was done during the surgery and we agree the terminology should have been post parathyroid removal or intraoperative rather than post-operative.

(03) Gross examination findings of surgical specimens are given in table (01). Sensitivity and specificity were highly satisfactory and the concordance between the surgeon and pathologist was > 95%. Non-parathyroid tissue which included small lymph nodes, fat globules and thyroid nodules are mentioned in table (02).

We did not elaborate the instances of incorrect gross identification as once this information was conveyed to the surgeon during the surgery further exploration was carried out and adenoma was accurately identified and sent for FS in all instances.

(04) Follow up of patients up to date has shown no evidence of disease recurrence. We agree that follow up would have been given as mean or median in months in our cohort of patients.

In view of the small sample size the mean was not calculated.

(05) Gross examination may not be 100% reliable. In the fresh state thyroid tissue could mimic parathyroid, thus causing confusion.

Yes, we do, agree in certain instances parathyroid can be confirmed by the naked eye appearance.

Authors did not want to carry the slightest risk for a second surgery, hence the specimens were subjected for frozen section diagnosis.

(06) In contrast to developed countries which have readily available sophisticated imaging techniques, in resource poor settings intraoperative frozen sections will continue to play a pivotal role during parathyroid exploration.

Authors do not feel FS is obsolete in resource poor settings and it will definitely minimize reoperation rates.

Co- authors:
Prof. Bimalka Seneviratne
Dr. Bawantha Gamage

23/07/2019

SELECTED ABSTRACT

Never Events in Surgery': Mere Error or an Avoidable Disaster

Jitendra Kumar and Rajni Raina, Indian J Surg. 2017 Jun; 79(3): 238–244.

Published online 2017 Mar 28. doi: 10.1007/s12262-017-1620-4. PMCID: PMC5473801 PMID: 28659678

Abstract

Method

Authors carried out a systematic review of literature to find out analyse the commonest never events recorded and to identify the risk areas and look for broad based areas where solutions can be reached. Search of literature in English language was performed using online search engines: PubMed NCBI database, Google search, and other digital sources available online. Out of 374 related studies from all sources, finally, at the end, 35 studies were selected for review and ultimate analysis.

Results

Authors concluded that no studies were reported from developing countries, most research and reporting came from developed countries. However authors identified key areas of failure leading to never events as; Human error, Communication error, System failure and Equipment failure.

Conclusions

Authors recommended that key solutions in order to prevent a never events lies in multiple areas within the health care organisation. These include:

1. Creating awareness
2. Mandatory and voluntary reporting of events via incidence forms etc,
3. Sound communication and team culture: "A good communication in clear and straightforward way is required among all surgical team members, anaesthetists, nurses, and paramedics at every stage of surgical care." Say the authors. These include briefing debriefing, which are sharing of all patient-related information preoperatively, sign in when the patient is handed over to the theatre staff. Another useful example is a concept of 'time out' or 'surgical pause' just prior to the incision. Finally once the surgery is completed final the process called a sign out hands over checks and post-operative management verbally.
4. Professional fitness and competency
5. Oversight organisation
6. Documentation

Commentary

Dr. Hiran Amarasekera

Consultant Orthopaedic Surgeon,

Senior Lecturer

Faculty of Medicine,

University of Kelaniya, Sri Lanka

Above article emphasises the importance of "Never events" in surgical practice. While developing countries due to many reasons such as quality assurance and litigation have identified the importance of this the developing countries seem to ignore the problem.

However countries such as Sri Lanka with high health indices should lead in identifying and developing mechanisms to minimise surgical never events from happening. Incidence reporting is the key to start the process. With high case load never events are bound to happen in any country. However by careful identification, incidence reporting and naming the "never events list" to that particular set up and applying in place check lists and protocols these can be minimised. Surgical community in conjunction with other specialties such as anaesthesia initially develop a list of events and together with clinical teams should develop suitable protocols in a Sri Lankan set up. Then implement them with help of administrative staff. Further it appears to be the correct time to formulate a national policy and implement it via the ministry of health.

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Why a P-Value is Not Enough

Solla, Federico, Antoine Tran, Domenico Bertoncelli, Charles Musoff, and Carlo M. Bertoncelli.

Why a P-Value is Not Enough. Clinical Spine Surgery: November 2018: 31(9);385–388

Background

All doctors know that P-value<0.05 is "the Graal,"but publications require further parameters [odds ratios, confidence interval (CI), etc.] to better analyze scientific data.

Aim

The aim of this study was to present P-values, CI, and common effect-sizes (Cohen d, odds ratio, and various coefficients) in a simple way.

Description

The P-value is the probability, when the null hypothesis is true (eg, no difference or no association), of obtaining a result equal to or more extreme than what we actually observed. Simplistically, P-value quantifies the probability that the result is due to chance. It does not measure how big the association or the difference is. The CI on a value describes the probability that the true value is within a given range. A 95% CI means that the CI covers the true value in 95 of 100 performed studies. The test is significant if the CI does not include the null hypothesized difference or association (eg, 0 for difference). The effect-sizes are quantitative measures of the strength of a difference or association. If the P-value is < 0.05 but the effect size is very low, the test is statistically significant but probably, clinically not so.

Conclusions

Scientific publications require more parameters than a P-value. Statistical results should also include effect sizes and CIs to allow for a more complete, honest, and useful interpretation of scientific findings.

Commentary

Dr. Dileepa Ediriweera,
Senior Lecturer, Faculty of Medicine,
University of Kelaniya, Sri Lanka

This article highlights the importance of reporting effect sizes and confidence intervals to provide more meaningful and interpretable scientific findings. The P value indicates the incompatibility of observed data with a null hypothesis. The P value only quantifies the probability that the results is due to chance when the null hypothesis is true. However, it does not quantify the compatibility with the alternative hypothesis and does not quantify the effect size or clinical importance of the scientific finding. A P value can become very small when the sample sizes, measurement precision and data uniformity are high. Further, labelling results as "statistically significant" and "not significant" based on a predefined limit (i.e. 0.05) has mislead scholars to think P value as a binary variable rather than a continuous variable (eg. can we consider a P = 0.049 better than P=0.051 to arrive at a decision?). This approach could halt publishing "insignificant" results. In medicine, clinical significance is could be more important than a P value under 0.05. Effect sizes provide quantitative measures for the strength of statistical relationship between variables. This will allow understanding whether the difference is both statistically and clinically significant. Commonly used statistics to measure effect sizes include Odds Ratio, Correlation Coefficient, Coefficient of Determination and Regression Coefficients. Therefore, scientific results should also include effect sizes along with their confidence intervals to provide more meaningful and interpretable scientific findings.

Mechanical and oral antibiotic bowel preparation versus no bowel preparation for elective colectomy (MOBILE): a multicentre, randomised, parallel, single-blinded trial

Laura Koskenvuo, Taru Lehtonen, Selja Koskensalo, Suvi Rasilainen, Kai Klintrup, Anu Ehrlich et al.

The Lancet, August 08, 2019
doi.org/10.1016/S0140-6736(19)31269-3

Background

Decreased surgical site infections (SSIs) and morbidity have been reported with mechanical and oral antibiotic bowel preparation (MOABP) compared with no bowel preparation (NBP) in colonic surgery. Several societies have recommended routine use of MOABP in patients undergoing colon resection on the basis of these data. Our aim was to investigate this recommendation in a prospective randomised context.

Methods

In this multicentre, parallel, single-blinded trial, patients undergoing colon resection were randomly assigned (1:1) to either MOABP or NBP in four hospitals in Finland, using a web-based randomisation technique. Randomly varying block sizes (four, six, and eight) were used for randomisation, and stratification was done according to centre. The recruiters, treating physicians, operating surgeons, data collectors, and analysts were masked to the allocated treatment. Key exclusion criteria were need for emergency surgery; bowel obstruction; colonoscopy planned during surgery; allergy to polyethylene glycol, neomycin, or metronidazole; and age younger than 18 years or older than 95 years. Study nurses opened numbered opaque envelopes containing the patient allocated group, and instructed the patients according to the allocation group to either prepare the bowel, or not prepare the bowel. Patients allocated to MOABP prepared their bowel by drinking 2 L of polyethylene glycol and 1 L of clear fluid before 6 pm on the day before surgery and took 2 g of neomycin orally at 7 pm and 2 g of metronidazole orally at 11 pm the day before surgery. The primary outcome was SSI within 30 days after surgery, analysed in the modified intention-to-treat population (all patients who were randomly allocated to and underwent elective colon resection with an anastomosis) along with safety analyses. The trial is registered with ClinicalTrials.gov, NCT02652637, and EudraCT, 2015–004559–38, and is closed to new participants.

Findings

Between March 17, 2016, and Aug 20, 2018, 738 patients were assessed for eligibility. Of the 417 patients who were randomised (209 to MOABP and 208 to NBP), 13 in the MOABP group and eight in the NBP were excluded before undergoing colonic resection; therefore, the modified intention-to-treat analysis included 396 patients (196 for

MOABP and 200 for NBP). SSI was detected in 13 (7%) of 196 patients randomised to MOABP, and in 21 (11%) of 200 patients randomised to NBP (odds ratio 1·65, 95% CI 0·80–3·40; p=0·17). Anastomotic dehiscence was reported in 7 (4%) of 196 patients in the MOABP group and in 8 (4%) of 200 in the NBP group, and reoperations were necessary in 16 (8%) of 196 compared with 13 (7%) of 200 patients. Two patients died in the NBP group and none in the MOABP group within 30 days.

Interpretation

MOABP does not reduce SSIs or the overall morbidity of colon surgery compared with NBP. We therefore propose that the current recommendations of using MOABP for colectomies to reduce SSIs or morbidity should be reconsidered.

Commentary

Dr. Dakshitha Wickramasinghe,

Lecturer in Surgery, Department of Surgery,

Faculty of Medicine,

University of Colombo, Sri Lanka.

Although mechanical and oral antibiotic bowel preparation (MOABP) has been historically favoured before elective colorectal surgery, there has been a reluctance to use this routinely. This is due to the unpleasantness of the preparation, the physiological derangements it causes, the recommendations of Enhanced Recovery After Surgery (ERAS) programs to minimize bowel preparation and the lack of convincing evidence regarding its benefit.

There have been conflicting conclusions in several meta-analyses. A meta-analysis by Rollins et al. failed to identify a benefit of mechanical bowel preparation on anastomotic leak rates, surgical site infection (SSI), intra-abdominal collection, reoperation, hospital length of stay or mortality . The same authors in 2019, however, have identified a benefit of reducing SSI, anastomotic leak, and 30-day mortality when mechanical bowel preparation was combined with oral antibiotics . When compared to MOABP, oral antibiotics alone provided similar benefits in SSI and anastomotic leaks . However, the findings of Toh et al contradict the advantage of antibiotic-alone bowel preparation .

The present study is a large, multi-center trial and the first prospective randomized trial focussing on the effect of MOABP on SSI and other complications. Similar to some of the previous meta-analysis , this study failed to demonstrate any benefit regarding the primary and secondary endpoints. One of the main limitations was that the study was underpowered to identify the difference in SSI, where they estimated an eight percent difference but found only a four percent difference. The overall complication rate, however, is a more relevant endpoint and was similar in the two groups.

Some surgeons favour mechanic bowel preparation for laparoscopic colonic resections claiming a loaded colon is more challenging to manipulate laparoscopically. Others prefer mechanical bowel preparation for anterior resections to minimize contamination during the anastomosis. Several large surgical societies continue to recommend MOABP because of the benefit shown regarding SSI and overall complications. These decisions and recommendations may need revisiting with the availability of new evidence.

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The evolution of acute burn care – retiring the split skin graft.

JE Greenwood

Abstract

The skin graft was born in 1869 and since then, surgeons have been using split skin grafts for wound repair. Nevertheless, this asset fails the big burn patient, who deserves an elastic, mobile and robust outcome but who receives the poorest possible outcome based on donor site paucity. Negating the need for the skin graft requires an autologous composite cultured skin and a material capable of temporising the burn wound for four weeks until the composite is produced.

A novel, biodegradable polyurethane chemistry has been used to create two such products. This paper describes the design, production, optimisation and evaluation of several iterations of these products. The evaluation has occurred in a variety of models, both in vitro and in vivo, employing Hunterian scientific principles, and embracing Hunter's love and appreciation of comparative anatomy. The process has

culminated in significant human experience in complex wounds and extensive burn injury. Used serially, the products offer robust and elastic healing in deep burns of any size within 6 weeks of injury.

Commentary

Dr. Gayan Ekanayake

Consultant Plastic and Reconstructive Surgeon

National Hospital Sri Lanka.

The article describes reasons for split skin grafts not being replaced by a substitute. Epidermis being derived from ectoderm epidermis has the potential to regenerate. However, the dermis is like all the mesodermal structures cannot regenerate but replaces with a scar. The microstructure of the dermis dictates the outcome of the quality of the dermis. The suppleness and the amount of scar tissues are inversely related.

The new discovery is the biodegradable polyurethane that can provide the scaffolding for the dermal superstructure. The second product is something extraordinary that very well be the precursor for great things to come before humans. Growing skin that actually can function normally or at least near normally has been a dream. The technology has evolved with the pressure falling on the burn surgeons to find cultured skin to use as grafts in burns with minimal donor site to harvest grafts from.

The author will take the reader to a new dimension that unlocks the potential of creativity of a surgeon that shows he is not a mere technical person.

Tribute to a great pioneer urological surgeon

Dr. Lakshman Sujeewa Attygalle, MBBS(Cey), FRCS(Eng), Senior Consultant Genito Urinary (Urological) Surgeon, passed away on 18th of May 2019.

Born in 1933, He was the prodigious son of Sir. Nicholas Attygalle, who was a doyen of Sri Lankan medical history to become the first native Vice Chancellor of the University of Ceylon, the first ENT surgeon in Sri Lanka as well as the first Obstetrician and Gynaecologist. Dr Lakshman Attygalle was also the great grandson of Dr. John Attygalle, MD(Aberdeen), Colonial Surgeon of Ceylon, the first Sinhalese to qualify in Western Medicine. He belonged to a distinguished family of indigenous medical professionals and generations of "Hela Veda Healers" from Madapatha.

Completing his primary education at the Royal college, Colombo, he entered Ceylon Medical College and completed his undergraduate degree with a 1st class honours. After a brief period of working as a demonstrator in Anatomy and completing his Primary FRCS examination, he worked as a Senior House Officer to Dr. Misso FRCS, another skillful and eminent surgeon of that era .

He branched off to specialise in Genito urinary surgery in 1968, which was at its infancy as a surgical sub specialty. He proceeded to UK on Smith and Nephew scholarship and worked with prominent British surgical giants such as Dr Norman Gibbon FRCS.

Returning from UK in 1968, he was appointed to Kandy General hospital, where he built the first Urology Unit outside Colombo. Later, he took up the post in Colombo General hospital (at present The National Hospital of Sri Lanka) in 1972 and single handedly managed and developed the Unit (present ward 22), to greater heights, up to his retirement in 1993.

His pioneering work on minimally invasive transurethral bladder and prostatic surgery and moved Genito Urinary Surgery (Urology) in to a well-respected finer specialty in Sri Lankan surgical arena making "Genito Urinary Surgery" and the name "Lakshman Attygalle" synonymous.

He was also a skillful surgeon who carried out several thousands of open surgical procedures for urinary stone disease and cancers, with a remarkable success, at an era with minimal supportive facilities such as Intensive Care and trained junior staff.

He became the first post graduate trainer in Urology after the establishment of the Post Graduate Institute of Medicine (PGIM) in 1980, beginning with three post graduate trainees, leading to a long line of modern specialist urologists numbering nearly 50 at present.

He was much loved by all categories of staff members in his unit for not only being their leader but also for being a friend-in-need. His generosity extended beyond the staff and reached his patients in a big way as he would pay great attention to their financial restrains in addition to their surgical ailments.

While being a Buddhist by religion he believed more in practicing its principles by giving the poor the health and the wealth. He has held the post of the President of "Kelaniya Vidyalankara Sabha" up to his demise.

At the height of his academic career he held the prestigious post of the President of the College of Surgeons of Sri Lanka from 1992-1993 and served as an executive council member and Honorary Fellow of the Sri Lanka Association of Urological Surgeons (SLAUS).

He also had an illustrious and highly connected social career and thoroughly enjoyed entertaining his friends and colleagues. He was in the board of trustees of the Singhalese sports club (SSC).

Dr Attygalle is survived by his wife Dr. Deepthi Attygalle (nee Mendis), retired senior Consultant Anaesthesiologist; and his children, Priyan, Chief Executive, American Express Bank, Saudi Arabia, Ayoma, Consultant Pathologist, Royal Marsden Hospital, London and Amila, Attorney-at-law.

He will be dearly remembered by all his urological trainees and his legend will be narrated and passed on to future generations taking up his beloved speciality.

May his soul rest in peace!

Prof Neville D Perera

Past President
College of Surgeons of Sri Lanka

Editorial retraction

Retraction: Gunawansa, N. and Wolf, B., 2017. Transposed brachio-basilic arterio-venous fistulae versus prosthetic arteriovenous grafts; mid-term results and a review of literature. Sri Lanka Journal of Surgery, 35(2), pp.7–15.

Ajith P Malalasekera, Editor in Chief

A letter was received by the editor questioning the authenticity of the numbers quoted in this study. The data in the original article was evaluated by a team of the editorial board. The numbers cited by the authors are significantly higher than the numbers of surgical procedures (Transposed Brachio-Basilic Arterio-Venous Fistula (TBB-AVF) and prosthetic Arterio Venous Grafts (AVG) verified at the institute mentioned in the study.

The corresponding author has responded that "there has been some inaccuracy due to the inclusion of procedures performed in private institutions, outside the primary hospital setting indicated in the paper. This has led to inflation of the numbers of procedures quoted in the submission. Furthermore, there has been some confusion with regard to the number of 'vascular access procedures' quoted in the submission. Although the authors attempted to describe vascular access procedures to include all arterio-venous fistulae (AVF), arterio-venous grafts (AVG) and central venous catheters (CVC), it has been misunderstood as vascular access operations rather than procedures and the discrepancy in numbers has been highlighted."

Therefore due to discrepancies relating to the study population numbers, and as requested by the corresponding author, the article is retracted.

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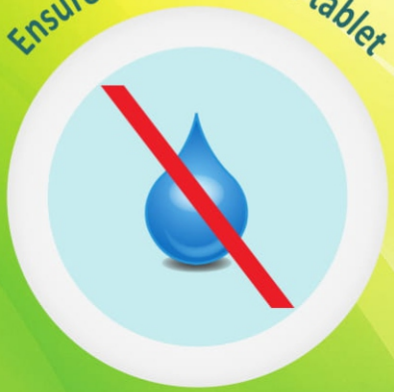
Alu Alu Packing

Ensure moisture-free tablet



Moisture Control Technology

Ensure good quality product

High Quality API

Round the clock Moisture Control Technology

with vacuum drying to prevent and control moisture throughout in manufacturing process#

Cipla Spectracare
REACHING OUT

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Cipla Pharma Lanka Pvt Ltd
345-1/4, Galle Road, Colombo 03, Sri Lanka

Cipla

Over **82** years of experience

1500+ products in a wide range of therapeutic areas, available in **50+** dosage forms

Our manufacturing facilities are approved by major International Regulatory Agencies such as US FDA*, MHRA UK**, PIC† Germany, TGA‡ Australia, MCC# South Africa, WHO± Geneva, and many more

Over **43** state-of-the-art manufacturing facilities

Creating access to affordable medicines in more than **80** countries

Cipla Vitalis