



# **THE SRI LANKA JOURNAL OF SURGERY**

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**THE SRI LANKA SURGICAL CONGRESS 2024**

**53<sup>RD</sup> ANNUAL ACADEMIC SESSIONS**

**OF**

**THE COLLEGE OF SURGEONS OF SRI LANKA**

**AND**

**JOINT INTERNATIONAL CONFERENCE WITH**

**THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH**

**AND**

**THE SAARC SURGICAL CARE SOCIETY**

**September 11<sup>th</sup> - 14<sup>th</sup> 2024**

**Kandy, Sri Lanka**



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**Accepted Abstracts**

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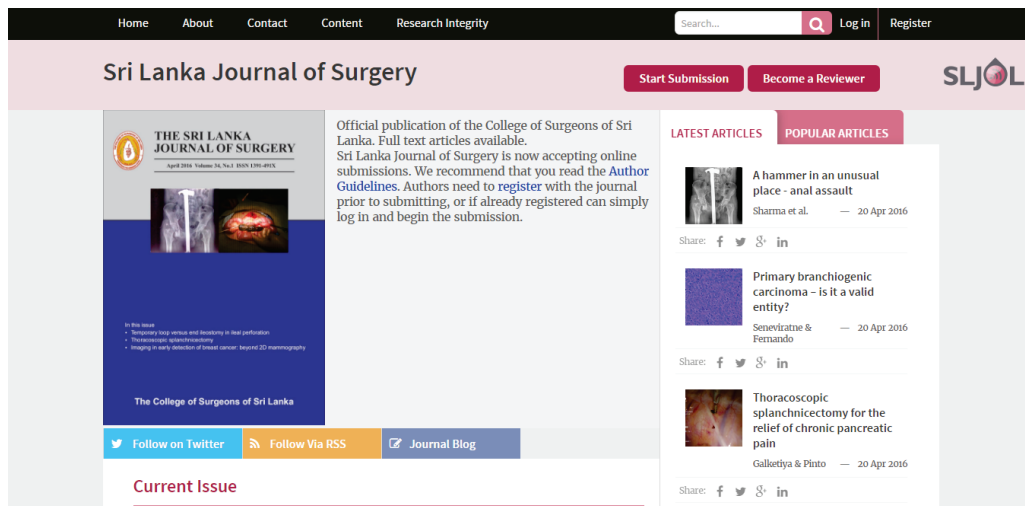
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# ABSTRACTS

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## ORAL PRESENTATIONS

**OP07 - Endoscopic Ultrasound (EUS)-Guided Biopsy as a Diagnostic Tool in Lymphadenopathy Surrounding the Gastrointestinal Tract: Experience from a Tertiary Care Center**

**D Senanayake<sup>1</sup>, T B G H Wimalasena<sup>1</sup>, J Mithushan<sup>1</sup>, D Subasinghe<sup>1,2</sup>, S Sivaganesh<sup>1,2</sup>, H Wijesinghe<sup>3</sup>, A Priyani<sup>3</sup>, N Fernandopulle<sup>1,2</sup>**

**1-Department of Surgery, Faculty of Medicine, University of Colombo, 2- University Surgical Unit, National Hospital Sri Lanka, Colombo, 3- Department of Pathology, Faculty of Medicine, University of Colombo, Sri Lanka**

**Introduction**

EUS with transluminal biopsy has revolutionized the diagnosis of patients with enlarged lymph nodes (LN) of the mediastinum, para-aortic and hilar regions where traditional more invasive surgical approaches were the gold standard. This pioneering study in Sri Lanka highlights the effective use of EUS in obtaining histology of LNs in these sites with difficult access.

**Methods**

From March 2018 to March 2024, 27 patients with LN masses requiring EUS-guided biopsy were included in this study. A single endoscopist (ANR) performed the procedures.

**Results**

The mean age was 49.44 years (SD 15.52) with 16 (59.3%) male patients. LN locations were as follows: 11 (40.7%) para-aortic, 5 (18.5%) porta hepatis, 4 (14.8%) mediastinal, 4 (14.8%) celiac, and 3 (11.1%) para-oesophageal. The LN sizes ranged from 10 to 47 mm. Diagnoses were available in 21 (77.8%) cases, in 6 the diagnosis remained inconclusive. Among the positive diagnoses, 11 (52.4%) were malignant, 7 (33.3%) benign, and 3 (14.28%) infective. The diagnoses included 4 (18.5%) Adenocarcinoma, 3 (11.1%) Hodgkin lymphoma, 2 (7.4%) non-Hodgkin lymphoma, 2 (7.4%) poorly differentiated carcinoma, and 3 (11.1%) tuberculosis cases. No complications occurred during the procedure.

**Discussion and Conclusions**

EUS-guided biopsy is a safe and effective diagnostic tool for LN masses accessible via the upper gastrointestinal tract, providing a non-invasive alternative to surgical methods.

**OP 08 - Role of contrast enhanced magnetic resonance imaging in evaluation of axilla in patients with breast carcinoma: a prospective observational study**

**Prashant Singh, Vivek Rathod, Chandan Jha, Upasana Sinha**

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

**Background**

Axillary lymph node metastasis in breast carcinoma carries significant prognostic and management implications. Sentinel lymph node biopsy, axillary lymph node sampling and axillary lymph node dissection are standard of care to stage axilla. However, these modalities are associated with significant morbidities. We assessed the efficacy of magnetic resonance imaging using dedicated shoulder coil to stage axillary lymph node metastasis.

**Method**

We obtained axillary MR images using dedicated shoulder coils of 54 breast cancer patients and meeting the inclusion and exclusion criteria from November 2019 to May 2024. Cortical thickness, short diameter, long diameter, loss of fatty hilum, apparent diffusion coefficient (ADC) value, and perifocal edema of each significant node were evaluated using MR images. The image characteristics of each axillary node were correlated with the pathologic diagnosis.

**Results**

We analyzed a total of 108 suspicious lymph-nodes from 54 patients with mean diameter of was 19.1+ 6.6 mm. Lymph node diameter, pathologic type, apparent diffusion coefficient value (ADC), time-intensity curve (TIC) type of breast tumors correlated with node metastasis. The ADC value of less than 892.27/10-6 mm<sup>2</sup> /s (SD 203.4) and loss of fatty hilum were most consistent finding on MRI associated with malignant nodes. MRI interpretations were 92.3% sensitive, 60% specific, and 83.3% accurate. Positive predictive value (PPV) and Negative predictive value (NPV) were 85.7% and 75% respectively.

**Conclusion**

Metastatic axillary lymph nodes can be accurately diagnosed by MR in breast cancer preoperatively and non-invasively. Lymph-nodes of size less than 5 mm diameter are difficult to be characterized by MRI.

### **OP09 - Development of a locally made simulation arm for training in intravenous cannulation and phlebotomy for medical students**

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#### **Introduction**

Intravenous cannulation and phlebotomy are essential clinical skills that healthcare professionals must master. Traditional methods of training rely on live patients, posing risks and ethical challenges. This innovative approach of clinical training is using custom-made simulation materials for the medical students of faculty of Medicine, University of Moratuwa during their clinical orientation program. The commercially available venipuncture simulation arms are expensive and cost around one million Sri Lankan Rupees (LKR) and not readily accessible in resource-limited settings. As an emerging medical faculty, we faced the challenge of purchasing these simulation materials during the economic crisis.

#### **Methodology**

The simulation arm was developed using silicone rubber tubing, fiber based upper limb and synthetic skin. A pump system was integrated to replicate adjustable blood flow and cost to make this arm was LKR 20,000. The locally made simulation arm demonstrated realistic anatomical features for venipuncture.

#### **Results**

A validation study was conducted using the simulation arm beforehand. Participants reported high levels of satisfaction with the realism and functionality. Instructors are trained to provide guidance, feedback, and assessment during sessions. Objective evaluation tools are utilized to assess learners' performance. Feedback from participants is collected and analyzed to continually refine and improve the training programme.

#### **Conclusion**

This training programme recognizes the benefit of using simulation technology in clinical training and improves patient safety. The locally made simulation arm is an affordable and accessible alternative to commercial simulators for clinical training, particularly in resource-limited setting.

### **OP 10 - A Comparative Study Of Perioperative And Quality Of Life Outcomes With Its Ergonomic Characteristics In Midline Totally Extraperitoneal Repair Versus Extended Totally Extraperitoneal Repair In Inguinal Hernia: a report from Indian tertiary care hospital**

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#### **Introduction**

Research on perioperative outcomes, including operative time, complications, and pain management and understanding surgeon ergonomics using subjective measures like SMEQ and LEDS is vital for assessing the effectiveness of totally extraperitoneal (TEP) and the emerging extended totally extraperitoneal (eTEP) techniques for inguinal hernia repair. Consequently, we have designed a study to evaluate and compare these indicators between the two hernia repair approaches.

#### **Methodology**

N=62 patients with written informed consent were enrolled in a hospital-based prospective interventional study based on the European Hernia Society (EHS) criteria. A single surgical team performed both TEP (n=31) and eTEP (n=31) inguinal hernia repairs. Perioperative outcomes were evaluated for both procedures.

#### **Results**

No significant difference in surgery duration, SSI occurrence and seroma formation between eTEP and TEP groups. TEP had bleeding (3.2%), pneumoperitoneum (3.2%) while no intraoperative complications were observed during eTEP procedures. Comparable mean pain scores between TEP and eTEP groups across follow-up durations ( $p > 0.05$ ). Conversion to TAPP required in 6.4% of TEP patients but none were noted during eTEP procedures. Higher SMEQ score in TEP indicates greater perceived mental effort ( $p < 0.001$ ). Lower LED score in eTEP suggests higher perceived ease during surgery ( $p < 0.001$ ). No signs of recurrence observed at both the 3rd and 6th month follow-ups in both eTEP and TEP groups.

#### **Conclusion**

eTEP showed superior perioperative outcomes and

ergonomics with higher surgeon satisfaction scores and perceived ease compared to TEP technique for inguinal hernia repair.

#### **OP 21 - Financial Toxicity of Colorectal Carcinoma in Sri Lanka: Preliminary Results**

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##### **Introduction**

Financial toxicity in cancer refers to the excessive financial strain on patients, families, and society due to cancer-related expenses. This study assesses the financial toxicity in a cohort of Sri Lankan patients with colorectal cancer.

##### **Method**

Data from patients with colorectal carcinoma of any stage, diagnosed 6- 24 months prior, and receiving treatment from the National Cancer Institute were collected using an interviewer-administered questionnaire.

##### **Results**

Eighty-one patients were included. Financial toxicity was highly prevalent with 82.7%; (n=67) reporting a financial toxicity of 4 or 5 on a scale of 1 to 5. Transport (72, 88.9%), external investigations (55, 67.9%), supportive medications (53, 65.4%), and active cancer management (48, 59.3%) were the major factors contributing to financial burden. The main impacts of financial toxicity included compromised spending on food (40, 49.4%), childrens education (23, 28.4%), and recreation (26, 32.1%). Financial toxicity resulted in 56 (69.1%) exhausting life savings, 35 (43.2%) losing property and 28 (34.6%) resorting to loans. Financial aid was received by 45 (55.6%), primarily from their relatives (36, 44.4%), with minimal support from the government (n=6, 7.4%) or the hospital (n=2, 2.5%).

##### **Discussion and Conclusion**

Despite free healthcare in Sri Lanka, patients with colorectal carcinoma seeking treatment from the public health sector were found to be facing significant financial toxicity, often compromising basic day-to-day needs. Many had exhausted their life savings, lost property or had to resort to loans

impacting the future economic stability of the whole household.

#### **OP 13 - Prognostic significance of lymphovascular invasion in colorectal cancer - a retrospective study at a specialized colorectal cancer center in Sri Lanka**

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##### **Introduction**

In colorectal cancer(CRC), lymphovascular invasion(LVI) signifies nodal metastasis and plays a crucial role in determining adjuvant therapy for node-negative disease. This study investigates the prognostic value of LVI in CRC patients, addressing the scarcity of literature on the South Asian region.

##### **Methodology**

A retrospective cohort study enrolled CRC patients who had surgical resection with curative intent from January 2013 to May 2019, followed until May 2024. Collected data included pathological and demographic information along with time since surgery to last follow-up or death. Chi-square test compared groups. Survival rates were estimated via Kaplan-Meier curves and tested with Log-rank test, utilizing right-censored survival data. Cox proportional-hazard models identified features associated with survival. Forward variable selection done by log-likelihood ratio test determined explanatory variables in final model. Proportional hazard assumption and outliers were tested in final model.

##### **Results**

Out of 137 participants, 54(39.42%) were males, with a median age of 61(IQR: 52-68). LVI was positive in 41(29.93%) participants. The correlation between LVI and at least one positive LN had a P-value of 0.0002. The 5-year overall survival (OS) rate was 60.4%, and the disease-specific survival(DSS) rate was 72.2%. The 5-year survival rate for LVI positive was 28.3%, compared to 74.4% for LVI negative. When considering OS and DSS, LVI status indicated a significant difference in log-rank test. (both,  $P < 0.0001$ ). The hazard ratios were, OS 3.094(95% CI, 1.782-5.372,  $P < 0.0001$ ) and DSS 14.053(95% CI, 5.731-34.459,  $P < 0.0001$ )

##### **Discussion and Conclusion**

LVI strongly associated with predicting prognosis in CRC patients, aligning with quantified hazards of international

literature.

### **OP 15 - Effectiveness of implementing WHO Surgical safety checklist: study at a leading tertiary care hospital in Sri Lanka**

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#### **Introduction**

The World Health Organization Surgical Safety Checklist (WHO SSC), introduced in 2008, aims to reduce surgical and anaesthetic complications. Despite its implementation in Sri Lanka since 2013, its efficacy remains uncertain. This study aimed to assess the utilization, adequacy, and the knowledge, attitudes, and practices regarding the WHO SSC among surgical theatre staff at a tertiary care hospital.

#### **Methods**

A biphasic study was conducted at a tertiary care hospital from August 2020 to February 2021. Phase one involved reviewing medical records of major surgeries, to assess the usage and completeness of the WHO SSC. In phase two, a questionnaire was administered to nursing and medical staff involved in operating theatres to evaluate their knowledge, attitudes, and practices regarding the WHO SSC.

#### **Results**

Analysis of 238 surgical records revealed that only 38.6% had the WHO SSC attached, with completion rates of 36.6% for the first component and 15.2% for the second component. None of the checklists had the third component completed. In phase two, 106 participants (47 nurses, 59 doctors) were surveyed. 9.4% were unaware of the SSC, and 73.5% were unaware of its implementation through a government circular. Only 37.5% had initiated filling the SSC, citing divided attitudes and shyness as common reasons for incomplete documentation.

#### **Discussion and Conclusions**

The utilization and completeness of the WHO SSC are severely lacking due to various factors. Effective dissemination of knowledge, clarification of roles and responsibilities, and empowerment are essential for successful implementation of this crucial tool.

### **OP 25 - Homodigital Unipedicled Islanded Neurovascular Pulp Advancement Flap/Colombo Flap for Fingertip Reconstruction**

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#### **Introduction**

Fingertip amputations, often resulting from crush mechanisms, pose significant challenges in microvascular replantation. Operative management is often necessary for larger defects, bone exposure, and associated distal phalangeal fractures. Treatment goals include preserving length, sensation, and aesthetics. Various techniques such as revision amputation, composite grafting, and local flaps are available but usually have limitations. We introduce a novel homodigital flap technique named 'Colombo flap' addressing these limitations.

#### **Methods**

The study was done in a major trauma centre. Five fingertip injuries in four patients were treated using the new technique. Recruited patients had traumatic proximal Allen zone 3 fingertip amputations with minimal residual nail bed, unsuitable for microvascular replantation. Surgical technique involved meticulous debridement, raising of a uni-pedicled islanded flap, and inset of the flap with advancement. Postoperative care comprised of antibiotic therapy, elevation, and scar management. Participants were followed up for 2.5 years, assessing sensory recovery, range of motion, grip strength, pain, and outcomes using standardized measures including Michigan Hand Questionnaire.

#### **Results**

All flaps survived with satisfactory healing and minimal complications. Donor sites showed good healing, and nail deformities were minimal. Patients regained sensory function, range of motion, and grip strength comparable to the uninjured hand. Outcome assessment indicated highly successful results.

#### **Discussion and Conclusion**

The 'Colombo flap' represents a reliable technique for fingertip reconstruction, offering satisfactory short- and long-term outcomes. Its success suggests it as a valuable addition to the armamentarium of fingertip reconstruction techniques. Further studies are warranted to validate its efficacy and explore its potential applications.

## **OP 43 - Prevalence of surgical site infections and antibiotic resistance pattern in a Tertiary care Orthopaedic unit**

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### **Introduction**

Surgical site infections (SSIs) in orthopaedic surgeries pose a significant risk to outcomes. These infections ranging from superficial to periprosthetic joint complications result from various factors including patient-related conditions and environmental factors. *Staphylococcus aureus*, with increasing antibiotic resistance, is a predominant cause

### **Methods**

This is a retrospective study conducted at a tertiary care hospital from December 2022 to November 2023 at the orthopaedic unit. The study population was all the patients who had surgical site infections following clean orthopaedic surgeries during the study period. An institutional-level ethical clearance was obtained.

### **Results**

This retrospective study conducted at a tertiary orthopaedic unit in Jaffna, Sri Lanka, aimed to investigate surgical site infections (SSI) following clean orthopaedic surgeries. Analyzing data from 1676 surgeries over one year, the study identified 83 culture-proven SSIs, yielding an annual incidence of 4.95%. The majority of SSIs occurred in males (62.7%) and were associated predominantly with lower limb surgeries (83.1%). Contrary to global trends, *Pseudomonas* emerged as the most common causative organism (31.3%).

### **Discussion**

Notably, the study revealed significant variations in antibiotic sensitivity patterns among isolated organisms. While *Pseudomonas* exhibited sensitivity to a wide range of antibiotics, coliforms displayed resistance to several agents. This emphasizes regional and institutional differences in antibiotic resistance patterns.

### **Conclusion**

Continuous large-scale institutional audits are crucial for shaping effective antibiotic policies. The study underscores

the dynamic nature of SSI aetiology, emphasizing the need for tailored preventive measures based on regional data. Establishing national surveillance considering local antibiotic resistance and continuous auditing is essential for formulating effective guidelines to prevent and manage SSIs

## **OP 49 - Knowledge, attitude, practice, available facilities and influencing factors of hand hygiene among doctors and nursing officers in the surgical wards of Teaching hospital, Jaffna**

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### **Introduction**

Healthcare-associated infections are transmitted from patient to patient via the hands of healthcare workers. A good compliance to hand hygiene is necessary to prevent the Healthcare associated infections.

### **Methodology**

This is a descriptive, observational cross-sectional hospital-based study done on the doctors and nursing officers of the surgical wards. Knowledge, attitude and level of satisfaction were assessed through self-administered questionnaires. Hand hygiene practice was observed by direct observation using the WHO observation tool.

### **Results**

There was a total of 156 participants. 54 (34.6%) were doctors while 102 (65.4%) were nursing officers. 93.6% of the doctors and nurses scored above 80 in the knowledge, 5.1% scored between 60 and 80 and 1.3% between 40 and 60. 86.5% had positive attitude towards hand hygiene and scored more than 80 and the rest (13.5%) scored between 60 to 80. Among the doctors, 92.6% scored more than 80 for positive attitude and 83.3% of the nurses scored more than 80. Only 7.1% scored above 80 for the satisfaction of available facilities while 57.7% scored between 60 and 80. A total of 1864 hand hygiene opportunities were observed, out of which only 215 (21.04%) opportunities of the doctors and 312 (37.05%) opportunities of the nurses were compliant to hand hygiene.

### **Discussion and conclusion**

Hand hygiene is a simple procedure that is instrumental in

reducing hospital-acquired infections. Majority of the respondents had good knowledge and good attitudes but most of them had poor hand hygiene practices. Hand washing policies, education of health care workers, training and monitoring will significantly improve adherence to hand hygiene compliance.

**OP 14 - Improving the use of WHO surgical safety checklist in a peripheral surgical unit: An audit**  
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### **Introduction**

To ensure patient safety, the World Health Organization (WHO) introduced the surgical safety checklist (SSC), which improves communication among surgical-anesthetic team members, resulting in better outcomes and reduced complications. However, ensuring proper implementation and strict adherence is crucial for a checklist to be truly practical.

### **Methods**

An audit was conducted in a District General Hospital Sri Lanka on the routine use of the WHO SSC before and after implementing a staff awareness programme. The assessment of the sign-in, time-out, and sign-out sections occurred in three phases: standard practice, audio prompt, and full audio delivery. Data collection was done over three weeks, during which time-out and sign-out times and the completeness of the checklist were evaluated.

### **Results**

Before the intervention, checklists were completed for 21 (22.1%) patients, and compliance with sign in, sign out, and time out on the checklists stood at 49 (51.6%), 34 (35.8%), and 21 (22.1%) respectively. Following the intervention, checklists were completed in 79 (83.2%), and compliance with sign in, sign out, and time out, reached 84 (88.4%), 80 (84.2%), and 83 (87.4%), respectively. Statistically significant improvements were observed in compliance with sign in, sign out, and time out sections and overall checklist completion. ( $p < 0.001$ )

### **Conclusion**

Even though the initial compliance with the World Health

Organization surgical safety checklist was suboptimal, implementing a staff awareness programme significantly enhanced compliance rates, reinforcing patient safety protocols within surgical settings.

**OP 17 - Audit of Preoperative Fasting Practices for Elective Surgical Patients in a surgical unit at Colombo North teaching hospital (CNTH)**  
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**Post graduate Institute of Medicine, University of Colombo, Colombo North Teaching Hospital, Ragama, Sri Lanka**

### **Introduction**

Preoperative fasting was traditionally used to minimize the risk of pulmonary aspiration during anesthesia. Enhanced Recovery After Surgery (ERAS) protocol recommends shorter fasting times -6 hours for solids and 2 hours for clear liquids, to promote faster recovery. The objective of this audit is to evaluate adherence to the ERAS recommendations for preoperative fasting times in elective surgical patients within a surgical unit at CNTH

### **Methods**

An analytical cross-sectional study design was employed. All consenting elective surgical patients admitted to two wards undergoing general or spinal anesthesia over a one-month period were included. The European Society of Parenteral and Enteral Nutrition (ESPEN) guidelines on ERAS served as the reference standard for expected preoperative fasting recommendations.

### **Results**

40 patients were recruited for the study. The average fasting time for clear liquids was 10.17 hours, while for solids/semisolids it was 12.29 hours. Correct fasting instructions recorded in BHT reached 82.5% ( $n=33$ ) and 52.5% ( $n=21$ ) was given correct verbal advices. But 7.5% ( $n=3$ ) met ERAS fasting goals. Fear of upsetting surgery by eating, incorrect final instructions, and delayed surgeries were the primary reasons for not meeting the fasting recommendations.

### **Discussion**

We identified suboptimal adherence to ERAS fasting

guidelines. Significant discrepancy existed between documented vs verbal instructions. Fear of upsetting surgery by eating, incorrect final instructions, and delayed surgeries emerged as barriers to achieving ERAS goals

## Conclusion

To improve compliance to the ERAS fasting guidelines, we recommend a multifaceted approach including standardization of documentation, enhanced communication, addressing patient concerns, and workflow adjustments.

## OP 20 - Prevalence of Anxiety, Depression, and Stress in Patients with Colorectal Cancer at a Tertiary care hospital in Sri Lanka

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## Background

Colorectal cancer (CRC) is the fourth commonest cancer in Sri Lanka. The psychological burden of CRC has not been previously studied.

## Materials and methods

A cross-sectional study was conducted at the National Hospital of Sri Lanka and the National Cancer Institute from January 2021 to December 2022 and data on sociodemographic factors, tumours, and treatment of patients diagnosed with CRC were collected. Sinhala, Tamil and English versions of the Depression, Anxiety and Stress Scale – 21 (DASS-21) and Becks Depression Inventory (BDI) were used to assess depression, anxiety, and stress.

## Results

The mean age was 59.1 (SD±11.1) years. Of the 100, the majority were male (56%) and married (86%). The commonest tumour biology was T3 (48%), N0 (57%), and M0 (80%). BDI responses indicated mostly normal scores (n=46), and 23 had moderate depression. The majority had normal scores for DASS21 depression (n=68), anxiety (n=70), and stress (n=100), while 14 had moderate depression and 11 reported moderate anxiety. Fewer

participants experienced mild (n=9,n=8), severe (n=4,n=6), or extremely severe (n=5,n=5) symptoms in each category, respectively. There were statistically significant correlations between Beck's score and the depression, anxiety, and stress subscales of DASS21 ( $\rho=0.653, 0.498, 0.659$  and  $p<0.01$ ). A backward logistic regression model for significant disability in any of the scales due to CRC diagnosis was statistically significant ( $\chi^2(6) = 19.3, p = 0.004$ ). Part-time employment and retirement, and the presence of metastasis increased the risk of significant psychological distress (OR 4.9, 24.4, and 3.7 respectively).

## Conclusions

CRC patients in Sri Lanka experience significant psychological distress. Metastatic disease and financial constraints were identified to affect these adversely.

## OP 29 - Trends in adenoma detection rate in lower gastrointestinal endoscopy in symptomatic patients undergoing lower alimentary endoscopy

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## Introduction

Adenoma Detection Rate (ADR) is a crucial metric in evaluating colonoscopy effectiveness. This study reports the ADR and detection of colorectal CA while exploring the associated factors.

## Methods

Data from 334 consecutive patients undergoing lower gastrointestinal endoscopies by a single endoscopist at a single centre during a three-year period was analysed. Demographic information and polyp characteristics such as location, morphology and histopathological diagnosis were collected. The chi-square and Fischer's test were used to compare the ADR between the different age groups and genders, taking a p-value of 0.05 as significant.

## Results

Majority of patients were males (56%) and above 60 years (54.8%), with a median age of 58 years (IQR 42-69). Colonoscopy with a 100% caecal intubation rate accounted for 70.4% of tests. Suspicious polyps/masses were detected in 18% (n=60) of all tests and histological confirmation was obtained. Adenomas, malignancies and hyperplastic polyps were detected in 50, 7 and 3 patients, respectively. Multiple polyps were detected in 19 patients (5.7%) with 64 adenomas in total. The ADR was 14.97%. Most adenomas were sessile (77%, n=64) and located in the descending or sigmoid

colon(39.6%), followed by 33.3% in the transverse colon. There was a statistically significant rising trend of ADR with age, with those above 60 years having the highest ADR(21.2%).

### Discussion & Conclusion

Despite the lower incidence of CRC(15/100,000) in Sri Lanka, the ADR was comparable with the global average of 15% and varied with age and polyp location. Larger multi-centre studies are needed to ascertain the ADR and other risk factors for colonic adenomas in Sri Lanka.

### OP 33 - Diagnostic Accuracy of Digital Rectal Examination Versus High-Resolution Anorectal Manometry in Chronic Constipation and Fecal Incontinence

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### Introduction

Digital rectal examination (DRE) is a basic yet fundamental clinical tool for assessing anorectal disorders. High-resolution 3D anorectal manometry (HRAM) offers superior diagnostic accuracy. The objective of our study was to assess the diagnostic value of DRE in comparison with HRAM.

### Methods

This cross-sectional study included patients who underwent DRE and HRAM. Resting pressures (RP) and squeeze pressures (SP) were measured using both tools. Sensitivity, specificity, and positive predictive value (PPV) of DRE findings were calculated using HRAM as the reference standard. The level of agreement between DRE and HRAM was assessed using the  $\kappa$ -coefficient and correlations were evaluated using Spearman's rho.

### Results

A total of 52 consecutive patients with suspected obstructed defecation (n=22, 42.3%) and anal incontinence (n=30, 57.7%) were included. For RP, the DRE showed a sensitivity of 75%, specificity of 87.5%, and a PPV of 78.9%, with moderate agreement between the two methods ( $\kappa$ -coefficient = 0.571,  $P < 0.001$ ). For SP, the DRE demonstrated a sensitivity of 89.5%, specificity of 78.8%, and a PPV of 70.8%, also

showing moderate agreement with HRAM ( $\kappa$ -coefficient = 0.571,  $P < 0.001$ ). Chi-square showed a significant association between the findings of DRE and HRM in localizing weakness ( $\chi^2 = 10.098$ ,  $df = 1$ ,  $p = .001$ ,  $N = 52$ ).

### Discussion And Conclusions

DRE shows a high diagnostic value for assessing RP and SP, with moderate agreement with HRM, which supports the use of DRE as a reliable clinical tool in the evaluation of anorectal disorders. However, HRM shows more effectiveness in localizing weakness compared to DRE.

### OP 27 - Factors affecting sensory impairment with bilateral subcostal incision in long term Whipple surgery survivors.

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### Introduction

Whipple surgery needs adequate surgical exposure. Bilateral subcostal incision (BSI) is one of the traditional preferred approaches. Sensory impairment following BSI in long-term survivors has not been evaluated.

### Methods

37 patients who underwent Whipple surgery with bilateral subcostal incision completed a 6 months follow-up were selected. The area of sensory impairment (SI) was measured using pin prick method and the Nottingham Sensory Assessment (NSA) scale and factors affecting the sensory impairment were evaluated.

Area of sensory impairment was divided by body surface area to standardize and minimize individual variation. Correlation between the factors and the sensory impairment was evaluated.

### Results

The median age was 51 (16-78) with 61% (n =22) males. The median area of sensory loss was 109.27cm<sup>2</sup>, 97.3 % (n=36) had grade NSA 1/0 SI. In univariate analysis, incision angle ( $p=0.068$ ), incision length ( $p= 0.040$ ), and distance from subcostal angle ( $p=0.018$ ) had a significant association with SI while subcostal angle, interval following surgery, BMI or co morbidities had no impact on SI . In multivariate analysis, the distance from the subcostal angle had a significant association ( $p=0.016$ ) with SI.

## Conclusion

Long-term sensory impairment can be reduced when an incision is placed furthest away from the subcostal angle

## OP 30 - Prospective review of wild-elephant-attack related trauma victims at a base hospital

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## Introduction

Although Sri Lanka has the second highest number of deaths following wild elephant attacks, such injury and fatality profiles has never been evaluated from a surgical point of view.

## Methods

In this prospective study; demographics of the cases, socio-environmental details of the incidents, prehospital care specifics, injury severity classification, treatment details and clinical outcome data with disability status of the victims of wild elephant attacks were studied at Base Hospital, Dambulla from July 2022 to December 2023.

## Results

Among 54 cases, there were 13(24%) fatalities. For 47 cases brought alive to the hospital, average transportation duration was 65(range 20-125) minutes. Among them, 6/15 patients with class III/IV haemorrhagic shock had crystalloid resuscitation, 10/23 with tachypnoea/pulseoxymetry<94% received prehospital oxygen and none of 9 patients with GCS?8 had protected airway. Among 41 survivors, 13(25%) suffered major injuries with Revised Trauma Score(RTS)? 5. Eleven patients (27% of survivors) had long-term disability and 20(49%) had short-term disability. Average hospital stay was 25.2 days (range 6-79) for major injury survivors and 7.2 days (range 2-26) for survivors with RTS>5. Seventy-five percent of the attacks have happened during vulnerable time periods(4am-8am or 4pm-8pm) and 93% have happened in the vicinity of human habitats.

## Discussion and conclusion

Human injuries caused by wild elephant attacks have led to high injury severities, disabilities and fatalities. Majority of the victims have not received prehospital treatment after the

elephant attacks and have been brought to the surgical facility with an average transport time over an hour indicating deficiencies in prehospital care.

## OP31 - Endoscopic ultrasound (EUS) guided diagnosis of pancreatic lesions – Single center Experience in Sri Lanka.

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## Introduction

EUS-FNA allows histopathological diagnoses of pancreatic tumours to be made when radiological imaging is inconclusive or when histological confirmation is required before neoadjuvant therapy for inoperable pancreatic cancers. Previously, these patients were subjected to surgery or chemotherapy solely based on radiology and tumour markers which have their own inherent risks. We aimed to assess the diagnostic accuracy of EUS-FNAB in patients with suspected pancreatic tumours where histological confirmation was required.

## Methods

A total of 297 patients with suspected pancreatic masses were referred for EUS to University Surgical Unit, National Hospital of Sri Lanka, where EUS FNAB was done.

## Results

The mean age of the population was 54.91 years (SD – 15.07 years) and 156 (52.5%) were males. A majority of the lesions (161,54.2%) were solid and found in the head (57.5%). Complications included pancreatitis and infection in 2 patients each (0.67%) which were managed medically. 115 (61.2%) were malignant lesions, 37 (19.7%) inflammatory and 36 (19.1%) benign. Out of the malignant lesions, 68 (59.1%) were adenocarcinomas and 19 (16.5%) neuroendocrine tumors. Solid masses were significantly associated with malignancy ( $p<0.001$ ). Adenocarcinomas were more likely to be seen in males ( $p=0.013$ ), and in the

head of the pancreas ( $p=0.009$ ).

### Discussion and conclusions

In an era where personalized medicine is advocated, EUS FNAB of pancreatic neoplasms allows effective and accurate pathological diagnoses to be made permitting oncologists to provide personalized oncotherapy to patients, which cannot be achieved by imaging alone. Single use of needles and onsite histopathology (ROSE) will further improve diagnostic yield.

### OP 42 - Traumatic Hand and Wrist Injuries: Retrospective study delineating injury patterns in a high-volume centre

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#### Introduction

Hand and wrist trauma is one of the commonest presentations to the ED resulting in significant functional impairment and quality of life reduction in the young working population. Despite being one of the most prevalent patterns of injury, data is scarce. By pinpointing areas of concern, targeted preventative measures can be implemented. This is an ongoing study.

#### Methods

354 patients with hand/wrist injuries referred to the Plastic Surgical Unit from October to December 2023 were incorporated into the study. Mechanism of injury was classified into cut, crush, penetrative, blast and bite. Site of injury was classified anatomically.

#### Results

Median age was 37 years (14 – 80) with an overwhelming male preponderance (93.8%). 90.9% had right-handed dominance. 91% were ASA I and 9% ASA II. 52.1% were cut injuries, 33.6% crush, 1.1% penetrative, 1.1% amputation, 1.1% blast while 10% were unclassifiable. 40.6% of injuries affected the palm/dorsum of hand, 12.6% thumb, 9.2% index finger and 24.5% other fingers. More than 1/3 (34%) involved tendons, 21% had fractures and 10.5% had nerve injuries. 45.9% of patients had hand/wrist injury to their dominant side.

### Conclusion and Discussion

Debilitating hand and wrist injuries affect the young, healthy bread-winning population in middle and lower socioeconomic countries like Sri Lanka. The dominant hand is often affected, leading to prolonged time off work and significant socio-economic compromise, increasing household and national burden. By implementing safer workplace practices and robust fail-safe measures in commonly used grinder machines, incidence and long-term complications of these injuries could be minimised.

### OP 44 - Impact of Pancreatic Enzyme Replacement Therapy (PERT) on Abdominal Pain and Gastrointestinal Symptoms in Pancreatic Insufficiency: A Longitudinal Study

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#### Introduction

Pancreatic insufficiency (PI) often results in debilitating gastrointestinal symptoms, including abdominal pain, diarrhoea, and steatorrhea, significantly impairing quality of life. This study aimed to determine the impact of pancreatic enzyme replacement therapy (PERT) on gastrointestinal symptoms.

#### Methods

This longitudinal study was conducted on 95 PI patients (31 females, 64 males; mean age  $47.51 \pm 15.23$  years) to evaluate changes in gastrointestinal symptoms, including abdominal pain, diarrhoea, and steatorrhea, pre-PERT and post-PERT initiation.

#### Results

According to the Wilcoxon Signed-Rank Test, abdominal pain scores significantly decreased post-PERT ( $Z = -7.936$ ,  $p < 0.001$ ), with mean scores reducing from  $6.64 \pm 1.97$  to  $2.16 \pm 1.67$ . Diarrhoea improved in 20 patients (21.1%) and steatorrhea in 33 patients (34.7%). Pearson Chi-Square analysis revealed no significant gender differences in the improvement of diarrhoea ( $\chi^2(1) = 0.490$ ,  $p = 0.484$ ) and steatorrhea ( $\chi^2(1) = 0.429$ ,  $p = 0.513$ ).

## Discussion

The initiation of PERT resulted in significant reductions in abdominal pain and improvements in diarrhoea and steatorrhea among PI patients. The lack of gender differences in symptom improvement underscores the broad efficacy of PERT across demographics. Conclusion: PERT reduces abdominal pain and alleviates other gastrointestinal symptoms in PI, enhancing overall patient quality of life. This study supports the routine use of PERT in managing PI symptoms. Further multi-centre studies with more participants are needed to better understand these findings.

## OP 46 - Case series: Outcomes of Laparoscopic cholecystectomy without Laparoscopic clips at a Base Hospital in Sri Lanka

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### Background

Laparoscopic cholecystectomy(LC) is a common surgery in Sri Lanka. Achieving critical view of safety(CVS) is the best surgical practice to minimize its complications. Laparoscopic clips (Titanium clips, Polymer ligating clips) are essential to get control of Cystic artery(CA) and Cystic duct(CD). The economic crisis of Sri Lanka the Ministry of Health restrained to continuous supply and maintenance of surgical items and surgical instruments. BH-Gampola was unable to replace their one and only broken Laparoscopic metal clip applicator and shortage of Titanium clips.

### Methodology

This cohort was symptomatic patients (Gallstone pancreatitis, Acute cholecystitis, Recurrent biliary colic) who were waited for LC at BH-Gampola August 2023 to February 2024. The consented patients were undergone LC without Titanium clips. After achieving CVS the CA was diathermised with Bipolar diathermy and divided. The CD was Transfixed and either side Ligated with 2/0 Polyglactin sutures. Then CD was divided between Transfixed and Distal ligature. The immediate postoperative outcomes were assessed.

### Results

There were 14 (Male-1, Female-13) patients under LC; one of

them had been converted to Open cholecystectomy and one Subtotal LC. The indication of them were Acute cholecystitis 7(58.3%), Recurrent biliary colic 3(25.0%) and Gallstone pancreatitis 2(16.7%).

The operative time range 50-150 minutes (Average 84.1 min). Only 6 (50%) patients had Abdominal drain. Postoperatively, only 2(16.7%) had Nausea-vomiting, 1(8.3%) had pain, no other complications or ICU admissions and 8(66.7%) discharged on postoperative Day-1.

## Conclusion

Although Laparoscopic clips are mandatory for LC, Bipolar diathermy of CA and Transfixed-Ligation of CD achieve a good outcome.

## OP 56 - Safety Of Simultaneous Laparoscopic Cholecystectomy And Inguinal Hernia Repair: A Systematic Review

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### Introduction

Cholelithiasis and inguinal hernias are common surgical conditions that often coexist. Laparoscopic approaches are becoming increasingly popular for cholecystectomy (LC) and inguinal hernia repair (LIHR). This study aimed to systematically review the available evidence on the safety and efficacy of simultaneous LC and LIHR.

### Methods

A systematic search of the PubMed/MEDLINE and Google Scholar databases was carried out using specific keywords for articles published up until March 2024. Studies describing patients undergoing combined LC and LIHR under the same anaesthesia exposure and meeting predetermined inclusion and exclusion criteria were analysed. Data on the mean operative times, length of stay, and the perioperative and long-term complications were extracted and reported.

### Results

Ten studies, of which 2 were comparative and 8 were non-comparative studies, comprising a pooled total of 199 patients, were included in the review. The mean operative time for combined LC and LIHR ranged from 55-157

minutes, with an average length of hospital stay between 1-4 days. The overall complication rate was 22%, with seroma/hematoma formation (6.5%) being most common. There were no reported mortalities or cases of mesh infection. Hernia recurrence rate was 2.4%.

## **Discussion and Conclusion**

Simultaneous LC and LIHR is a safe and effective option in select patients with co-existing symptomatic cholelithiasis and inguinal hernia. The combined procedure offers potential benefits such as reduced hospital stay, faster recovery, and cost savings. Although the optimal sequence of surgical procedures for LIHR and LC remains debatable, the risk of mesh infection appears to be minimal.

## **OP 19 - Impact of Flexible Cystoscopic Examination in Cause Identification for Patients with Haematuria with Insignificant USS KUB Findings in a Tertiary Care Hospital - A Prospective Study**

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### **Introduction**

Flexible cystoscopy (FC) is an essential method in the aetiological diagnosis of haematuria especially in the USS KUB normal cohort. We describe a population of haematuria patients who had normal USS KUB in view of describing case variation and evaluating the effect of cause identification using flexible cystoscopy.

### **Methods**

A prospective study was carried out among patients with haematuria in a genitourinary surgical unit in a tertiary care hospital from June 2023 to December 2023. All patients presented with haematuria with a normal USS KUB were included. Demographic details, risk factors, and positive findings on cystoscopy were recorded.

### **Results**

A total number of 202 flexi cystoscopies were performed during the period of the study. 22(10.89%) patients had haematuria. 21(95.5%) had macroscopic haematuria. Number of males and females were 13(59.1%) and 9(40.9%) respectively. The mean age of the study group was 57.55(31-90). Lower urinary tract infections, bladder stones, prostatic enlargement and bladder carcinoma were diagnosed in

4(18.18%), 1(4.54%), 6(27.27%) and 1(4.54%) respectively. 10(45.45%) had inconclusive cystoscopic findings. Among the patients aged above 55, the cause of haematuria was concluded as BPE in 41.67% (5/12).

Globally, there is no reliable data regarding sensitivity in flexible cystoscopy for cause identification in haematuria. However, the positive rate in our study was 54.5% indicating the pivotal role of cystoscopic examination in our population with haematuria. Highly selected population may have contributed to the higher positive rate. However, multicentred streamlined protocol-based studies are needed to validate the findings to the national level.

## **OP23 - Modifications of multi-subunit forehead flaps.**

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### **Introduction**

Forehead flap is a pedicled fasciocutaneous flap used in reconstruction of nasal subunits. It's considered as the world's first described flap that stood the test of time and was discovered by the father of plastic surgery (Susrutha) in India. Comparable colour and texture match, minimal donor site morbidity, thickness match and its versatility in the ability to reconstruct nasal subunits are key advantages of this flap. The flap has been a stable method for total reconstruction the nose. However, partial injuries has forced the surgeons to modify the design of the flap. These modifications are refined to provide better functional and cosmetic outcome. Multiple subunits are frequently encountered in current practice. We analyzed present data to find the multi-subunit patterns to provide design modification of the flap.

### **Methods**

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

### **Results**

16 nasal reconstructions were analyzed. Forehead flaps were used in four patients for total nasal reconstruction, five patients for tip reconstruction, four patients for Ala

reconstruction, two patients for Ala and tip reconstruction. One patient underwent Ala ,tip and columella reconstruction .

### Discussion

Majority had successful reconstruction with regard to function and cosmetic outcome. There were no total flap losses, one patient and partial flap loss and one had a congested flap. Most patients needed a second procedure for flap remodelling.

### Conclusion

Forehead flap is an excellent flap for nasal reconstruction with regard to function and cosmesis. The commonest multi subunit reconstruction is ala reconstruction along with the tip.

### OP26 - Does lymphovascular invasion increase the risk of ipsilateral axillary lymph node and distant systemic metastases in invasive breast cancer?

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### Introduction

Axillary lymph node metastasis (ALNM) and distant systemic metastases (DSM) are well recognised prognostic indicators in invasive breast cancer (BC). Although lymphovascular invasion (LVI) of the primary tumour is assessed histologically, evidence on its significance on ALNM and DSM is sparse. This study intends to determine an association between ALNM and DSM with LVI in invasive breast cancer.

### Methodology

Out of 630 BC patients (from January 2020 to May 2024), 574 patients (median age 57 years [range 23-92]) with invasive BC were analysed. Histopathological analysis was carried out with H&E stain and reported by a group of three consultant histopathologists. The primary end points were to describe an association between; (i) LVI with ALNM and (ii) LVI and DSM. The data was analysed through SPSS version 26 (IBM SPSS, Armonk, NY). Statistical significance was assigned to a p value <0.05.

### Results

There are 394 patients with LVI negative cancer, of which 167 (42.4%) had positive ALNM. Whereas, out of 180

patients (with LVI positive cancer) 122 (67.8%) was positive for ALNM. This was statistically significant with p value <0.001. Furthermore, out of 394 BC patients 23 (5.8%) had DSM, whereas out of 180 BC patients 21 (11.6%) had DSM which was statistically significant (p=0.015). Median ALNM burden in LVI negative is 30.77% while LVI positive is 50.00%.

### Discussion and conclusion

LVI positivity has a statistically significant association with ipsilateral ALNM and DSM in invasive breast cancer. LVI positive cancer has a higher ALNM burden.

### OP32 - Assessment of Frailty among patients with Critical Limb Ischemia presenting to a Tertiary Vascular Surgical Centre

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### Introduction

Frailty is a significant predictor of functional deterioration, increased MALE and MACE in patients with critical limb ischaemia (CLTI). There is no previous data on frailty for CLTI in Sri Lanka.

### Methodology

A single center prospective study was conducted on 100 patients presenting with CLTI. Frailty was evaluated both subjectively using Clinical Frailty Score (CFS) and quantitatively using Modified Frailty Index (MFI). Patient and disease related data collected via an interviewer-based questionnaire.

### Results

Mean age was 61.9 years. Majority were male (67%). 94% had multimorbidity [diabetes (88%), hypertension (56.6%)]. All exhibited tissue loss, with 57.6% experiencing rest pain. Frailty was observed subjectively in 34.4% (CFS) and objectively in 69% (MFI). On univariate analysis, malnutrition (p=0.004), smoking (p=0.007), multimorbidity (p=0.000) and wound size (p=0.05) were significantly associated with frailty. Duration of disease, gender, age and anaemia did not demonstrate significance.

Mean follow up period was 8.7 months. At 3 and 6 months, overall survival (OS) was 91.8% and 85.2%, whilst amputation free survival (AFS) was 78.7% and 70.5% respectively. 16.3% underwent primary amputation. A further 11.4% underwent secondary amputation. Frailty was associated with inferior OS (98% vs 79.1%), inferior AFS (83.3% vs 65.1%) and less likelihood of revascularization at 6 months follow up.

### **Discussion and Conclusion**

The prevalence of frailty is underscored amongst patients hospitalized with CLTI. Frailty is an important predictor of inferior OS and AFS in this cohort. A multidisciplinary collaborative approach should be considered to identify and manage frailty to improve outcomes.

### **OP 40 - Assessment of Nutritional Status among patients with Critical Limb Ischemia presenting to a Tertiary Vascular Surgical Centre**

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**2 Senior Registrar in Clinical Nutrition, NHSL, Sri Lanka**

### **Introduction**

Malnutrition significantly impacts morbidity, mortality, and QOL in patients with critical limb ischemia (CLI). No national data exists on the nutritional status for this cohort.

### **Method**

A single-center prospective observational study was conducted on 93 CLI patients awaiting intervention. Malnutrition was screened using Subjective Global Assessment (SGA) and Global Leadership Initiative on Malnutrition (GLIM) criteria was utilized to diagnose and grade malnutrition severity.

### **Results**

Mean age was 63±9.4 years with male predominance (69.9%). All had tissue loss with rest pain in 56%. Major comorbidities included diabetes (90.3%), hypertension (57.6%), dyslipidemia (43.3%), CKD (21.7%). On WIF wound 2 and 3 were noted in 55.8% and 34.9% respectively.

On screening, risk of malnutrition was moderate (49.4%) and severe (3.7%) based on SGA scores. Based on GLIM criteria, 72.0% were diagnosed with malnutrition (37.6% moderate malnutrition, 34.4% severe malnutrition). Only 7% received a clinical nutritionist referral.

Prevalence of malnutrition was 6% based on BMI, 55.7% based on muscle mass and 67.1% based on skin fold thickness (SFT). Mean serum albumin (2.79 g/dL) was reduced. Diabetes ( $p=0.034$ ) and dyslipidemia ( $p=0.045$ ) were significantly associated with malnutrition.

On One-way ANOVA analysis, sarcopenia was the most significant factor affecting severity of malnutrition ( $p=0.000$ ). Sarcopenia was an independent predictor of inferior six-month amputation free survival (AFS) (62.5% vs 81%) but not for overall survival.

### **Discussion and Conclusion**

Prevalence of malnutrition is high amongst patients with CLTI. Sarcopenia (and adipopenia to a lesser extent) with normal BMI is the predominant form of malnutrition and leads to inferior AFS.

### **OP 50 - Waiting times in the colorectal cancer treatment pathway; data from a specialised tertiary care centre in Sri Lanka.**

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### **Introduction**

Colorectal cancer (CRC) is the third commonest cancer amongst both sexes in Sri Lanka. The outcome depends on timely intervention and prolonged waiting times (WT) due to workload is a global health service burden.

### **Method**

The treatment pathways of consecutive patients undergoing curative treatment for CRC was mapped. The median time between general practitioner (GP) to specialist, to colonoscopy and diagnosis, to staging, to neoadjuvant chemoradiotherapy (NCRT) and surgery were calculated in weeks.

## Results

A total of 108 (male – 36.1%; median age – 63; range 26-87) patients who underwent curative surgery between 2020 and 2024 were included. 31% (n=34) had seen a GP after median of 11 weeks (range: 0.26 - 307), a specialist in 21 weeks (range: 0.5 - 416) from onset of symptoms and referral to a specialist in those who sought initial GP care, is 3 weeks (range: 0.2 - 73). 66% underwent colonoscopy within 2 weeks from a specialist consultation (median – 1.2; range: 0.14 - 82) and 78% within 4 weeks. In those who didn't require NCRT, median time from scoping to surgery is 3.86 weeks (range: 0.14 - 30). A median of 12.86 weeks (range: 3.14–32) from scoping to completing NCRT.

## Conclusion

In this cohort, the WT for CRC management that are under control of the healthcare system are within acceptable range. Accumulated median WT between definitive treatment and seeing a primary care physician is 8 weeks. Community awareness to seek healthcare for alarming symptoms could further reduce the initial lag period.

## OP 18 - Surgical Treatment For Achalasia Cardia : Experience From A Tertiary Care Centre in Sri Lanka.

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## Introduction

Achalasia is an esophageal motility disorder resulting in dysphagia, chest pain and reflux. This study reviews a single surgeon's experience on laparoscopic Heller's cardiomyotomy surgery at the Gastrointestinal Surgical Unit of the National Hospital Kandy over 6 years.

## Methodology

A retrospective study was conducted on 20 consecutive patients who underwent laparoscopic Heller's cardiomyotomy between 2018 and 2024. Study reviewed epidemiological data, symptomatology, investigation results and outcomes. Confirmation of achalasia cardia was obtained through upper GI endoscopy (UGIE), barium swallow and high-resolution manometry. Patients were followed for a year. Eckhardt score assessed achalasia severity.

## Results

Majority were females 12(60%) and the mean age of population was 47 years(25-65). All 20 (100%) experienced dysphagia and 14(70%) had reflux while 8 (40%) reported chest pain. Among them 13 (65%) were having Eckhardt score more than 3. Pre-operative UGIE revealed that 13 (65%) had dilated esophagus, and 2 (10%) had hiatal hernias. Four patients(20%) had already undergone pneumatic balloon dilatation. All procedures were laparoscopic Heller's cardiomyotomy. Three(15%) had Dor antireflux procedure and 5(25%) had Toupet procedure. All patients had improved symptoms following surgery. Eckhardt score significantly decreased after surgery ( $p<0.05$ ) Complications wise; early post operative gastric mucosal perforation in 1(5%) and in 1(5%) had respiratory distress following surgery. Late postoperative period, 10 patients were followed up and 5 (41.7%) developed reflux and 3 (30%) developed dysphagia after one year.

## Conclusion

Laparoscopic Heller's cardiomyotomy performed at a tertiary care hospital in Sri Lanka has demonstrated significant improvement in patients symptoms, exhibiting the efficacy and safety of this surgical intervention.

## OP 28 - Outcomes of using LigaSure Mini Jaw for Thyroidectomy in comparison with conventional techniques.

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## Introduction

Thyroidectomy is a common procedure in endocrine surgery. Being a highly vascular gland it carries potential risk for range of complications. Thyroid surgery is becoming safer due to the development of new surgical techniques.

## Methods

This retrospective study was conducted among patients who underwent total / hemi thyroidectomy over 1 year period from May 2023 to May 2024. Total sample was divided into two defined groups. Group A included patients whom LigaSure® was used for haemostasis and dissection during surgery. Group B included patients who underwent suture ligation and conventional electrocautery techniques.

## Results

Total of 101 patients included in this study. Mean age was  $44.4\pm 6.5$  Years. Group A included 60 patients and group B

included 41 patients. Mean Operative times for Total and Hemi Thyroidectomy was 108 Minutes and 58 Minutes respectively in group A. In group B it was 129 minutes and 75 minutes. In group A and B , Post operative bleeding/Haematoma was noted in 6.6%(n=4) and 4.9%(n=2) respectively. Transient voice changes noted in A-10.0%(n=6) and B-9.8%(n=4). Post operative transient Hypocalcaemia in 19.6%(n=12) in Group A and 29.2%(n=12) in group B respectively.

### **Conclusion**

Ligasure technique for Thyroidectomy was significantly advantageous over conventional techniques in significant reduction of Operative time and post operative Hypocalcaemia. No statistically significant correlation was noted in occurrence of other major complications between two methods.

### **OP 34 - Long term follow up study of leiomyosarcoma of the Inferior Vena Cava following excision**

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**University Vascular and Transplantation Surgical Unit, National Hospital of Sri Lanka. Sri Lanka**

### **Introduction**

Leiomyosarcoma of the inferior vena cava (IVC) accounts for only 0.5% of all adult sarcoma. It is a malignant tumour arising from the smooth muscle cell lining the wall of the IVC.

### **Methodology**

This is a descriptive study. The patients with leiomyosarcoma in IVC who underwent surgical resection were included. Data on demography, site of the tumour, CT findings, histology and follow up details were collected.

### **Results**

3 patients who underwent surgical excision of IVC leiomyosarcoma were included. All were females (100%), and the mean age was 51.67 years (51-52). All patients presented with non specific abdominal symptoms. CT demonstrated lobulated growths in relation to IVC extending both internally and into the surrounding areas. The level of tumour was infra renal -1, suprarenal-1, retro hepatic -1. All patients underwent laparotomy with complete resection of tumour and primary IVC repair. Histology revealed complete resection with no lymph node invasion or metastasis. At a mean follow up of 28.83 months (6.5-55) all are well with no evidence of recurrence. All of them have

resumed their occupational activities. Their quality of life has improved including physical and mental wellbeing.

### **Discussion**

This is one of the few studies on long term follow up of leiomyosarcoma. In this series, the survival is 100% at a mean follow up of 28.83 months which is a good outcome.

### **Conclusion**

Accurate identification and complete surgical resection of tumour increases the chance of long-term survival.

### **OP 35 - Evaluating Artificial Intelligence Awareness and Utilization Among Medical Practitioners: A Single-Centre Study**

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### **Introduction**

Artificial Intelligence (AI) is making significant changes in the medical industry through innovative methods for clinical decision-making and education. This single-centre study aims to evaluate AI knowledge among medical professionals in a peripheral hospital and its application in the hospital context.

### **Method**

A cross-sectional study was conducted using a standardized questionnaire distributed to medical professionals. The questionnaire assessed familiarity with AI, awareness of specific AI tools such as ChatGPT, Elicit, Canva, and Gemini, and the extent of AI usage in medical practice. A total of 72 responses were analyzed.

### **Results**

76.7% of participants reported familiarity with AI, but only 46.7% used AI for medical management. Among the AI tools, 76.7% were familiar with ChatGPT, 32% used Elicit, 55.1% used Canva, and only 2.5% used Gemini.

### **Discussion**

High AI awareness among medical practitioners indicates recognition of its benefits. However, the lower usage rate in clinical and educational contexts highlights a gap between awareness and practical implementation. The prevalence of ChatGPT and Canva suggests a preference for user-friendly tools, while the minimal use of Gemini indicates a need for increased exposure and training.

## Conclusion

Although medical professionals in this peripheral hospital are aware of AI, its utilization in clinical management and education is limited. Targeted training and resource development are essential to foster more comprehensive AI integration in medical practice. OP 36 - Evaluation of Post-operative Complications Following Laparoscopic Totally Extra Peritoneal (TEP) Hernia Repair

## OP 36 - Evaluation of Post-operative Complications Following Laparoscopic Totally Extra Peritoneal (TEP) Hernia Repair

P Gnanaselvam, I P K B Thilakarathne, G L Darshika, H D D A Gunawardana, P W J C Dayarathne, D C M Chamathka, G V P Chandrasiri, L B S Chandeevani, I D S M Dasanayake, P G S Buddhika, J B A H Dayakantha, B A M Chathurangi, A H M D M Bandara, R M C N Bandara, W M K R Bandara, B M V D Basnayake, W Surgical Unit A, Teaching Hospital Anuradhapura, Sri Lanka

## Background

Totally Extra peritoneal (TEP) hernia repair is a widely utilized minimally invasive surgical procedure. In this study, one consultant surgeon and multiple assistants performed the surgeries. The procedure involves the placement of three ports, one 10mm port below the umbilicus and two 5mm ports, one above the pubic bone and the other one between these two and repaired with the use of polypropylene mesh without mesh fixation devices (trackers) under general anaesthesia. CO2 inflates the space to clear visualization.

## Method

A retrospective study was conducted on 73 patients who underwent TEP hernia repair from 2023/09/01 to 2024/04/30, at Surgical Unit A in Teaching Hospital Anuradhapura who had inguinal hernias and femoral hernias. Data were collected and analyzed from 52 responders including details of the type of surgery, gender, indication and post-operative complications. The cohort consisted of 45 males and 7 females, whose age are in the range of 20 to 90 years.

## Results

Among 52 patients who responded to follow up, 48 (92.3%) had no postoperative complications. One reported pain at the surgical site (1.9%). One reported pain at the portal site (1.9%) and two patients experienced haematoma (3.8%).

## Conclusion

TEP hernia repair demonstrates a high safety profile with

92.3% of patients free of postoperative complications and only 7.7% of patients experiencing mild complications. According to network meta analysis, TEP shows less post operative pain and high efficacy compared to open hernia repair.

## OP37 - Impact of Secondary Hemorrhoids on the Outcomes of Flexible Sigmoidoscopy and Rubber Band Ligation

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## Introduction

Hemorrhoids are the most prevalent anorectal disorder among adults. Rubber band ligation has become the chief treatment for bleeding and prolapsing internal hemorrhoids, and is now a well-established and safe technique.

## Methods

A descriptive study was conducted using data from 46 patients who underwent flexible sigmoidoscopy and rubber band ligation at Asiri Hospital Kandy, Sri Lanka, from June 2022 to June 2024.

## Results

Among the 46 patients studied, 26.1% had secondary hemorrhoids accompanying primary hemorrhoids at the 3, 7, and 11 o'clock positions. Possessing secondary hemorrhoids significantly impacted patient outcomes. Specifically, 41.6% of patients with secondary hemorrhoids had a persistent lump at the follow-up visit compared to 20.6% without secondary hemorrhoids ( $p=0.049$ ). Additionally, a higher proportion of patients with secondary hemorrhoids required retreatment (33.3%) compared to those without secondary hemorrhoids (5.9%). The overall retreatment rate for the study population was 13%. Post-procedural complaints were common, with 78.3% experiencing pain and 63% experiencing bleeding within the first five days. Even so, 84.8% of patients were satisfied with the treatment outcome, though possessing secondary hemorrhoids was linked to poorer long-term outcomes and a higher need for retreatment.

## Conclusions

The presence of secondary hemorrhoids significantly impacts the outcomes of flexible sigmoidoscopy and banding for hemorrhoids, leading to persistent symptoms and a higher need for retreatment. Identifying and addressing secondary hemorrhoids during initial treatment is crucial for improving patient outcomes. While the procedure is effective for most patients, those with secondary hemorrhoids require

careful monitoring and possibly additional interventions to achieve optimal results.

**OP 16 - Comparison of Carpel Tunnel Decompression skin crease incision vs. straight line incision with regard to Scar quality and Scar complications**

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**Plastic and Reconstructive Surgical Unit - National Hospital of Sri Lanka, Colombo, Sri Lanka**

**Introduction**

Carpal tunnel decompression surgery is vital for alleviating symptoms of carpal tunnel syndrome. This study compares outcomes between skin crease and straight-line incision techniques, focusing on scar quality and complications.

**Method**

A prospective case-control cohort study included 50 randomly assigned patients, analyzing scar outcomes, complications, demographics, surgical techniques, postoperative care.

**Results**

Most common age group 51-60 years, all experienced preoperative numbness, with 42% reporting motor symptoms. At three months, skin crease incisions better cosmetic outcomes (64% excellent, 36% good) compared to straight line (32% excellent, 52% good). Pain was also lower with skin crease incisions (85.7% no pain, 3.6% mild) versus straight line (57.1% no pain, 21.4% mild, 10.7% moderate). Straight line incisions had higher scar complications at three months: 44% hypersensitivity, 56% no complications, versus skin crease (20% hypersensitivity, 80% no complications)

**Discussion**

Skin crease incisions offer superior outcomes and lower pain levels post-surgery. Higher scar complications with straight line incisions suggest greater tissue disruption and potential inflammatory responses. The alignment of skin crease incisions with natural skin folds likely aids in scar concealment and minimize adverse tissue reactions.

**Conclusion**

Skin crease incisions demonstrate advantages in scar quality and complications over straight line incisions. These findings support their use to enhance outcomes and satisfaction. Future research could explore long-term effects across broader populations to validate these benefits

consistently.

**OP 38 - Centchroman and tamoxifen in mastalgia: a randomized controlled trial**

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**Background**

Mastalgia can be incapacitating for some individuals, necessitating medical intervention. Only a limited number of drugs have demonstrated effectiveness in managing the symptoms. An emerging option is oral centchroman, purported to be effective in this condition. Clinical trials are necessary to determine its role in the treatment of mastalgia.

**Methodology**

An evaluator-blinded randomized controlled trial was conducted at a tertiary care teaching hospital to compare the efficacy of tamoxifen 10 mg and centchroman 30 mg daily. The study aimed to investigate the effect of treatment on the Visual Analog Scale (VAS) score of pain and the number of painful days per menstrual cycle or month. Fifty-one patients completed the treatment and follow-up.

**Results**

Centchroman was more effective in controlling pain in the first month ( $p=0.04$ ). No significant difference in the Visual Analog Scale (VAS) score of pain was observed at the third or sixth month. Both drugs were effective in reducing the number of painful days, with no statistically significant difference between them. The recurrence rate at the sixth month was also not different ( $P=0.41$ ). Overall, 32% of patients on centchroman and 38.4% of patients on tamoxifen either failed to achieve satisfactory pain relief or experienced recurrences

**Conclusion**

Centchroman is a safe and effective substitute for tamoxifen, demonstrating superior early symptom control, albeit with a slightly increased occurrence of adverse effects. In the event that no symptomatic relief is observed within a one-month trial of either medication, discontinuation is recommended, as prolonged use is unlikely to yield additional relief.

**OP 41 - Evaluating and Enhancing the Quality of Record Keeping in the University Surgical Unit of the National Hospital of Sri Lanka: A Closed Loop Clinical Audit Using the Surgical Tool for Auditing Records (STAR) Scoring System**

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**Introduction**

Effective record-keeping is crucial in healthcare. This study aimed to assess and improve the quality of surgical records in the University Surgical Unit (USU) of the National Hospital of Sri Lanka (NHSL).

**Methods**

This prospective, quantitative, descriptive study included a sample of 92 patient records in two cycles. Records were scored using the STAR system, consisting of 50 components across six domains. Interventions were implemented between cycles. Pre- and post-audit scores comparison was made between the cycles.

**Results**

A significant increase in total score from a mean of 67.60  $\pm$  8.13 in first cycle to 78.04  $\pm$  7.25 second cycle was seen. All domains showed enhancement, with Subsequent Entries exhibiting the greatest increase (34.8%) and Anesthetic Records the least (3.31%). Discharge Summary domain achieved a near-perfect score of 94.44  $\pm$  56.14, though the diagnosis was documented in only 50% of records. Despite a 25.89% improvement, the Consent domain remained the lowest scoring (). Paired sample t-test results demonstrated statistically significant increase in total score between first and second cycles ( $t = -5.535$ ,  $p < 0.001$ ); Initial Clerking ( $t = -2.889$ ,  $p = .006$ ); Subsequent Entries ( $t = -7.509$ ,  $p < .001$ ); Operative Record ( $t = -3.102$ ,  $p = .003$ ); and Discharge Summary ( $t = -3.361$ ,  $p = .002$ ).

**Discussions and conclusion**

This study highlights the effectiveness of targeted interventions, including the use of templates and education, in improving the quality of surgical records. By implementing these recommendations, USU of NHSL can continue to enhance its surgical record documentation, ultimately improving patient care and safety.

**OP 45 - The outcome of implementing ERACS (Enhanced recovery after cardiac surgery) in a cardiac surgical unit - a descriptive study**

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**Introduction**

This study analyzes the cardiac surgeries done over a period of 1 year with regards to outcome of implementing ERACS in cardiac surgery.

**Methods**

This is a prospective descriptive study of all the cardiac surgeries performed in a single unit from 2023 June to 2024 May. There were 391 patients and the complete data is available for only 349 patients. Hard copies of the BHTs were used to make a data base and the analysis was done using SPSS version 23.0. ERACS protocol was practiced during the study period

**Results**

The mean age of patient population was 58.41 years ( $\pm$  8.662) and 70.5% patients were males. There were 270 (72.97%) OFFPUMP CABGs (coronary artery bypass grafts), 31 (8.37%) ONPUMP CABGs, 27 (7.29%) single vessel MIDCABS (minimally invasive direct coronary artery bypass grafts), 18 (4.86%) Multi Vessel MIDCABS, 7 (1.89%) open mitral valve repairs, 2 (0.54%) mini mitral valve replacement (MVR), 4 (1.08%) open MVR, 3 (0.81%) aortic valve replacement (AVR), 4 (1.08%) AVR + CABG, 1 (0.27%) MVR + TV ring annuloplasty, 1 (0.27%) ASD closure, 1 (0.27%) DVR (Double valve Replacement), 1 (0.27%) DVR and ASD closure, 1 (0.27%) repair of aortic dissection and 1 (0.27%) CABG + MV Repair. There were 9 (2.3%) in-hospital mortality due to acute left ventricular failure in three cases and six cases due to sepsis. 43 (12.4%) had post operative Atrial fibrillation. Acute kidney injury occurred in 19 (5.3%). The average ICU stay was 3.24 days ( $\pm$  0.905). The mean post-operative hospital stay was 6.91 days ( $\pm$  3.73). These results are better than the outcome of conventional protocol practiced in the past.

**Conclusion and discussion**

The implementation of ERAS in cardiac surgery is safe and leads to quicker recovery.

## **OP 47 - Surgical Treatment For Gastroesophageal Reflux Disease: Experience From A Tertiary Care Centre In Sri Lanka.**

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### **Introduction**

Gastro-oesophageal reflux disease (GORD) involves excessive reflux of gastric contents into the oesophagus. This study reviews laparoscopic fundoplication surgery at the National Hospital Kandy, describing epidemiological data, surgical practices, and outcomes.

### **Methodology**

A retrospective study was conducted on 21 patients who underwent laparoscopic fundoplication surgery from 2018 to 2024. Data on epidemiology, pre- and postoperative symptoms, and investigation results were analyzed. Outcomes were assessed one year post-surgery using the GERD Health-Related Quality of Life (HRQL) score, with significance tested using the paired t-test.

### **Results**

Among 21 patients, 14(63.6%) were male, with a mean age of 42 years (range 19-71). Reflux symptoms were reported by 20(95.2%) patients and heartburn by 16(76.2%). UGIE revealed hiatal hernias in 10(89.5%) patients. pH studies showed a Demeester score >14.72 in 12(85.7%) cases.

All surgeries were laparoscopic fundoplications: 18(85.7%) primary repairs and 3(14.3%) re-dos. Toupet fundoplication (TF) was performed on 17(76.2%) patients, and Nissen fundoplication (NF) on 4(23.8%). The mean hospital stay was 7.6 days (range 4-45). Complications included postoperative bleeding in one patient and wrap migration in another. Redo surgery was required in one case.

Postoperatively, 5(23.8%) patients required proton pump inhibitors (PPIs) for more than 3 months, with 40% of NF patients and 18.8% of TF patients needing extended PPI use. Dysphagia persisted in 25% of NF patients and 18.2% of TF patients after one year. Quality of life improved significantly post-surgery ( $p < 0.05$ ).

### **Conclusion**

Laparoscopic fundoplication at a Sri Lankan tertiary hospital significantly improved the quality of life for patients with

GORD, demonstrating the procedures effectiveness and safety.

## **OP 61 - Application of Colombo Classification of Functional Free Flaps to Tissue Transfer in a Tertiary Care Hospital in Sri Lanka**

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### **Introduction**

Free flap surgery is an advanced reconstructive microsurgical technique involving meticulous transfer of autologous tissues to a site of trauma or cancer surgery. Over time, numerous free flap classifications primarily focused on either the anatomy or composition of tissues than functional integrity. Conversely, emerging tissue transfer facilitates functional recovery apart from filling tissue voids. Thereby, the Colombo Classification of Functional Free Tissue Transfers (FTT) has been introduced.

### **Methods**

A retrospective cohort study was done amongst 59 patients who underwent FTT from January 2023 to April 2024.

### **Results**

69.5% of the sample underwent Functional FTT, amongst whom most (41.5%) underwent category 1C transfers. Other categories comprised: 12.2% - 1A, 14.6% - 1B, 9.8% - 2B, 4.9% - 2C, 4.9% - 3C and 12.2% - 3D. There were no FTT under 2A, 3A and 3B.

### **Discussion**

The Colombo Classification of Functional FTT is an effective method of classifying FTT in high functioning surgical units. All FTT performed can be clearly classified into one branch of the new classification system without confusion or overlap. Given the customized and unique nature of these functional FTT, desirable outcomes were observed in the variety of performed reconstructions.

### **Conclusion**

Majority of free tissue transfers in the unit are functional FTT. Toe transfers were the commonest type of functional FTT. All functional FTT were classifiable using the Colombo Classification of Functional FTT making it a comprehensive classification system.

## **OP 51 - Feasibility of Fast Track Discharge in Breast Cancer Patients undergoing Definitive Surgery and Impact on Quality of Life: A Prospective Study from Tertiary Care Center in India**

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### **Introduction**

Fast-track surgery, or fast-track rehabilitation, employs an interdisciplinary approach to expedite postoperative recovery and reduce morbidity. It emphasizes preoperative education, minimally invasive techniques, effective pain management, early mobilization, oral feeding, and avoidance of unnecessary interventions. While widely adopted, its application in breast cancer surgery, especially in resource-constrained settings like India, remains underexplored. This study evaluates fast-track discharge following breast cancer surgery in a tertiary care teaching hospital.

### **Methods**

Over two years, 106 breast cancer patients meeting inclusion criteria were enrolled at a tertiary care center in North India. They underwent breast-conserving surgery or modified radical mastectomy, with assessments using validated tools including visual analog scale (VAS), post-anesthesia discharge scoring system (PADSS), and Functional Assessment of Cancer Therapy-Breast (FACT-B4). Statistical analyses used SPSS 16.0.

### **Results**

Most patients (84.91%) achieved PADSS scores >9, indicating readiness for discharge within 48 hours postoperatively. Mean postoperative stay was 42.27 hours, with 92% undergoing modified radical mastectomy and 8% breast-conserving surgery. Pain management relied on analgesics, with decreasing needs over time. Three patients required readmission due to complications. Quality of life improved initially but some aspects returned to baseline after one month.

### **Discussion**

This study highlights the feasibility of early discharge post breast cancer surgery, given strict selection criteria and adequate support. Challenges include patient selection and post-discharge care provision. Tailored strategies are needed to optimize outcomes.

### **Conclusion**

Fast-track discharge in breast cancer surgery shows promise, especially in resource-limited settings. Further research is

needed to refine criteria and enhance postoperative care, improving overall patient outcomes.

## **OP 52 - Clinicopathological Characteristics and Quality of Life in patients with Idiopathic Granulomatous Mastitis**

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### **Introduction**

Idiopathic Granulomatous Mastitis (IGM) is a benign inflammatory disease that typically affects women around the age of thirty. This study explores pathophysiology, clinical characteristics, and effect of IGM on quality of life.

### **Materials and Methods**

A descriptive study was carried out on patients diagnosed with IGM at the breast clinic, Colombo South Teaching Hospital from Jan 2022 to May 2024. The WHOQOL-BREF questionnaire was used to assess quality of life.

### **Results**

A total of 50 patients, averaging 36 years who had IGM verified histopathologically, participated in the study. 22 and 28 patients had symptoms in right and left breasts, respectively. 39 patients presented with a mass, 28 had mastitis, 7 had fistulas, 11 had abscesses, and 2 had ulceration. These findings were consistent with ultrasonography. The majority (40) of the patients were treated with steroids while 11 patients received USS guided drainage. Notably, 22 people experienced side effects from oral steroids. Overall, the QoL was poor in the physical and psychological domains.

### **Discussion and Conclusion**

IGM commonly presents as a unilateral breast disease with features of chronic inflammation usually resulting in poor QoL. This study emphasizes the necessity for individualized treatment strategies by addressing the physical and psychological needs of the patient.

**OP 53 - Assessing patient satisfaction and functional outcome following Lumbar Coronal Hemi Laminectomy in patients over 40 years :A single centre study.**

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**Introduction**

Sciatica and backpain is a debilitating, degenerative condition affecting primarily the middle aged working class population impeding their quality of life.

**Methods**

A prospective analysis was done using the Sciatica Bothersome Index scoring system for procedures done between January and December 2023 with comparisons made before and after the procedure. Results were obtained over the phone. Complications and recurrence rates were also separately assessed. Patients included in the study were all above 40 having undergone Lumbar Coronal Hemi laminectomy. Those having undergone Fenestration, Microdissection, Total laminectomy and Fusion were excluded from this study.

**Results**

Data was collected from 27 patients. Mean age 56, Male to female ratio of 2:1 with a significant resolution of symptoms seen after surgery, scores analysed before and after,  $p < 0.01$  (Paired T test)

3 patients had mild surgical site infections, whilst two patients needed redo Hemi laminectomy and no reported incidence of Cerebrospinal fluid leak.

**Discussion**

Lumbar Coronal Hemi laminectomy is a procedure which allows us to address the problem of Disc prolapse, ligament and facet joint hypertrophy as part of a single operation without the assistance of a microscope (which is cost intensive and requires technical expertise). It has the added benefit of preserving the stability of the spine which is paramount in our patients who often engage in outdoor activities.

**Conclusion**

Lumbar Coronal Hemi Laminectomy results in a satisfactory resolution of symptoms with good patient outcome and quality of life.

**OP 54 - A novel self-retaining retractor for thyroidectomy – Experience from a single centre**

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**Introduction**

During thyroidectomy, assistants help is vital for adequate exposure to facilitate the surgeon in meticulous dissection. Sometimes assistants may be difficult to find in centers with limited human resources. To overcome this problem, a novel self-retaining device has been developed.

**Methodology**

This study is a prospective analysis of the safety and feasibility of this novel device. This device is a self-retaining retractor attached to the Jolls device and functions as a single unit. The curved blade allows rotation in both directions and central retractor allows linear retraction. The safety and feasibility were measured using a Likert scale (1 to 10). The questionnaire was given to six surgeons performing the thyroidectomy with the new device.

**Results**

Under physical properties, the device scored 9/10 for self-retaining capacity, 8/10 for light weightiness, 7/10 for adjustability and 8/10 for stable view. The surgeons scored 8/10 for ability to align in two directions and effective retraction. With regards to safety, 9/10 was scored for minimal trauma to skin and soft tissue. A score of 9/10 was given for effective sterilization. Overall 9/10 was given for simplicity and effectiveness. 83% of surgeons agreed that this device obviates the need for a hand held instrument and that surgical assistants can participate more actively in the surgery.

**Discussion and conclusion**

This novel self-retaining device has the potential to substitute manual retractors held by assistants giving a stable clear view of the operative field. This can be an invaluable tool for surgeons working in the peripheral regions in Sri Lanka

**OP 55 - Outcomes of Pediatric Kidney Transplants in a Single Tertiary Care Centre : A Retrospective Study**  
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**Professorial Surgical Unit , Teaching Hospital Peradeniya, Sri Lanka**

**Introduction**

Patient survival and quality of life is better after a kidney transplant compared with dialysis. In this retrospective study, we analyzed the results of pediatric kidney transplants in an 16-year period in our center

**Method**

We followed up 35 childre and adolescents who had undergone kidney transplants between 2006 and 2022. All the patients were younger than 18 years old and had been followed up for at least 2 years

**Results**

Study cohort includes 24 males (69%), 11 females (31%) with median age of 10 years at the time of transplant. The transplanted kidneys were taken from live donors in all the cases. Commonest cause of ESRF in the cohort is dysplastic kidneys (17/35) and the median waiting time for a kidney transplant is 8 months. Median duration of follow up is 7 years. 32 is alive at the time of follow up, 4/32 has developed chronic rejection requiring dialysis and all have retransplant plans. Common long term complications in the living cohort (except rejection) includes growth related complications (15/32) , Drug side effects (8/32), Recurrent infections (11/32), Bladder dysfunction (6/32). Patient reported quality of life is Excellent/Good in 26/32 of patients and Poor in 6/32. As reported by patients overall transition from childhood to adulthood is satisfactory in the whole group of alive patients.

**Discussion**

Kidney transplant is a safe and feasible procedure in children and adolescents based on patient and graft survival outcomes. In our center, survival following kidney transplant is satisfactory to world standards.

**OP 58 - Feasibilty And Outcome Of A Virtual Wound Clinic In A Surgical Unit**

**Umayanga Dehigama, Hasthaka Dissanayake, Sepalika Wijekoon, Nilushika Perera, Hasangi Gamage, Jeewantha Senavirathna, Malith Nandasena, Kanchana Wijesinghe**

**Department of Surgery, Faculty of medical sciences, University of Sri Jayewardanepura, Sri Lanka**

**Introduction**

Patients with chronic wounds frequently return to the hospital for minor issues following discharge. This overburdens the health system as well as the patients. This study describes the feasibility and outcome of a virtual wound clinic in a surgical unit.

**Method**

Patients with chronic wounds who have access to smart phones that require regular wound dressing on discharge were invited to join the virtual clinic comprising of the Consultant surgeon, ward registrar, residence house officer and two nursing officers. Patients are given instructions to upload images of the wounds regularly and advice is given via telemedicine at a stipulated time.

**Results**

Mean age of study population was 62.3 + 3.78 years and majority were males (24). 80% had diabetic wounds due to vasculopathy and neuropathy. 60% used their smart phone with the help of a family member. Mean response time to their questions was 1.87 days. Participants have saved on average Rs.1266.66 per each visit to hospital and were able to avoid mean time of 3.59 hours for hospital visits weekly. Wound improvement was seen in 80% of patients by size on one month assessment in ward. Majority of patients (90%) think that this concept is useful.

**Conclusion**

Study shows significant saving of time and money for patients and improvement of the size of the wound. This study supports the concept of establishing telemedicine in wound care in a surgical setting to overcome the problems that patients face and to reduce the burden on the health care system.

## **OP 57 - Prevalence of LARS and comprehensive evaluation of factors influencing Lower Anterior Resection Syndrome (LARS)**

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### **Introduction**

LARS is a group of symptoms that occur following sphincter-preserving rectal surgeries which affects post-operative quality of life significantly. This study aimed to determine the prevalence, and factors influencing LARS on patients undergoing lower anterior resection at tertiary care centre.

### **Methods**

Telephone follow up was conducted using the validated LARS questionnaire among patients who underwent LAR during 2012-2024. The patients were categorized as low (0-20), minor (21-29) and major (31-42) LARS groups.

### **Results**

30/50 patients responded. The median age was 64 years which ranged from 40 to 83 years. Median BMI – 23.01. Male: female was 1.23:1.16 patients (53.3%) had comorbidities. Most patients (93.3%) underwent laparoscopic surgery. Tumor locations were in the mid (46.7%) and lower rectum (26.7%). Post-surgical complications rate was 6.7%. A defunctioning ileostomy was performed in 70% of participants. Majority had no LARS 18 (60%) while minor LARS in 7 (23.3%) and major LARS in 5 patients (16.7%). There were no statistically significant correlations found between LARS outcomes and gender ( $\chi^2=1.818$ ,  $p=0.403$ ), surgical approach ( $\chi^2=3.367$ ,  $p=0.186$ ), tumour location ( $\chi^2=3.515$ ,  $p=0.742$ ), neoadjuvant therapy ( $\chi^2=0.109$ ,  $p=0.947$ ), postoperative complications ( $\chi^2=1.964$ ,  $p=0.375$ ), ileostomy status ( $\chi^2=1.156$ ,  $p=0.561$ ), or BMI ( $\chi^2=0.147$ ,  $p=0.055$ ). The Pearson correlation coefficient indicates a weak positive relationship between BMI and LARS category, while the significance value suggests no significant linear relationship ( $r=0.055$ ,  $p=0.835$ ).

### **Conclusion**

The incidence of LARS was lower than in published literature. This could be due to better outcome of laparoscopic surgery or the low sensitivity of the LARS questionnaire in the Sri Lankan context.

## **OP 59 - Postoperative Outcome And Complications Of Fast-Track Colorectal Surgery And Traditional Colorectal Surgery**

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### **Introduction**

Colorectal surgeries vary in complexity, with fast-track approaches aiming to expedite recovery by minimizing stress responses. Postoperative strategies like multimodal analgesia and early mobilization enhance outcomes. Despite proven benefits, some practitioners still favour traditional methods due to concerns or unfamiliarity. Thus, comparative studies are crucial for guiding clinical decisions and advancing patient care.

### **Method**

A comparative cross-sectional study evaluated outcomes and complications in patients who underwent fast track and traditional colorectal surgery from 2016 to 2023. Around 300 patients were sampled, meeting specific criteria, with data collected retrospectively and analysed statistically.

### **Results**

The study encompassed 298 patients undergoing colorectal surgery, with 68.8% opting for fast track and 31.2% for traditional procedures. Surgical Site Infection (SSI) prevailed as the primary complication in both groups. Remarkably, traditional surgery exhibited a mortality rate of 0.7% ( $n=2$ ), whereas fast track surgery reported no fatalities. Hospital stays were notably shorter for fast track surgery, with a median duration of 5 days (range: 2-18), compared to 7 days (range: 4-20) for traditional surgery. In pain management strategies emerged, as fast track surgery favoured multimodal analgesia and regional anaesthesia, contrasting with the prevalent use of opioids in traditional colorectal surgery.

### **Discussion and Conclusion**

Fast track surgery showed reduced complications, absence of mortality, and shorter hospital stays, emphasizing the benefits of multimodal analgesia and regional anaesthesia. In conclusion, it highlights superior outcomes compared to traditional colorectal surgery.

## **OP 60 - Compliance on Surgical Safety Checklist during Routine General Surgical Procedures: The Practice at a District General Hospital.**

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### **Introduction**

The majority of in-hospital adverse events take place in the operating theatre and 43% of these are preventable. A surgical safety checklist was introduced by the Ministry of Health, Sri Lanka in 2013 to minimize avoidable mishaps.

An audit was conducted from November 2023 to December 2023 at a District General Hospital, Sri Lanka. Data was collected from Surgical Safety Checklists of fifty patients who underwent routine surgical procedures. The mean age of the sample was 50.

The highest number of questions filled checklist had 25 while the lowest was 6 out of 41. The "Patient details" component of the checklist was completed only in 22/50 (44%). and none were filled in 16(32%).

### **Results**

The "Before induction of anaesthesia" and "Before start of surgical intervention" components were not completed in any of the checklists. The "Before patient leaves the theatre" component was completed only in 4(8%). All the questions directed towards the nurses were completed in 12(24%) and none were answered in 16(32%). None of the checklists had completed at least 1 question which was directed towards the surgeon or the anaesthetist.

### **Conclusion**

Findings indicate the nonadherence to the safety checklist despite the availability, highlighting the importance of encouraging and educating all the surgical team members and sharing responsibilities within the team to deliver safe surgical care to patients.

## **OP 62 - Impact of the Enhanced Recovery After Surgery (ERAS) protocol on different age groups undergoing laparoscopic colorectal cancer surgery**

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### **Introduction**

This study evaluates the efficacy of (ERAS) in patients undergoing laparoscopic colorectal cancer surgery (LCRS) in different age groups.

### **Methods**

A retrospective analysis was conducted on LCRS data base. Postoperative hospital stay, haemoglobin, serum albumin, CRP levels on day 4, and complication rates were assessed. The Kruskal-Wallis test was used to compare complications between age groups, and Pearson correlation coefficients assessed the association between age and biochemical markers.

### **Results**

Two-fifty patients were included. Male: female was 142: 108. Mean age was 62.83. The median postoperative hospital stay was 5days ranging from 3-31days. Haemoglobin levels averaged  $11.27 \pm 1.94$  g/dL, albumin  $27.27 \pm 17.24$  g/L, and day 4 CRP  $81.99 \pm 66.11$  mg/L. Complications occurred in 13.6% of patients, primarily surgical site infections (4.4%) and ileus (2.4%). The Kruskal-Wallis test indicated no significant differences in complications across age groups ( $\chi^2(4) = 5.035$ ,  $p = 0.284$ ). Pearson correlation showed weak, non-significant relationships between age and haemoglobin ( $r = -0.102$ ,  $p = 0.396$ ), albumin ( $r = -0.396$ ,  $p = 0.180$ ), day 4 CRP ( $r = -0.111$ ,  $p = 0.349$ ), and postoperative stay ( $r = -0.085$ ,  $p = 0.312$ ).

### **Conclusion**

ERAS protocol has shown no significant age-related differences in complications or recovery markers in our cohort. Further studies with larger numbers could refine age-specific adjustments within ERAS protocols to optimize outcomes further.

**OP63 - Peri-Operative and Quality of Life Outcome after Endoscopic Extended extraperitoneal repair (EeTEP) for Ventral Hernia – a prospective study from Tertiary Care Centre**

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**Introduction**

Laparoscopic Ventral Hernia (VH) Repair is a routine surgical procedure in clinical settings. The use of composite mesh and tackers substantially increases the overall costs of laparoscopic repair. In endoscopic extended extraperitoneal repair (EeTEP) hernioplasty, polypropylene mesh is placed in the retro-rectus space, minimizing the need for mesh fixation.

**Methodology**

N=45 patients were operated on for VH by EeTEP hernioplasty between September 2018 to June 2022 in the Department of Surgery, King George Medical University India. Perioperative outcome measures included intraoperative surgeon's satisfaction score, surgeon difficulty index, duration of operation and intraoperative complication. Postoperative outcomes included post-op pain by VAS scale, abdominal wall function, abdominal wall strength measurement, duration of hospital stay and quality of life (measured by CCS (Carolina Comfort Scale) and HerQoL (Hernia Related Quality of Life)).

**Results**

The mean defect size was  $4.62 \pm 1.2$  cm. There were no intraoperative complications, with a mean surgery duration, hospital stay and surgeon's satisfaction score of  $167 \pm 32$  minutes,  $3.45 \pm 1.2$  days and  $8.75 \pm 1.6$ , respectively. Postoperative pain, as assessed by VAS exhibited a significant decrease. N=8 developed seromas, managed conservatively. Abdominal wall strength and quality of life outcomes demonstrated significant improvement at 1 and 3 months. N=2 experienced recurrence after 18 months of follow-up in operated cohort.

**Conclusion**

EeTEP is a safe and feasible approach with lower complication rates. It is a cost-effective procedure compared to intraperitoneal onlay mesh repairs with composite mesh and tackers, particularly beneficial for developing countries like India.

**OP 02 - Practices and Knowledge about Diabetic Footcare at a Tertiary Care Hospital in Sri Lanka**

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**Introduction**

Increasing national prevalence of diabetes has necessitated prioritization of self-foot care as a crucial factor in preventing diabetic foot complications.

**Methods**

A prospective cross-sectional study was carried out on 92 in-patients with diabetes, admitted for non-foot-related issues. Data on knowledge and practice of diabetic foot care was collected via a pre-tested interview-based questionnaire and clinical examination. Ulcer risk was via modified ADA diabetic foot risk classification.

**Results**

Majority were middle-aged (median -63 years), females (56.5%), attending regular clinic follow-up (80.4%). Median duration of diabetes was 10.2 years. Only 43% have previously received formal foot care advice. 53.3% scored a minimum of 80% for knowledge on foot care. Common knowledge deficiencies were regarding the harm of brushing feet (57.6%) and preventing skin drying (52.2%).

Majority didn't examine their feet daily (72%), didn't prevent skin drying (71%), and didn't reduce interdigital fungal infections (50%). Rubber slippers (81%) were the primary footwear. Only 6% used protective footwear. Ulcer risk was high and moderate in 24% and 25% respectively. Daily foot examination was performed only by 23% of high-risk stratified patients. Univariate analysis showed no significant patient and disease-related variables affecting 'good' foot care practice.

**Discussion and Conclusion**

Despite regular clinic attendance, footcare practices were sub optimal. The importance of daily foot examination needs emphasis. The finding that 50% of the study population are at elevated risk of ulceration highlights the importance of addressing this issue. An effective mechanism is required to increase awareness and practice of diabetic footcare to prevent complications.

### **OP 03 - A comparative evaluation of ultrasound and frozen section analysis in predicting margin status after breast conservation surgery in patients with ultrasound-detectable breast carcinoma**

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#### **Introduction**

Positive margins following breast-conserving surgery (BCS) frequently lead to reoperations and is the strongest predictor of local recurrence. We aimed to evaluate the performance of ultrasound (USG) and frozen section (FS) in predicting the margin status of lumpectomy specimens.

#### **Methods**

Patients with ultrasound-detectable breast carcinoma amenable to BCS, primarily or post-neoadjuvant chemotherapy (NACT) were prospectively enrolled. All patients underwent excision of the tumor with a >1 cm margin and margins were assessed with USG and then FS. Any margin <2 mm on USG was recorded as positive on ultrasound, while for FS, positive margins were defined as “ink on tumor”. Margin status on H&E stained sections was considered the gold standard. We calculated the patient-wise and margin-wise sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and accuracy for both modalities.

#### **Results**

Thirty (30) patients, with a mean age of 45.6±12.7 years were included. Eleven patients (36.7%) received NACT to facilitate BCS. Patient-wise sensitivity, specificity, positive predictive value PPV, NPV, and accuracy for USG and FS were 75 versus 100%, 73 versus 84.6%, 30 versus 43%, 95 versus 100%, and 73 versus 86%. Margin-wise sensitivity, specificity, PPV, NPV, and accuracy for USG and FS were 86 versus 88%, 95 versus 97%, 46 versus 58%, 99 versus 99%, and 95 versus 96%.

#### **Discussion and Conclusions**

Although FS performed better than USG, the high patient-wise and margin-wise NPV of USG mean that false negatives are rare with USG. USG of lumpectomy specimens can be successfully used as a rapid intraoperative tool for margin assessment in patients undergoing BCS for USG-detectable breast carcinomas.

### **OP 04 - Robotic Vs Open Pancreatoduodenectomy for Periampullary Neoplasm: A Retrospective Analysis of Peri-operative and Oncologic Outcomes**

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#### **Introduction**

Though Open Pancreatoduodenectomy (OPD) is the gold standard, Robotic Pancreatoduodenectomy (RPD) is popular due to technical ease with robotic armamentarium and claims to decrease post-operative morbidity. This study compares the perioperative and oncologic outcomes of RPD performed for Periampullary neoplasms (PANs) with OPD.

#### **Methods**

This is a retrospective study conducted from January 2018 to March 2023 for patients who underwent either OPD or RPD for PANs. Demographic, peri- & post-operative outcomes with oncological parameters [Disease-free survival (DFS) and overall survival (OS)] were analysed and compared. Confounding factors were matched using 1:1 propensity score matching (PSM).

#### **Results**

A hundred patients were analysed (30 in RPD and 70 in OPD) and both groups were similar in demographics. Post-operative morbidity in terms of clinically relevant pancreatic fistula, post-pancreatectomy haemorrhage, delayed gastric emptying and Clavien-Dindo ? Grade 3 complications were similar in both groups. A significant proportion of patients had surgical site infection in the OPD compared to RPD (31.4% Vs 6.7,  $p=0.008$ ); however, the median postoperative hospital stay was similar in both groups. After PSM (26 patients in each group), the RPD group had significantly more operative time (480 min v/s 360 min,  $p=0.01$ ) and less blood loss (300 ml v/s 400 ml,  $p=0.02$ ). The R0 resection rate, lymph nodal yield, lymph nodal positivity, DFS and OS were similar in both groups.

#### **Conclusion**

The robotic approach for PD is technically safe and feasible with equivalent resection quality and oncological outcomes compared to the open approach. RPD has non-inferior postoperative morbidity, DFS and OS in comparison to OPD.

**OP 06 - Aesthetic and Surgical Outcomes following surgery for breast tumors in the Upper Inner Quadrant**  
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### **Background**

Oncoplastic breast surgery assists in achieving a good aesthetic outcome in breast surgery. However, tumors located in the upper inner quadrant (UIQ) pose a challenge to the surgeon due to visible scars and significant deformities. This study describes the aesthetic and surgical outcomes following surgery for UIQ breast tumours.

### **Materials and Methods**

This is a prospective study of 38 patients diagnosed with UIQ breast cancer at a breast clinic from 2022 to 2023. All patients were operated following multi-disciplinary decision. Aesthetic outcomes were measured at 12 months by an independent observer and by the patient using the aesthetic item scale. Surgical complications were classified using the Clavien–Dindo system.

### **Results**

8 patients underwent batwing incision-based surgery and 12 patients underwent the matrix rotation surgery (MRS) while 18 underwent the modified matrix incision surgery. Wound dehiscence was seen in two patients. Patient reported aesthetic outcome demonstrated good response to breast volume, shape, symmetry and nipple areola complex in all patients. Lower aesthetic outcome was reported in scar visibility with patients who have undergone the MRS. Among the patients who scored low for global aesthetic judgment, 94% stated the restriction in the choice of clothing due to visible scar and 90% had low self-esteem with MRS.

### **Conclusions**

Our results demonstrate that patients are concerned about scar visibility in UIQ tumours and superior aesthetic outcome is noted with modified matrix technique.

**OP 39 - Neoadjuvant Chemotherapy Vs Chemoradiotherapy for Malignancy of Oesophagus: A Prospective Comparative Study**  
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### **Introduction**

Neoadjuvant chemoradiation (NACRT) followed by esophagectomy has become the standard of care in the management of oesophageal carcinoma. This study was intended to compare neoadjuvant chemotherapy (NACT) with NACRT for squamous cell carcinoma (SCC) of the oesophagus in terms of pathological response and oncological benefit.

### **Methods**

A prospective comparative study was conducted from July 2019 to July 2023. Either NACT or NACRT was given to resectable oesophagus cancer (clinical staged IB–IIIC) patients based on their choice after counselling and proper consent. Post neoadjuvant therapy, all patients underwent McKeown's esophagectomy. Radiological and pathological response, peri-operative morbidity, recurrence-free survival (RFS) and overall survival (OS) were compared.

### **Results**

Out of 75 patients enrolled, after exclusion, 30 patients had received NACT, and 33 received NACRT. The pre-operative demographics were comparable, and the complications grade after neoadjuvant therapy was similar in the two arms. The median number of LNs retrieved (21 vs 19,  $p=0.19$ ), R0 resection rate (100% vs 94%) and perineural invasion were similar (36.7% vs 24.2%,  $p$ -value: 0.283) in both arms. Although the complete pathological response, downstaging of pT and pN were significantly better in the NACRT groups, at a median follow-up of 32.5 (20.75 – 48) months, both groups had similar RFS (57 vs 36 months,  $p=0.831$ ) and OS was yet to reach.

### **Conclusions**

NACT has comparable oncological and survival outcomes vis-a-vis patients receiving NACRT. NACT is a feasible alternative to NACRT in oesophagus SCC, especially in situations where radiotherapy is not feasible.

**OP 65 - Even Sub-optimally Excised Superficially Invasive Squamous Cell Carcinomas of Anus (SISCCAs) Can Be Managed Preferably by Surveillance Alone in a High Resolution Anoscopy (HRA) Practice**

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**Introduction**

SISCCAs is a small subvariant of T1 squamous cell carcinoma (SCC) of the anus and may be adequately treated with complete surgical excision alone. We evaluated differences in the initial management between an HRA service and standard colorectal practice.

**Methods**

A 10-year prospective cohort study of patients with SISCCA-like lesions between April 2014 and March 2024 at University Hospitals Dorset, UK. A SISCCA-like lesion was defined as a horizontal tumour size < 15mm.

**Results**

23 patients were identified, with the median age of 63 years. 21 initial biopsies (91%) were performed by non-HRA colorectal specialists, of which 61% were unexpected diagnoses.

All of 10 specimens with complete resection were excised as a complete excision biopsy, whereas 5/13 (38%) biopsies with uncertain or positive margin were fragmented ( $P=0.025$ ). 9/13 (69%) biopsies with positive or uncertain margins were referred to our HRA service, all of them were suitable for HRA surveillance. One patient withdrew from surveillance and one patient developed a synchronous rectal SCC subsequently underwent chemoradiotherapy (CRTx). The remaining 7/9 patients were successfully managed with local resection alone and HRA surveillance. All 4 patients, who were managed under standard colorectal care, underwent CRTx. No mortality or adverse effects were recorded amongst the cohorts who were managed with local excision and HRA surveillance, whereas all four patients, who were treated with CRTx, experienced adverse effects, Clavien-Dindo ? 2 ( $P=0.0007$ ).

**Discussion**

Even sub-optimally excised SISCCA like lesions can be salvaged and preferably managed safely by surveillance alone with HRA expertise.

**OP 66 - Exploring Radical Prostatectomy Outcomes for Localized Prostate Cancer: Findings from a Single-Center Study**

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**Indroduction**

Prostate cancer ranks as the second most common cancer in men globally. In Sri Lanka, its incidence varies from 5.8 to 12.4 cases per 100,000 individuals. Despite historical concerns about complications, radical prostatectomy is extensively used for treating localized prostate cancer. Our goal is to assess the treatment approaches and results linked with radical prostatectomy in this context.

**Methodology**

A retrospective descriptive analysis of 39 cases of localized prostate cancer was performed. Data were gathered from January 2017 to December 2023 using computer databases and clinical questionnaires at Sri Jayawardanapura General Hospital. The analysis, conducted using SPSS, concentrated on oncological outcomes, including disease-free survival (DFS) and overall survival (OS), as well as the incidence of erectile dysfunction and urinary incontinence during patient follow-up.

**Results**

The study included 39 patients aged 56 to 82 (average 68.6 years). Follow-up averaged 30 months. Of those treated, 21 underwent radical prostatectomy: 15 experienced erectile dysfunction, none suffered permanent urinary incontinence, and 5 had temporary incontinence within 3 months post-surgery. Minor perioperative complications affected 18% of patients, with no deaths within 30 days post-surgery. Biochemical recurrence occurred in three patients; overall survival and disease-free survival rates were 95% and 88%, respectively.

**Conclusion**

Skilled surgical techniques and experience contribute to better outcomes, especially in achieving higher rates of continence post-surgery. However, erectile dysfunction remains a common concern. Current data on overall and disease-free survival are inadequate for definitive decision-making. Further multi-center studies are needed to comprehensively evaluate these outcomes.

## POSTER PRESENTATIONS

**P 01 - Enhancing Neurosurgical Practice through adherence to Operative Note Guidelines: An Audit**  
**PGN Danushka, MR Jayasinghe, M Osudhihansi, RGN Punsara, D Attanayake, NHSL, Sri Lanka**

**Introduction**

Careful and comprehensive operative note documentation is a crucial element of surgical procedures. This study aims to evaluate the quality of operative note-writing within a neurosurgical unit in Sri Lanka, ensuring adherence to the Royal College of Surgeons of England guidelines.

**Methods**

An audit was conducted in a neurosurgical unit in National Hospital of Sri Lanka. Data was collected from 192 operative notes over three months. An educational program on documentation was conducted highlighting the Royal College of Surgeons guidelines. A standardized operative note template was introduced and made freely accessible. Wilcoxon sign rank test was used.

**Results**

During the baseline survey, the least frequently mentioned were the signature (1%), prosthesis serial number (1%), estimated blood loss (3%), complications (5%), reasons for extra procedures (11.9%), and name of anaesthetist (19.8%) respectively. Stating the post-op antibiotics and applicability of DVT prophylaxis were 23.8% and 0%.

Following the intervention, all of them showed significant improvement over 60%: signature (92.3%), prosthesis serial number (93.4%), estimated blood loss (70.3%), complications (96.7%), reasons for extra procedures (73.6%), and name of anaesthetics (83.5%). Antibiotic prophylaxis and DVT prophylaxis were mentioned in 100% and 69.2%, op notes respectively ( $p < 0.05$ ).

**Conclusion**

The quality of operative note documentation significantly improved post-intervention. It is recommended that the neurosurgical unit adopt a standardized format for operative notes to ensure accurate documentation of all the necessary information.

**PP 02 - Assessment of gender differences in pre-op parameters and early post operative outcome after ERAS based Laparoscopic colorectal cancer surgeries at a tertiary centre.**

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**Introduction**

Enhanced Recovery After Surgery (ERAS) protocol has improved colorectal cancer (CRC) surgery care, but the data on impact of gender on ERAS is scarce. This study examines gender differences in preoperative parameters and early postoperative outcomes of ERAS-based laparoscopic CRC surgeries.

**Methods**

A retrospective analysis was done from 2012 to 2024 in ERAS database at the University surgical unit of the CSTH. ASA grade, MET score, complications, Hb, recovery times, and CRP were analyzed using Pearson Chi-Square and t-Tests.

**Results**

Two-fifty patients included. Male: female was 1:0.76. Type of surgeries were; AR (N=139, 55.6%), Sigmoid colectomy (N=41, 16.4%), APR (N=22, 8.8%), and right hemicolectomy (N=22, 8.8%). ASA grades were; 1 (N=78, 31.2%), 2 (N=132, 52.8%), 3 (N=4, 1.6%). MET scores were <4- 6 (2.4%), 4-7- 186 (74.4%) , >7 - 8 (3.2%) . Postoperative complication rate (N=34) was 13.6%; including 8 surgical site infections, 2 anastomotic failures, and 4 ileus Gender did not significantly correlate with ASA grade ( $X^2(2) = 3.261$ ,  $p = 0.196$ ), MET score ( $X^2(2) = 1.338$ ,  $p = 0.512$ ), or complications ( $X^2(10) = 14.472$ ,  $p = 0.153$ ). Significant gender difference was observed in serum Hb levels ( $t(70) = -2.487$ ,  $p = 0.015$ ), with higher levels in men. There were no discernible variations in recovery times. ( $U = 2198$ ,  $p = 0.189$ ) or CRP levels ( $U = 528$ ,  $p = 0.288$ ).

**Conclusion**

No significant gender differences among ERAS patients in Complications, recovery time or pre-op biochemistry

**PP 03 - Audit on fasting times prior to elective surgeries -  
Single center experience at a tertiary care hospital  
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**Introduction**

Preoperative fasting is routinely practiced prior to elective surgeries in view of minimizing aspiration risk during induction of anesthesia. Although International guidelines advocate importance of preoperative fasting, they also emphasize on ill effects of prolonged fasting. This audit was carried out to assess the adherence to international guidelines with regard to preoperative fasting periods in a single surgical unit.

**Methods**

This audit was carried out over a period of 4 months from January to April 2024. Data was retrieved from adult patients, who underwent elective surgery, by a questionnaire conducted by the principal investigator. Standard fasting time for solid foods and clear fluids were taken as 6 hours and 2 hours respectively in accordance to European Society of Anaesthesiology – Guidelines.

**Results**

Of 72 patients included in the study, 81% (n=58) were males and 19% (n=14) were females. Median fasting time for solids was 14.3 hours and for clear fluids, 10.3 hrs. 82% (n=59) of patients underwent prolonged fasting (>12 hours) for solids and 44% (n=24) underwent prolonged fasting for clear fluids. All the patients (n=72) fasted more than 6 hours for solids and except for 1 patient all the others (n=71) fasted more than 2 hours for clear fluids.

**Conclusions**

Despite international consensus on duration of preoperative fasting, patients continue to fast prolonged lengths of time. Educating the staff including doctors, nurses as well as patients on adherence to such, can be recommended to overcome this problem. Re-audit after such collective and collaborative effort would be beneficial.

**PP 04 - Clinico-pathological characteristics of patients with malignant liver lesions: preliminary results from an HPB surgical unit**

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**Introduction**

Liver malignancies are the fourth commonest cause of cancer-related deaths globally. Of these, secondary liver malignancies are more common, especially colorectal metastases. This study studies the demography, clinicopathological features and management of malignant liver lesions (MLL) in a tertiary hepatobiliary center.

**Methods**

A prospective study was conducted on patients with MLL (n=44) presenting from May 2023 – May 2024. Data on clinicopathological and radiological features were obtained from a custom-made database, followed by a descriptive analysis.

**Results**

The majority were males (84%) with a mean age of 63.9 (38-82) years. Most patients (47.7%) were from the Colombo district. Constitutional symptoms were common (59%). Alcohol (n=25, 56.8%) and diabetes (n=24, 54.5%) were major associations, with (n=11, 25%) diagnosed with chronic liver disease. Most lesions on CT were multifocal (n=23, 52.2%), followed by solitary lesions (n=17, 38.6%). Primary malignancies included HCCs (n=19, 43.1%), intrahepatic-cholangiocarcinomas (n=3, 6.8%) and combined HCC/Cholangiocarcinoma (n=2, 4.54%). Metastases were mainly from the pancreas (n=6, 13.6%), large bowel (n=5, 11.3%) and distal CBD (n=4, 4.54%). Management included palliation (n=20, 45.4%), hepatectomy (n=13, 29.5%), TACE (n=6, 13.6%), and ablative therapy (n=3, 6.8%). Surgery included right hepatectomy (n=4, 30.7%), left lateral sectionectomy (n=4, 30.7%), non-anatomical resection (n=2, 15.3%), segmentectomy (n=2, 15.3%) and parenchymal sparing hepatectomy (n=1, 7.69%).

**Conclusion**

The clinical and demographic spectrum of malignant liver tumors observed in this cohort are similar to that in Asia.

However, liver secondaries in Asia predominantly originates from lung and colorectal primaries compared to pancreatic and colorectal origins in our cohort, which affects survival rates.

#### **PP 05 - Clinical characteristics and outcomes in hilar cholangiocarcinoma: A 6-year experience**

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##### **Introduction**

Hilar cholangiocarcinomas (HC) are associated with poor outcomes. This study outlines the demography and outcomes of patients with HC from a single HPB surgical unit in Sri Lanka.

##### **Methods**

A retrospective analysis of the unit HC database from 2019 to 2024 was done.

##### **Results**

Forty-eight patients were included, with a mean age of 63.5 years; 29(60.4%) were male. Majority were ASA II (n=19,39.6%). The most common symptom was obstructive jaundice (n=37,77.1%), followed by anorexia and weight loss (n=30,62.5%). The mean duration of symptoms on presentation was 3 months. Most tumours were Bismuth type 4 (n=12,25.0%) and type 1(n=3, 6.3%), type 2 (n=9, 18.8%), type 3A (n=5, 10.4%), type 3B(n=6,12.5%). Staging laparoscopy was performed in 22 (45.8%) patients, with 11 revealing metastatic disease. 39 (77.1%) patients were inoperable, and only 9(18.8%) lesions were resectable. However, surgery was performed in only 6 (12.5%). There were two patients with poor performance status and one with cirrhosis which precluded curative resection. The majority (n=42,87.5%) received palliative care. Metastatic disease was found in 23(47.9%). Surgical procedures included extended right hepatectomy+extrahepatic biliary resection(EHBR) and hepaticojejunostomy (n=4) and left hepatectomy with EHBR+hepaticojejunostomy(n=2). Other

interventions included ERCP+palliative biliary stenting (n=17,35.4%), external biliary drainage (n=15,31.3%), PTC (n=6,12.5%),EUS-BD (Hep-Gas) (n=1). Post-operative complications included pneumonia(n=3) and transient liver dysfunction(n=2). There was one postoperative mortality due to post-hepatectomy liver failure.

##### **Discussion and Conclusion**

Locally advanced or metastatic disease and poor patient fitness have led to poor outcomes for hilar cholangiocarcinoma. Early referral to specialized surgical units should be emphasized

#### **PP 06 - Pattern of abdominal injuries in adults presenting to a tertiary care center in Sri Lanka**

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##### **Introduction**

Abdominal injuries are associated with 10- 31 % mortality. This study presents a series of laparotomies done on patients with abdominal trauma at accident and emergency service of the National Hospital of Sri Lanka (NHSL)

##### **Methodology**

Patients who underwent laparotomy following abdominal injuries from June to November 2023 were included. Data on demography, cause of injury, organs injured, type of injury and immediate perioperative mortality were collected from the operation theater register.

##### **Results**

47 patients were included with 41 males (87.23%). Majority of abdominal trauma was due to stab injury (20/47 - 42.55%) followed by road traffic accidents in 10 (21.27%). Number of stab injuries were significantly high ( $p < 0.00001$ ) compared to other studies. 40 (85.10%) had penetrating injuries and 6(14.89%) had blunt injuries. However, this difference was not statistically significant ( $p = 0.9$ ). Intraoperative findings were 17 (36.17%) bowel injuries, 11(23.40%) liver injuries, 7 (14.89%) splenic injuries. Incidence of bowel injury (36.17%) was significantly high ( $P < 0.00001$ ) Bowel injury following penetrating injuries

occurred in 40.00 % however this difference was not statistically significant ( $p=0.191477$ ) There were 6 (12.76%) perioperative mortality in this series. 4 (8.51%) of these were following penetrating abdominal injuries.

### Discussion and Conclusion

Laparotomy for abdominal injuries contribute to 50.00 % of all major surgeries. A significantly large number of stab injuries were found in this study ( $p<0.00001$ ). This probably indicates the increase in violence in the community.

### PP 07 - Perception of Fertility among a cohort of patients with Inflammatory Bowel Disease in Sri Lanka

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#### Introduction

The relationship between fertility and inflammatory bowel disease (IBD) is a significant concern for both sexes, as it frequently affects patients during their reproductive years.

#### Methods

IBD patients following up at a single gastroenterology unit in Sri Lanka were enrolled in this prospective descriptive study.

#### Results

Of 64 patients, 86% ( $n = 55$ ) had ulcerative colitis (UC), and 14% ( $n = 9$ ) had Crohn's disease (CD). The mean age was 43 (range 25–67), with a male-female ratio of 1.4:1. The majority, 78% ( $n = 50$ ), perceived that IBD didn't affect fertility. Twenty-two percent ( $n = 14$ ) felt it reduced fertility, with 7 fearing infertility. The majority, 77% ( $n = 49$ ), had no children after the onset of symptoms of IBD; among those, 42 have never had children. Eleven patients had fewer children than expected, 09 had difficulty conceiving, and 14 had sought a medical opinion for fertility. Eight patients ended up losing their pregnancies, and significantly, three of them attributed the pregnancy loss to IBD ( $p = <0.001$ ). Twelve patients were "voluntarily infertile." The common reasons were fear about medication teratogenicity ( $n = 7$ ), genetic risk of IBD in offspring ( $n = 6$ ), inappropriate medical advice on IBD ( $n = 4$ ), and fear of IBD-related congenital abnormalities ( $n = 3$ ).

### Conclusion

Patients' perceptions of reduced fertility due to IBD highlight its importance. Voluntary infertility and pregnancy loss attributed to IBD cannot be accepted. Addressing fertility and pregnancy outcomes through counselling is crucial for informed patient decisions.

### PP 08 - Analysis of recurrence rates, disease-free survival, and distal metastasis following ERAS implemented laparoscopic colorectal surgery: A multi-centre retrospective study.

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#### Introduction

This study aims to evaluate the long-term oncologic outcomes of (ERAS) protocols implemented in colorectal cancer surgery which includes recurrence rates, disease-free survival (DFS) and distal metastasis,

#### Methods

Retrospective analysis was conducted on the colorectal database of tertiary care centre. A chi-squared test was used to assess the degree of significance.

#### Results

248 patients were included, with a male-to-female ratio of 1:0.76 (mean age:  $62.83 \pm 12.96$  years). The median follow-up was 3.68 years. The recurrence rate was 2.4% ( $n = 6$ ). All recurrences were pelvic, with no anastomotic recurrences reported. Most of the recurrences were rectal tumours in patients who had undergone AR for previous rectal tumours, diagnosed during follow-up CECT. An 84% DFS was observed among 95 patients for the 5-year follow-up period. Distal metastasis was evaluated in 86 patients: 10 (4%) metastasis was present (M1), 39 (15.7%) had no metastasis (M0), and 37 (14.9%) were not assessed (Mx). There was no statistically significant correlation between recurrences and gender ( $\chi^2 = 0.477$ ,  $p = 0.490$ ), ASA grade ( $\chi^2 = 0.165$ ,  $p = 0.921$ ), MET score ( $\chi^2 = 0.367$ ,  $p = 0.832$ ), tumour stage ( $\chi^2 = 0.828$ ,  $p = 0.363$ ), involved bowel segment ( $\chi^2 = 4.723$ ,  $p = 0.580$ ), or surgical procedures ( $\chi^2 = 4.885$ ,  $p = 0.430$ ).

#### Conclusion

This cohort has a relatively higher DFS rate with low local recurrence rates compared to the literature. No statistically significant association was found between tumour recurrence and gender, stage, surgery, MET Score, ASA grade or tumour

location.

**PP 09 - An audit on assessment and management of pain in hip fracture in the Accident Service of a tertiary care hospital in Sri Lanka**

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**Introduction**

Hip fracture is a significant cause of morbidity, mortality, and hospital admissions among the elderly, often leading to unmitigated pain and worsened prognosis. Notably, there exists no established local protocol for pain management in hip fractures within Sri Lanka.

**Method**

This study presents a prospective audit of hip fracture patients admitted to the Accident service under a single orthopaedic unit over two months, assessing adherence to the NICE CG 124 recommendations on hip fracture management.

**Results**

Among the 27 patients analyzed, 18 (67%) were female, with a mean age of 68 years (SD=15). Injuries comprised 15 (56%) intracapsular and 12 (44%) extracapsular hip fractures. Pain assessment was neglected in 25 (92%) cases, with only 2 (7.4%) patients evaluated upon admission, utilizing the numeric pain rating scale. Analgesia was administered to 14 (53%) and 1 (3.7%) patients within 30 and 60 minutes of admission, respectively. Notably, 5 (18.5%) patients received no analgesia during initial assessment. Intramuscular tramadol was the predominant analgesic (60.3%, n=16), followed by NSAIDs (7.4%, n=2) and parenteral morphine (7.4%, n=2). A single patient (3.7%) underwent a fascia iliaca block.

**Conclusion and recommendations**

The findings indicate potential areas for enhancing the assessment and management of hip fracture pain in the Accident service. Implementing a systematic approach is imperative to address these deficiencies.

**PP 10 - Pre-operative fears, anxiety, and coping strategies in adults awaiting surgery – a cross sectional study in a surgical unit**

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**Background**

Hospitalization is well known to provoke anxiety and is an unpleasant experience that causes tension, apprehension and high autonomic activity. In order to help patients with their preoperative anxiety, it will be helpful to be familiar with the fears and coping strategies from a patients' perspective and address their issues.

**Methods**

This study was part of a cross-sectional survey in patients scheduled to undergo elective surgery. This survey contained Amsterdam Preoperative Anxiety and Information Scales (APAIS) that contains three sections as (A) Patient characteristics, (B) Anxiety assessment and (C) Coping strategies.

**Results**

The average APAIS-A-T score was 9.9 (SD = 3.6) on a 4-20 scale, with 40.5% of subjects reporting high anxiety (score >10). "Anesthesiologist error" had the highest concern (3.9, SD = 3.08), while "Fatigue and drowsiness" had the lowest (2.4, SD = 2.29). Female gender and previous anesthetic experiences predicted anxiety across all subscales. Over 70% of patients preferred multimedia for information, and 91.7% used mental strategies for emotional coping.

**Conclusion**

The study highlights the need for individualized support to address preoperative anxiety, as specific fears vary widely. Tailored conversations are more effective than generic materials in alleviating patient fears. Our study suggests that engaging in a conversation with the patient, tailored to their individual concerns, is likely to be more effective in addressing fears compared to using generic patient education materials.

**PP 11 - Factors affecting Pain Relief after Freys Procedure for Chronic Calcific Pancreatitis -Analysis at a Tertiary Care Centre, India**

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**Background & Aim**

Most common indication for surgery in chronic calcific pancreatitis (CCP) is debilitating abdominal pain. Multiple modalities are available like conservative management, endotherapy and surgery. Freys procedure which is local head resection with lateral pancreaticojejunostomy has emerged as a reasonable single time intervention, with low reported morbidity, as a solution for intractable pain in CCP. Our study aimed to assess the degree of pain relief after Freys procedure for CCP over 2 years and the risk factors associated with failure to achieve pain control after the procedure.

**Methods**

A retrospective analysis of 70 patients who underwent Freys procedure (local head resection with lateral pancreaticojejunostomy) for CCP at All India Institute of Medical Sciences, Patna, India was conducted. The patients were evaluated by Izbicki pain score prior to surgery and on follow up at 6 months, 1 year and 2 years. Patients were divided into complete, partial responders. Other parameters like preoperative usage of opiates, presence of bulky head, small duct, postoperative complications, presence of Diabetes mellitus (DM), postoperative need for re admission with pain were also recorded. Predictors of complete pain relief were identified with multivariate analysis.

**Results**

A total of 70 patients were included in the study with a follow up of 2 years. The median pain scores was reduced from 66 to 12 ( $P < 0.001$ ). Of the 70, complete and partial response was seen in about 80 per cent of the patients. There was a significant reduction in median number of hospitalizations required for pain episodes (from 5 to 0)

**PP 12 - Development of robotic tool with haptic feedback for minimally invasive surgeries**

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**Introduction**

Minimally invasive surgeries are commonly used to minimize postoperative morbidity and pain compared to open surgery. In minimally invasive robotic surgeries, surgeons lack the ability to sense the applied force on the patients tissue when using specialized tools, potentially leading to tissue damage from excessive force. As a result, surgeons sometimes switch to open surgery. To address this issue, haptic feedback can be integrated in laparoscopic surgical tools.

**Methods**

In this study, a 2 degrees of freedom (DOF) laparoscopic bowel grasper tool is designed, and a prototype is developed. The tool is to be used for appendicectomy surgeries. The haptic feedback is integrated into the tool. Strain gauge sensors are integrated into the forceps of bowel graspers to sense the applied force. A wearable pneumatic actuated device is attached to the surgeon's upper arm to provide the haptic feedback.

**Experiments**

Preliminary experiments were conducted to validate the function of the tool and to measure the haptic feedback. A scaled-up version of the proposed laparoscopic tool was used for the experiments. In the experiments, three participants grasped flexible materials using the tool with and without wearing the pneumatic actuating device.

**Results and Conclusion**

The proposed laparoscopic bowel grasper tool is able to generate 2 DOF motions by providing haptic feedback to the surgeon. Real-time haptic feedback can improve the grasping precision, demonstrating the potential of the tool to use in minimally invasive robotic procedures.

### **PP 13 - Analysis of trends in childhood and adolescent brain tumours in Sri Lanka (2013-2021)**

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NHSL, Sri Lanka

#### **Introduction**

Brain tumors are among the most challenging pediatric cancers due to their complexity and the severe impact on the developing brain. Monitoring the trends in incidence and mortality rates of these tumors is crucial for understanding their epidemiology and informing public health strategies.

#### **Method**

A retrospective study was done using secondary data from annual cancer incidence and mortality data published by the National Cancer Control Program of the Ministry of Health in Sri Lanka. The data included cases of childhood and adolescent brain tumours (ages 0-19) in Sri Lanka from 2013 to 2021.

#### **Results**

Astrocytoma cases increased from 10 in 2013 to 12 in 2021, with male cases decreasing from 18.17% to 11.36%. Medulloblastoma cases rose from 13 in 2013 to 23 in 2021. Ependymomas saw a rise from 8 cases in 2013 to 17 in 2021, Choroid plexus tumors remained stable.

Glioblastomas and other gliomas exhibited consistently high incidence rates, although specific trends varied but glioblastoma cases decreased from 9 in 2013 to 4 in 2021, with male cases dropping from 13.63% to 5.76% and female cases from 16.66% to 2.17%. Other gliomas increased from 2 cases in 2013 to 6 in 2021, with male cases decreasing from 4.54% to 3.84% and female cases rising from 2.77% to 8.69%.

#### **Conclusion**

This study highlights the importance of monitoring trends in childhood and adolescent brain tumors in Sri Lanka. The findings suggest that certain types of tumors, such as astrocytomas and medulloblastomas, may require increased attention and resources. Further research is needed to understand the underlying causes of these trends and to develop effective prevention and treatment strategies.

### **PP 14 - EUS guided biliary drainage (EUS-BD) in malignant biliary obstruction and failed ERCP - Initial experience of tertiary HPB center**

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#### **Introduction**

The traditional primary method for treating biliary blockage is endoscopic retrograde cholangiopancreatography (ERCP). Endoscopic ultrasound (EUS) is increasingly used to drain obstructed biliary tracts in patients with failed ERCP. The biliary tract can be drained to the stomach (Hepaticogastrostomy-HGS) or duodenum (Choledoco-duodenostomy-CD) with EUS and fluoroscopy guidance using a self-expandable metal stent.

#### **Method**

This is a retrospective descriptive study among 18 patients with malignant biliary obstruction who underwent EUS-BD after failed ERCP from 2019 to 2023 in a tertiary HPB center in Sri Lanka. Results The mean age was 63 years (range 35–78). Indications for the procedure were obstructive jaundice with failed ERCP either due to failed biliary cannulation (13/18), inaccessible ampulla (4/18), or post-PTC stenting obstructive jaundice (1/18). CD and HGS techniques were performed on nine patients each. CD was performed in patients with distal bile duct obstruction (i.e., pancreatic cancer or periampullary cancer) and HGS in patients with proximal bile duct or hilar obstruction (i.e., hilar cholangiocarcinoma). In all patients, an enterobiliary fistula and stenting were successfully performed. One patient died on day 1 of a myocardial infarction. All other patients were followed up for at least eight weeks, with a 50% bilirubin reduction seen over a 2-4-week period and a 90% reduction at eight weeks. Post-procedure cholangitis was seen in all patients and needed antibiotics.

#### **Conclusion**

EUS-BD is an effective and efficient procedure to achieve biliary drainage in patients with malignant biliary obstruction after ERCP failure with minimal complications.

## **PP 15 - Pre-Operative Delay For the Definitive Management in Patients Presented Following Neck Of Femur Fracture**

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

### **Introduction**

Fracture neck of femur is a common orthopaedic problem. Majority of patients are elderly with medical problems and optimization is needed before anesthesia. A significant number of patients need post op ICU care. National Institute for Health and Excellence (NICE) recommendation is to arrange definitive surgical procedure preferably within 72 hours. We conducted this audit to evaluate the time taken for the definitive management from admission and the causes leading to the delay

### **Methods**

All patients presented to a tertiary care orthopedic unit with a fracture neck of femur (NOF), within 5 months were followed up until definitive treatment is done. Time taken for the definitive management was analyzed and factors that lead to the delay of the definitive care were identified. Steps were taken to minimize them

### **Results**

104 patients with NOF were followed up. Eighty seven were females. At the end of 72 hours 54 patients with fractures were treated with the definitive treatment. Another 32 were treated between 72 hours and 10 days. It took more than 10 days for the pre-operative preparation of another 18 patients. Commonest reasons for the delay was unavailability of ICU beds, patients were on clopidogrel, delay in getting required cardiology opinion for the anaesthesia and the time taken for the optimization of medical comorbidities.

### **Conclusion**

This audit revealed that 52% of patients were treated within the recommended period. Commonest causes for the delay is the time taken to get specialized opinion on comorbidities and time needed to optimize them.

## **PP 16 - Evaluation of the quality and readability of web-based patient information on colorectal cancer surgery**

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### **Introduction**

Effective patient education is crucial for empowering patients with colorectal cancer to make informed decisions about surgery. With rapid expansion of the internet, individuals are increasingly turning to online resources for health information. However, the reliability and comprehensibility of such resources is unclear. This study evaluated the quality and readability of web-based patient information on colorectal cancer surgery.

### **Methods**

The leading search engines Google, Yahoo!, and Bing were searched using the selected keywords. The top 100 results from each platform were screened further based on predetermined criteria. The results were evaluated using the validated Flesch-Kincaid Reading Ease Score (FRES), Gunning Fog Index (GFI), and DISCERN scores for readability and quality of information.

### **Results**

A total of 39 websites were analysed. The mean FRES and GFI were 51.5 (range: 30.7-70.1) and 9.37 (range: 5.8-13.6), respectively, both exceeding the recommended reading level for health resources. The mean DISCERN score was 50.4/80 (range: 24-73), indicating "fair" reliability and quality. Few websites provided references (35.9%) or were reviewed by experts (28.5%). Websites providing information on the benefits and risks of surgery were also scarce (7.7% and 30.8%, respectively). Less than 30% provided sufficient information on post-treatment quality of life and stoma care. Among the top 10 DISCERN-rated websites, only 3 appeared among the first 10 websites on the search engine results page, while only one had the recommended FRES.

### **Discussion and Conclusion**

Patient information websites are of satisfactory quality but have low readability and lack key information on risks, benefits, and effects on quality of life. This highlights the dire need for expert-regulated patient education web-based resources.

**PP 17 - Prognostic value of ca 19-9 in pancreatic cancer: a comparative study based on tumor location and resectability.**

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### **Introduction**

CA 19-9 is a well-known tumor marker which elevated in pancreatic cancers. This comparative study investigates the prognostic value of CA 19-9 in pancreatic cancer in relation to location of tumor, resectability and stage. Method: A retrospective study was conducted using 30 diagnosed patients with pancreatic adenocarcinomas from 2022 to 2023 in University Surgical Unit at Colombo South Teaching Hospital. Data was analyzed using SPSS version 21.

### **Results**

The mean age of the cohort is  $63.53 \pm 7.97$  years (range: 49-74). 17 were males (56.7%) and 13 were females (43.3%). Majority of tumors were located in the head of the pancreas (70.0%). We found no statistical significant association between CA 19-9 levels and tumor location [Kruskal-Wallis test ( $\chi^2(2) = 1.246$ ,  $p = 0.536$ )]. The Mann-Whitney U test shows statistically higher CA 19-9 levels amongst non-resectable tumors compared to resectable ones ( $U = 49.00$ ,  $p = 0.008$ ), and the difference in CA 19-9 levels was also significant across stage of the cancer ( $\chi^2(3) = 18.377$ ,  $p < 0.001$ ). Discussion: The present study shows that the level of CA 19-9 did not vary significantly according to the site of the tumors, but was higher in non-resectable tumors, which was associated with an advance stage of the disease.

### **Conclusion**

In Pancreatic cancer CA 19-9 is useful prognostic marker especially to assess resectability and stage not for the localization of tumor. Recommendation for further studies with bigger cohorts to confirm the present result.

**PP 19 - Outcomes of lower extremity bypass surgery for chronic limb threatening ischaemia in a tertiary care center**

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### **Introduction**

Chronic limb threatening ischaemia (CLTI) leads to significant patient morbidity & mortality and consumes considerable health and social resources. The aim of our study is to measure the outcome of lower extremity bypass surgery for CLTI.

### **Methods**

This is a retrospective analysis of 115 patients who underwent lower extremity vein bypass for infra inguinal disease or infra popliteal disease from 2020 to 2023. Measured variables included demographic information, comorbidities, limb factors, 30-day major adverse cardiac events & limb events, one-year overall survival and amputation free survival.

### **Results**

The mean age of our study population was 65. There were 105 (91%) patients with diabetes mellitus. We have performed 72 femoro-popliteal bypass & 43 popliteal distal bypass operations, and the perioperative mortality was 18 (15%). In 91 patients (79.1%) natural grafts were used and 24 synthetic grafts. The 30-day MACE was 14 (12%) and MALE was 9 (7.8%). The overall survival at 1 year was 84% and amputation free survival was 62.5% in infra popliteal bypass surgeries whereas in infra-inguinal bypass surgeries it was 77%.

### **Discussion**

Outcome of lower extremity bypass for CLTI are comparable to high income developed western world despite patients presenting with major tissue losses and poor resources.

### **Conclusion**

Our data suggested that lower extremity bypass surgery for chronic limb threatening ischaemia gives a satisfactory outcome in a resource poor setting.

**PP 20 - Is Colitis the Unseen Trigger for Hemorrhoidal Bleeding? Insights from Mucosal Biopsy Findings and Investigating Conservative Management options: A Retrospective Study**

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**Colombo South Teachers Hospital, Sri Lanka**

**Introduction**

Hemorrhoids is a common benign anorectal condition with a high socioeconomic and psychological burden, significantly compromising patients' quality of life. The aim of this study was to unravel possible associations indicative of the pathophysiological basis of hemorrhoids.

**Methods**

Data was recorded from n=19 patients presented with per rectal bleeding. All patients underwent sigmoidoscopy and mucosal biopsy investigations and conservatively managed with appropriate combination of stimulant and bulk forming laxatives, NSAIDS, prokinetics, antibiotics and with Mesalazine in those who showed colitis on histology. All patients were followed up for 3 months with reviews at 2 weeks, 1 month and 3 months after commencing treatment

**Results**

From the study, 73.6% (14/19) percentage of patients revealed some form of colitis in the mucosal biopsy findings. Out of these, 42.8% (6/14) were presented with chronic colitis, 42.8% (6/14) with microscopic colitis, (1/14) one patient each with moderate and severe colitis conditions. Conservative management of colitis along with Mesalazine resulted in significant reduction of clinical features of hemorrhoids, notably of per rectal bleeding.

**Discussion & Conclusion**

Finding of this case series indicates that underlying inflammatory conditions in the colon mucosa (colitis) might be a significant contributing factor for the hemorrhoidal bleeding. Therefore, conservative management of colitis using pharmacotherapy can result in notable reduction of hemorrhoid symptoms. This pilot finding warrants further research with large sample size and adequate follow-up to unravel true associations underlying the pathophysiology of hemorrhoids, which can be important to revise the current management protocols.

**PP 21 - Endoscopic Ultrasound (EUS) guided biopsy as a diagnostic tool in upper gastrointestinal (UGI) lesions, Experience from a single tertiary care center**

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**Introduction**

Despite its widespread use internationally, EUS-guided transluminal biopsy of UGI lesions is rarely requested and therefore no data is available in Sri Lanka. Without histology, these patients may have had to undergo surgery or follow-up with prolonged anxious periods. This study outlines the experience of a tertiary care referral center.

**Methods**

From March 2018 to March 2024, EUS-guided biopsy was performed on 46 patients with UGI tract lesions by a single endoscopist (ANR).

**Results**

The mean age was 57.93 years (SD=16.375) with 30 (65.2%) males. Lesion sites were, stomach (n=17, 37.0%), gastro esophageal junction (GOJ) (n=10, 21.7%), duodenum (n=10, 21.7%) and esophagus (n=9, 19.6%). The majority were solid (n=42, 91.35%), sizes ranging from 12 -34mm. No complications were seen.

A diagnosis was made in 91.3% (n=42) cases with only 2 (4.3%) inconclusive and 2 (4.3%) inadequate tissue. 16 (34.8%) were malignant. Following are location specific diagnoses. Esophageal: Gastrointestinal Stromal Tumors (GIST) (n=2), spindle cell tumour (n=2) and normal tissue (n=2). GOJ: Leiomyoma (n=4), squamous cell carcinoma (n=2), GIST/leiomyoma (n=2), normal tissue (n=1). Stomach: GIST (n=6), poorly cohesive carcinoma (n=1), GIST/leiomyoma (n=2), spindle cell tumour (n=2), gastric adenoma (n=2). Duodenum: Adenocarcinoma (n=3), GIST (n=2), Neuro Endocrine Tumor (n=2), Poorly cohesive carcinoma (n=2).

**Discussion and Conclusion**

EUS guided biopsy is an effective and safe diagnostic tool for

UGI lesions which can be utilized in Sri Lanka to provide histological diagnosis and determine appropriate treatment.

## **PP 22 - Perception and attitude of surgical coaching among the Sri Lankan surgical postgraduates**

**Kasun Lakmal, Nimesha Surage, Poornajith Godakanda, Dilanraj Sakthivel, Minidu Ravinda Chandraguptha, Sathasivam Kalaiyukan, Malith Nandasena, Kanchana Wijesinghe**

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### **Introduction**

Coaching is a distinct educational intervention for surgeons for either technical or non-technical skills. Advocates claim that coaching leads to enhanced performance and reduced stress and burnout. We aim to investigate the perception and attitude regarding surgical coaching among surgical trainees.

### **Methods**

This is a cross-sectional study that aims to investigate the perception and attitude of surgical coaching among MD-surgery trainees. Surgical trainees who have finished 6 months of training were invited to participate in an online survey with questions related to surgical coaching. Likert scale 1 – 5 was used to assess the satisfaction and attitude towards coaching.

### **Results**

Thirty-eight trainees (Male-84.2%, Mean age -32 years) participated in the survey. Out of them 20 were second-year registrars followed by 16 first-year registrars. The majority (n=30) reported 3 or more satisfaction regarding the coaching and supervision of their training. In this cohort, 73%(n=28) feel their trainer is committed to the training. Out of them, 79%(n=30) had done at least 2 direct observed surgical skills assessments during their training. Out of them, 79%(30) reported they received constructive feedback regarding technical skills. During the training, 52% of trainees received coaching in leadership, communication, teamwork, and situation awareness.

### **Discussion and conclusion**

Overall this group of trainees demonstrates good satisfaction in terms of surgical coaching on technical skills. However, our study shows that attention to non-technical skills coaching needs to be addressed.

## **PP 23 - Can obstructive Lower Urinary Tract Symptoms(LUTS) be Idiopathic? A Prospective Study to Delineate Aetiologies Associated with LUTS.**

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### **Introduction**

Obstructive LUTS may be due to anatomical or functional aetiologies. The resulting obstruction may present as LUTS affecting the quality of life of the patients. It has become a frequent clinical problem with the ageing population in Sri Lanka. We assessed the role of the flexible cystoscopy as an outpatient procedure in evaluating OLUTS.

### **Methods**

A prospective study was carried out among patients presented with OLUTS with a normal prostate volume in the USS KUBP in a genitourinary surgical unit in a tertiary care centre from June 2023 to December 2023. Demographic details, risk factors, and cystoscopic findings were recorded.

### **Results**

A total number of 202 flexible cystoscopies(FC) were performed. 32(15.84%) patients were included. Number of males and females were 30(93.8%) and 2(6.3%) respectively. The mean age was 64.63(40-90). Upon flexible cystoscopic assessment, occlusive prostatic enlargement, urethral stenosis, neurogenic bladder and high bladder neck were diagnosed in 23(71.88%), 3(9.4%), 1(3.1%) and 1(3.1%) respectively. Out of the prostatic enlargement group, 14(63.64%) were managed medically while 8(36.36%) underwent transurethral resection of the prostate(TURP). 1(4.55%) was managed with a long-term catheter. Subsequently, 1(12.5%) was diagnosed with prostate carcinoma upon histology of TURP. A significant cause for OLUTS was not recognized in 17(53.1%).

### **Conclusion**

About half the population had no identifiable cause for obstructive LUTS after initial simple evaluation. This indicates we should go beyond the conventional assessment

for such population to identify definitive causes. Study will be continued to assess next level evaluation to identify causes in aforementioned population.

**PP 25 - Evaluating the effectiveness of targeted educational workshops in improving deceased donor detection among critical care staff in Sri Lanka; A survey-based study.**

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**Introduction**

Knowledge and attitudes of Health Care Professionals' (HCPs) in critical care units play a crucial role in identifying potential deceased donors for a successful transplant program in Sri Lanka. This study aimed to evaluate the impact on knowledge and attitudes of HCP's by a one-day workshop on donor detection and maintenance. Potential donor detection will prompt HCP to inform institutional donor coordinators to proceed with donation cascade.

**Methods**

This cross-sectional study included doctors and nurses from 21 hospitals in Sri Lanka working in critical care units, institutional transplant coordinators were excluded. Data collection was conducted through self-administered questionnaire comprising 20 questions in January 2023, which assessed knowledge and attitudes towards deceased donation. The questionnaire was administered twice: T1 before and T2 after workshop. Results: Total of 198 HCPs completed both pretest (T1) and posttest (T2) questionnaires, 125 nurses and 73 doctors participated. At T1, 43% of participants demonstrated poor knowledge (Scoring <50%), whereas only 18% exhibited good knowledge (Scoring >75%). At T2, percentage of participants with poor knowledge decreased to 20%, and more than 42.5% showed good knowledge. Overall, 74.7% of the participants displayed positive attitude, but misconceptions persisted regarding body disfigurement (35%), family involvement (33%), and reluctance to discuss donation with family members (48.5%).

**Conclusion**

Despite working in critical care units, the knowledge of these HCPs was relatively poor. However this single workshop showed there was a modest improvement. Therefore there should be continuous medical educational programs for critical care units to enhance the knowledge in organ donation.

**PP 26 - Is there a diurnal variation in trauma-related mortality? Insights from the Resuscitation Room (R-ROOM) at a Tertiary Care Centre.**

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**Introduction**

Trauma-related mortality is a major burden globally but more accentuated in low-income countries. It's a common belief among public and even healthcare workers that there is a diurnal variation in trauma-related mortality. This has been demonstrated in studies conducted in low-income countries as ours.

**Methods**

A retrospective analytical study was carried out for 9 months, on admissions to R-ROOM, NHSL, which were retrieved from the R-ROOM registry. Deaths on admission (DOA) were excluded while calculating the R-ROOM mortality. Daytime was considered as 8am-8pm and Nighttime as, from 8pm-8am.

**Results**

A total of 1369 admissions were analyzed out of which 126 were DOA. 64 DOA were at Daytime. 52%(n=715) were admitted during the Daytime and the rest(n=654) at Nighttime. Of all admissions 18%(n=246) were females and 57%(n=140) of them were admitted during daytime. Out of all males admitted, 51%(n=575) were admitted during Daytime. The mean age of admissions was 45.92 years, and the mean age of day and night admission was 46.5 years and 45.2 years respectively. A total of 28 R-ROOM deaths were recorded during this period and an equal number of deaths occurred in both day and nighttime. R-ROOM mortality was 2.15% during Daytime and 2.36% at Nighttime. Statistically there was no variation between night and daytime mortality (P>0.05).

## Conclusion

When compared globally, with other studies from low economic countries, NHSL R-ROOM has no significant diurnal variation in trauma-related mortality. Infrastructure, trained staff, multi-disciplinary team approach may have contributed to these positive results. Similar studies in other trauma centers island-wide would be beneficial to get an overall idea.

## PP27 - Pathological Analysis of Appendicular Lesions in a Sri Lankan Cohort

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## Introduction

The global incidence of appendicitis increased by 0.58% annually from 1990 to 2019, with South Asia experiencing the highest rise. We report causative factors for acute appendicitis in a Sri Lankan cohort.

## Methods

A retrospective study at a tertiary-care hospital analysed appendectomy samples from June 2021 to December 2022, examining intraoperative findings and histological results.

## Results

Of 429 patients (mean age 21 years), 58%(n=249) were males. Intraoperatively, 80.4%(n=345) had acute appendicitis, followed by 6.7%(n=29) abscess, 2.8%(n=12) appendicular mass, 2.1%(n=9) ruptured appendix, and 0.4%(n=2) large bowel intussusception. Appendiceal luminal obstruction was caused by faecoliths (n=64) and *Ascaris lumbricoides* (n=1). Microscopy revealed lymphoid hyperplasia (58.7%,n=252), suppurative appendicitis (8.6%,n=80), necrosis (1.4%,n=6), fibrosis (2%,n=9), granulomatous changes [tuberculosis (2.3%,n=10), Crohn's (0.7%,n=3), sarcoidosis (0.2%,n=1)], and neoplasms [mucinous dysplasia (3%,n=13), carcinoid (0.5%,n=2)]. Mucinous dysplasia was classified as low-grade (1.6%,n=7), high-grade (0.9%,n=4), and invasive (0.5%,n=2). Negative appendectomies were 12%(n=53). No significant differences

in age or gender were found between benign and (pre)malignant lesions.

## Discussion

A 2014 Sri Lankan study (n=125) had 46% negative appendectomies, while the current study shows a decrease to 12%. Sarcoidosis, tuberculosis and *A.lumbricoides* could cause acute appendicitis. In Sri Lanka, invasive mucinous dysplasia is more prevalent compared to carcinoid tumors, which are more common in the West.

## Conclusion

Sarcoidosis, tuberculosis, and *Ascaris lumbricoides* can manifest as acute appendicitis in Sri Lanka. Malignant lesions of the appendix may not always be apparent during surgery and are not necessarily associated with a specific age or gender. Routine histopathological analysis of all appendectomy samples is recommended.

## PP 29 - Incidence and pattern of colorectal cancer in Sri Lanka from 2001-2019

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## Introduction

The incidence of colorectal cancer (CRC) has been increasing in Asian countries. Describing the trends in the incidence of CRC in Sri Lanka is necessary to plan CRC care in Sri Lanka. This study aims to analyse trends in CRC incidence in Sri Lanka.

## Materials and methods

The trends in the incidence of colorectal cancer were calculated using the published data from the Sri Lanka Cancer Registry for the period from 2001 to 2019. The trends in the WHO age-standardised incidence rates were presented using the Joinpoint regression analysis.

## Results

A total of 26,316 CRC were diagnosed over the 19-year study period, with an equal gender distribution. The mean age of males and females was 60.7 and 59.6 years, respectively

(overall mean age: 60.2 years). The incidence of CRC was highest in the 70–74 age group overall (45.4 per 100,000 population). The WHO age-standardised incidence of CRC was observed from 2.9 to 11.9 per 100,000 in 2001–2017 ( $p < 0.05$  for trend), followed by a decreasing trend to 11.2 per 100,000 in 2019 with an estimated annual percentage change (EAPC) of 9.1 for the rising trend.

### Discussion and conclusion

Similar to neighbouring Asian countries, a significant increase in the CRC incidence was observed in Sri Lanka. A rising incidence of CRC is likely due to the combination of better reporting and a true increase in incidence. Future studies focusing on trends in tumour stage and mortality will help to identify the cause for the rising incidence. Given the rising trend, community-based screening policies for CRC should be considered.

### PP 30 - Role of local Tranexamic acid in reduction of drain output after Modified radical mastectomy

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### Introduction

Significant drain output after modified radical mastectomy (MRM) can prolong hospital stay and increase the risk of complications such as seroma formation. This study aims to evaluate the effect of local administration of Tranexamic Acid (TA), an anti-fibrinolytic agent, on reducing axillary drain output following MRM.

### Methods

This study analyzed 62 patients out of an estimated sample size of 78 undergoing MRM. The patients were randomized into two groups: the test group receiving TA and the control group receiving Normal saline. In the Tranexamic Acid group, a 20 ml solution containing 500 mg of TA was infiltrated into the axilla following axillary dissection, before surgical closure. Drain removal criteria were set at an output of less than 30 ml on two consecutive days. The study assessed cumulative drain output, the day of drain removal, and the day of seroconversion of drain fluid character. Patients were followed up at one month and three months for surgical site infections (SSI) and seroma formation,

respectively.

### Results

Interim analysis of the 62 patients showed a significant reduction in cumulative drain output ( $p < 0.001$ ), day of drain removal ( $p < 0.03$ ), and day of seroconversion ( $p < 0.016$ ) in the TA group compared to the non-tranexamic acid group.

### Conclusion

The interim analysis of this ongoing study shows that the local use of TA significantly reduces axillary drain output following MRM. This leads to earlier drain removal and improved post-operative outcomes. Further analysis and definitive conclusions will be drawn once the full sample size is achieved.

### PP 31 - Cloacal Extrophy: demography and outcome- a single centre case series

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### Introduction

Cloacal exstrophy is an exceedingly rare, complex congenital ventral abdominal defect, with an incidence of less than 1 per 2,00,000- 4,00,000 live births. It is associated with anomalies like Meningomyelocele, lipo-meningomyelocele, spina bifida occulta, Congenital Talipo Equino Varus, congenital cyanotic heart diseases, hydronephrosis, solitary kidney, Meckel's diverticulum, high arched palate.

### Materials and methods

We conducted a retrospective study, with eighteen patients in our institute, between January 2014 and January 2024. The time of presentation, social background, gestational age of the mother, birth weights, associated malformations, procedure performed and outcome were noted.

### Result

Out of the 18 patients, 10 were males, 1 indeterminate, and 7 females. Incidence was seen more in lower socioeconomic strata, maximum belonging to tribes working in tea estates. 5 patients presented beyond 5 days of birth, while 12 had associated anomalies. 9 were preterm, with average weight of 1.91 kg. 3 patients died preoperatively, all being preterm, with an average weight of 1.46 kg, and major associated anomalies.

3 patients died post operatively, all preterm, with average weight of 1.56 kg, with 1 having multistep procedure. Discussion: Cloacal exstrophy, being rare and complex, poses a challenge in management, with limited infrastructure and resources in a developing nation. Prematurity, late presentation, lower socio-economic group, and sepsis are the major causes of high mortality, in our series.

### **Conclusion**

our series emphasizes the importance of studying the demographic and social profile of the patients for understanding the incidence and reducing mortality of such patients.

### **PP32 - Development of a surgery assistive robot B K R Mendis, D G S S Wijerathna, J S B Weeraratna Graduated engineer, Sri Lanka**

#### **Introduction**

In this research, a voice-controlled robot is developed to serve the surgical tools from a designated tool table to the surgeon. The robot is designed to assist the surgeon by serving the surgical tools during surgeries considering his voice inputs and tracking his palm.

#### **Methods**

The hardware of the surgery assistive robot is developed. The control system of the robot utilized speech recognition to convert voice commands into actionable inputs for the robotic arm. A predefined set of voice commands corresponding to surgical tools such as scalpel, hemostat, scissors, forceps, and retractor were implemented. The arm communicated continuously with a central computer over the local area network using a microcontroller.

#### **Experiments**

The experiments were carried out to evaluate effectiveness of the surgical tool serving function of the robot. Three participants issued voice commands for the five tools across ten trials. The system accuracy was measured by identifying correctly identified tools. The tracking of participants palm was evaluated through ten trials. The working accuracy of the inverse kinematics algorithm was also validated.

#### **Results and Conclusion**

The integration of voice command and computer vision into surgical robots stands out as a unique advancement to the existing technology. The computer vision improves accuracy of robotic arm control, and speech driven assistance improves human robot interaction for surgeons to carryout minimally invasive surgeries. The surgery assistive robot is

able to use for repetitive tasks, reduce manpower requirement, and enhance tool serving precision and human-robot interaction.

### **PP 33 - Assessment of adequacy of pain management of patients in a single surgery unit Teaching Hospital Kurunegala(THK)**

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#### **Introduction**

We decided to assess adequacy of pain control of warded patients in a surgical unit with a numerical scale.

#### **Method**

In this cross sectional study we collected data of age, sex, surgery performed, diagnosis, pain score, analgesia given in evening on 06 and 10 June 2024 in general surgery unit C ward patients THK.

#### **Results**

There were 106 patients. Male 57(54%):female 49(46%). Area of pain; abdomen/pelvis 51(48%), lower limb 37(35%), back 17(16%), head/neck 10(9%), chest 05(5%) and upper limb 05(05%). There were 35 post operative and 71 without undergoing surgery. 01/35(03%) post operative patients showed pain score 5/ >5. 21/71(30%) patients of without surgery group showed pain score >5. In non operative group 05(05%) showed score 08, 02(02%) score 09 and 03(03%) score 10. Overall 22/106 (21%) patients were with pain score >05. Ninety eight(93%) patients were on paracetamol, 45(43%) on NSAIDS, 07(07%) on tramadol, 03(03%) on morphine, 06(06%) without analgesia.

#### **Discussion/Conclusion**

22 % of patients with pain score more >5 is needed to be intervened for better pain control. Post anaesthetic agent residual effect could have played a role in low pain score in operated group(03% >5 score ). Overall pain control in patients in our study group need to be regularly assessed with numerical value and more precise regime of analgesia is needed to control pain. We suggest to assess all patients with numerical scale of pain in ward rounds .Otherwise pain will be hidden with the patients and result in poor pain control.

**PP 34 - The role of brain-computer tomography in mild traumatic head injury management in a tertiary care center**

**PGN Danushka, MR Jayasinghe, M Osudhihansi, RGN Punsara, T Godakumbura, D Attanayake**  
NHSL, Sri Lanka

**Introduction**

Performing a Computed tomography (CT) scan for mild traumatic brain injury (TBI) is still debatable, and sometimes it might be overused without proper indication according to the NICE guidelines. This study aimed to investigate the place of CT scan in patients with mild head injury presenting to a Tertiary care Hospital in Sri Lanka.

**Methods**

A cross-sectional study was conducted among 84 patients who presented with a mild TBI at a Tertiary care Hospital in Sri Lanka over a time period of two months. Relevant data were collected using bed head tickets, and the outcomes of the patients were analysed using chi-square test.

**Results**

The mean age of the population was 51.46 years, and 64 were males & 20 were females. The majority (73.8%) of them had mild head injuries (GCS 13 and 14). CT scans were indicated only in 54.8% of patients but were carried out in 94%. Ultimately, 68.8% were discharged after observation. Undergoing CT scans did not show a statistically significant difference in outcomes. ( $p=0.295$ )

**Discussion and Conclusions**

A substantial number of patients with mild TBI undergo CT scans even without specific indications, and the majority show better outcomes. This underscores the need to revisit the criteria for utilizing CT scans in managing patients with mild head injuries.

**PP 36 - Promoting Inclusivity in Orthopaedics: Outcomes and Strategies from UK EDI Initiatives.**

**Emily Schenk, Rebecca Maggs, Joanna Maggs, Elizabeth Smith, Ryan Moffat, Marieta Franklin**  
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**Introduction**

Enhancing equality, diversity, and inclusivity (EDI) within orthopaedic teams significantly improves patient outcomes. Globally, the orthopaedic community is transforming its workforce demographic. In the UK, the British Hip Society, British Orthopaedic Association, and British Orthopaedic

Training Association have introduced EDI initiatives targeting all career stages, from school to consultant level, aiming to create a workforce reflective of the UK's population.

**Methods**

Strategies included school engagement sessions, 1:1 orthopaedic mentorship workshops for medical students, national mentoring schemes, and establishing EDI committee roles within orthopaedic societies. These methods promote inclusivity and support underrepresented groups at every career stage.

**Results**

Feedback has been overwhelmingly positive. 100% of schoolchildren at engagement sessions indicated they would consider a career in medicine and recommend the event to friends. The mentorship event was also highly valued by both mentors and mentees for clarifying career tasks. Continuous proactive cultural changes within orthopaedics are driving further progress. Our methods, published in the JTO and replicated by other institutions, underline the need for such initiatives.

**Discussion**

Workforce retention in the UK remains a challenge due to competitive training posts and issues such as underfunding and burnout. These EDI initiatives are critical in addressing retention and recruitment challenges by fostering a supportive and inclusive environment.

**Conclusion**

Our EDI initiatives have yielded promising results in creating a more inclusive orthopaedic workforce. Continued efforts and research are essential to sustain these changes, ultimately enhancing workforce satisfaction and patient outcomes. This work also serves as a model for other specialties.

**PP 38 - Incidence and pattern of oesophageal cancer in Sri Lanka from 2001-2019**

**Mithushan J [1], Umesh Jayarajah [1,2], Sanjeewa Seneviratne [1,2]**

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**Introduction**

An increase in the global incidence of oesophageal cancer has been noted in the last few decades. This study was aimed

to describe the trends in the incidence of oesophageal cancer in Sri Lanka which would enable the planning of oesophageal cancer care.

### Materials and methods

The trends in the incidence of oesophageal cancer were calculated using the published data from the Sri Lanka Cancer Registry for the period from 2001 to 2019. The trends in the WHO age standardised incidence rates were presented using the Joinpoint regression analysis.

### Results

From 2001 to 2019, 26,459 oesophageal cancers were diagnosed, with a male predominance of 53%. The overall mean age was 62.8 years (males = 62.2 and females = 63.5 years). The highest incidence was seen in the 70–74 age group. The WHO age-standardised incidence of oesophageal cancer has risen significantly from 5.78 to 8.46 per 100,000 from 2001 to 2019. This increase was prominent till 2016 and thereafter showed a decreasing trend till 2019. The magnitude of the rise in incidence was higher for males [estimated annual percentage change (EAPC): 4.6 with a steady trend,  $p < 0.05$ ] compared with females, who had a variable trend with a non-significant EAPC.

### Discussion and conclusion

A statistically significant increase in the incidence of oesophageal cancer in Sri Lanka was noted from 2001 to 2019, with greater significant proportional increases in men. Further studies, including tumour stage, underlying reasons, and mortality, may help better understand changing patterns of disease burden. Given the rising trend, community-based screening policies should be considered.

### PP 39 - Single unit experience of open abdominal aortic aneurysm repair

**S. Sancheevan, H F D G D Fonseka, V Sanjeev, J Arudchelvam, N Gowcikan, N Harivallavan, R Cassim, T D Goonaratne, M Wijeyaratne**  
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National Hospital Sri Lanka, Sri Lanka

### Introduction

Aortic aneurysm (AA) is defined as dilatation of aorta more than 50% of its normal diameter. One of the worst complications of aneurysm is rupture. Risk of rupture associated with the diameter of aortic aneurysm.

### Methods

AA repaired at the university vascular and transplantation unit at the national hospital of Sri Lanka Colombo NHSL

from January 2021 to December 2022 were included. Data on demographics, risk factors and outcomes were collected.

### Results

25 were included. All were males. Mean age was 69.1 years (56–92). There were 13 (52%) elective and 12 (48%) emergency cases. One patient had renal cell carcinoma and underwent simultaneous radical nephrectomy. 62.5% of patients had hypertension as a risk factor. Mean aortic clamp time was 62.2 minutes (20–105 minutes). Average blood loss was 1384.7 millilitres (310–3750 millilitres). Two patients (7.6%) were with thoracoabdominal AA. One of them had undergone reimplantation of coeliac axis, superior mesenteric artery and renal artery. Most common postoperative complications were myocardial infarction (37.5%) and acute kidney injury (37.5%). Mortality following elective and emergency abdominal AA repair was 7.6% and 50.0%.

### Conclusion

The operated patients with AA were elderly males. Hypertension is the most common risk factor. Emergency repair is associated with high mortality. Establishment of endovascular facilities is needed to reduce mortality.

### PP 40 - Subcutaneous dirofilariasis: An emerging zoonotic infection in Sri Lanka

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### Introduction

Dirofilariasis is a parasitic infection caused by filarial nematodes belonging to the genus *Dirofilaria*. Human dirofilariasis due to *Dirofilaria repens* has been widely reported from Europe. Sri Lanka is the most affected country in Asia with an infection rate of almost 60% in canine population. However, most human infections of *Dirofilaria repens* remains undiagnosed. We present a case series of subcutaneous human dirofilariasis to emphasize the need for awareness among clinicians on this entity.

### Method

All patients presented to the District Base Hospital, Dambulla with painless, non-pruritic subcutaneous nodules of a short duration with ultrasonographic confirmation of parasitic granuloma were analyzed in 2023. All cases underwent surgical excision of the subcutaneous lump under local anaesthesia and specimens were sent to histopathological and parasitological examination.

## Results

There were 14(54%) males in the study population of 26, with a median age of 7 years (range 1-49). The 10/26 of the ultrasound scans revealed a hypoechoic nodular lesion measuring vary in sizes (maximum diameter - 12mm) with live worms inside the lesion. All cases had uncomplicated surgical excision and histology of foreign body granuloma. Parasitological examination of the worm confirmed the presence of *D. repens* having characteristic cuticle with longitudinal ridges in 12/26(46%) cases.

## Discussion and conclusion

It is essential to record the human infections and increase the public awareness about this infection, diagnostic tests and vector controlling measures, in order to reduce the disease prevalence through suppressing vector densities, proper diagnosis and patient care.

**PP 41 - Outcomes of diabetes related major lower limb amputations at a tertiary care centre in Sri Lanka**  
**LE D I Kumari, AP Weerasuriya, K B K Kavinda**  
**Colombo North Teaching Hospital, Ragama. Sri Lanka**

## Introduction

Major lower extremity amputations are associated with a significant morbidity and mortality. Advancements in surgical techniques, prosthetic technologies, and rehabilitative strategies have improved the quality of life and functional outcomes of individuals undergoing lower limb amputations.

## Methods

This is a prospective study, done using an interviewer-administered questionnaire assessing 115 patients, who underwent major lower limb amputations between 2020 to 2023, followed up by phone-calls. Gender distribution was male 67% (n=77) and female 33% (n=38). Measured variables included demographics, comorbidities, indication for amputation, immediate and late complications and mortality.

## Results

The mean age was 62.5 years, and most amputations were below knee amputations (92, 80%). When considering comorbidities, 26 patients (22.6%) previously had IHD and 9(7.8%) patients had CKD. Considering stump-related complications, 53 patients (46.1%) had phantom-limb pain, and 4 patients (3.5%) developed contractures. Kaplan-Meier survival analysis yielded survival rate at one month as 0.878 (87.8%), at six months 0.774 (77.4%), and at one year 0.751 (75.1%). The major causes of deaths were myocardial

infarction (18, 58.6%) and sepsis (7, 22.5%). The functional outcomes varied with 8(7%) patients bed-bound and 43 (37.6%) patients dependent on wheelchairs. 28.7% patients were independent with prosthesis and clutches.

## Discussion and Conclusion

Major extremity amputations continue to be associated with significant morbidity and mortality both in short and long term. In Sri Lankan context, the 1-month post amputation survival is comparable to the western world which is around 15%-20%. Prevention of amputations with intense management of comorbidities would benefit both patients and the healthcare system.

**PP 52 - The attitudes on diabetic foot care among nurses at a Teaching Hospital**

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## Introduction

Diabetic foot care is essential to reduce diabetic foot complications. Nurses play a vital role in the care and prevention of diabetic foot complications including Diabetic foot ulcers. Also, nurses positive attitudes toward diabetic foot complications will ensure better patient care. The main objective is to assess attitudes toward diabetic foot care among the nurses at a teaching hospital.

## Methods

A descriptive cross-sectional survey design was applied. Data was collected by using a pretested, validated, self-administered questionnaire covering demographic factors and attitudes toward diabetic foot care from purposively selected 100 nurses with more than one year of experience in diabetic foot care. Non-parametric tests and descriptive statistics were used for data analysis.

## Results

Lack of formal diabetic foot care training was reported by 88%. Also, 42% of participants had negative attitudes toward diabetic foot care while 58% of the participants had positive attitudes. In addition, many nurses have negative attitudes regarding monitoring for diabetic ulcers regularly, taking pain into account when cleaning diabetic ulcers, and providing diabetic ulcer treatment. Also, the majority have considered diabetic foot care as time-consuming work. Although demographic characteristics have no significant effect on nurses attitudes there is a weak negative relationship with age and professional qualification and a weak positive relationship with foot care experience and training.

## Discussion and conclusions

A lack of adequate training can all be attributed to negative attitudes. Therefore, more frequent formal training in diabetic foot care would be needed to ensure positive attitudes. Keywords: Diabetic foot care, nurses' attitudes

## PP 42 - Effectiveness and Patient Satisfaction of Flexible Sigmoidoscopy and Rubber Band Ligation for Internal Hemorrhoids

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### Introduction

Hemorrhoids are the most prevalent anorectal disorder among adults. Rubber band ligation has become the mainstay of treatment for bleeding and prolapsing internal hemorrhoids, and is now a well-established and safe technique.

### Methods

A descriptive study was conducted using data from 46 patients who underwent flexible sigmoidoscopy and rubber band ligation at Asiri Hospital Kandy, Sri Lanka, from June 2022 to June 2024.

### Results

46 patients with a mean age of  $52.14 \pm 15.29$  years, of which 69.6% were males, were studied. Common symptoms at presentation included a lump at anus (91.3%), defecation difficulties (78.3%), rectal bleeding (76.1%), painful defecation (8.7%), and anal discharge (6.5%). Proctoscopy revealed hemorrhoids at 3, 7, and 11 o'clock positions in all patients, with 26.1% having secondary hemorrhoids and 60.9% having mucosal prolapse. Clinically, 97.8% of patients were diagnosed with Grade II hemorrhoids and one Grade III case. Following flexible sigmoidoscopy and banding, 82.6% reported post-procedural complaints within the first five days, mainly pain (78.3%) and bleeding (63%). During follow-up, 26.1% had a persistent lump, 21.7% had defecation difficulties, and 17.4% reported ongoing rectal bleeding. Even so, 84.8% were satisfied with the treatment outcome, with 43.5% being extremely satisfied. 4.3% were unsatisfied, and 8.7% remained neutral.

### Conclusions

Flexible sigmoidoscopy and banding are effective treatments for internal hemorrhoids, with high patient satisfaction despite common post-procedural pain and bleeding. Most patients experienced significant relief and expressed overall satisfaction with the procedure.

Continuous monitoring and patient follow-up are essential for addressing post-procedural complications and maintaining patient satisfaction.

## PP 43 - Clinical audit on documentation of inpatient records at a tertiary care hospital in Sri Lanka – a closed loop audit

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### Introduction

Maintaining optimal medical records plays a major role in planning and evaluating patients' condition and treatment, ensuring continuity of care across providers and for medicolegal and patient safety implications. This study is aimed to evaluate the quality of surgical records in wards of tertiary care hospital.

### Methods

A checklist was designed using universal guidelines presented in previously validated STAR auditing tools as a basis for yes / no questions. In audit a random number generator was used to pick 30 days over 3 months & 50 records were retrospectively analyzed with total STAR and section specific STAR scores. Re-audit was done after introducing specific templates for the sections assessed. Prospective study using 50 records was done over a 3 months period and total STAR and section specific STAR scores were compared statistically.

### Results

Total of 100 records over a 6 month period was evaluated using the STAR questionnaire. Highest percentage of improvement showed in operative records from 80.46% to 96.78% with an increased percentage of 16.32%. Initial clerking improved from 90.10% to 98.56% (8.46%) and subsequent entries improved from 96.65% to 98.18% (1.53%), while consent improved from 89.20% to 96.00% (6.80%) and discharge summary improved from 96.30% to 98.70% (2.40%). Total score improved from 90.585% to 97.920% with a sum of 7.335%.

### Conclusion

A remarkable improvement in the quality of surgical records can be obtained by providing pre prepared templates, resident and nursing staff education programs, coordination between surgical anesthetic departments and systemic auditing which will ultimately benefit the patient's outcome.

**PP 44 - Outcome of Renal Cell Carcinoma with venous invasion, a long-term follow up study**

**J Arudchelvam, J N V Tissera, H F D G De Fonseka, R P S Prasanga, T D Gooneratne, S M Wijeyaratne, M R N Cassim**

**University Vascular and Transplantation Surgical Unit, National Hospital of Sri Lanka, Sri Lanka**

**Introduction**

Renal cell carcinoma (RCC) is known to invade Inferior Vena Cava (IVC) in 10-25%. Invasion of IVC results in poor prognosis. Complete excision improves long-term survival and improves quality of life.

**Methodology**

The study consists of patients who underwent radical nephrectomy for renal cell carcinoma invading IVC. Incomplete data and patients lost to follow up were excluded. The data on demography, type of surgery and management were initially collected and were followed up for a period of 4 years.

**Results**

18 patients were included in the study .10 (55.56%) were males.

Mean age was 60.39 years (37-79). Post-operatively 11.11% were complicated with paralytic ileus and 5.56% had reactionary haemorrhage. One (5.56%) died in the perioperative period.

We were able to trace 12(66.67%) patients. 5(27.78%) were lost to follow-up. Mean follow up is 20.81 (3-40) months. At a follow up of 20.81 months, 7 (58.33%) were alive. 25.00% were currently undergoing chemotherapy while the rest are not on any adjuvant therapy. Survival rates calculated for 3 months, and 6 months are 75.00% and 66.67% respectively.

**Discussion**

5/18 (27.78%) Patients were lost to follow-up. Therefore, computerised interconnected database systems should be implemented to improve this.

**Conclusion**

This study presents a long term follow up of patients with renal cell carcinoma with venous invasion. The outcome can be improved with better patient selection and multidisciplinary approach.

**PP 45 - Understanding Urostomy Care: Knowledge and Attitudes of Nursing Officers at SJGH**

**MNM Nabil, WMEK Wijeratne, N Senevirathne**  
**Sri Jayawardanapura General Hospital, Sri Lanka**

**Introduction**

A urostomy, or ileal conduit, redirects urine through an abdominal opening instead of the bladder, typically after bladder or pelvic cancer surgery, or for urinary tract abnormalities. Proper care for an intestinal ostomy is essential in nursing practice. While specialized care is available in developed countries, its lacking in low-middle-income countries like Sri Lanka. This study aims to assess the knowledge and attitudes of nurses at Sri Jayawardanapura General

Hospital (SJGH) regarding urostomy care.

**Methods**

The study included 31 nursing staff from various units at SJGH who completed a pretest questionnaire on knowledge and attitudes regarding urostomy care. Following a lecture and discussions, a post-test was administered to assess improvements. The aim was to evaluate the effectiveness of educational interventions in enhancing nurses knowledge and attitudes toward urostomy care using SPSS analysis.

**Results**

The study included 31 nurses (1 male, 28 females), with 55.17% working in surgical units. The average nursing experience was 12.62 years (range: 1 to 32 years). Only 6 nurses had stoma care experience, and 3 had attended stoma care workshops. A weak negative correlation (-0.11) was found between nursing experience and pretest scores. However, a moderate positive correlation (0.54) between pretest and post-test scores was statistically significant ( $p = 0.002$ ).

**Conclusion**

Knowledge of urostomy care among nursing staff at SJGH was unsatisfactory. However, attitudes and knowledge significantly improved after educational interventions. Nursing experience did not correlate with better knowledge or attitudes. Expanding these training initiatives nationwide could further enhance patient care.

**PP 46 - The effect of Interventional Workshop on improving Knowledge on Laparoscopic Surgery in Nursing Officers: A pre and post-test intervention study**  
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Senior Registrar in Surgery , Teaching Hospital Peradeniya, Sri Lanka

### **Introduction**

Laparoscopic surgery has revolutionized modern surgical practices. The growing integration of laparoscopic techniques in surgical procedures necessitates enhanced training for nursing officers to ensure optimal patient care. Objective This study aims to evaluate the impact of a dedicated Laparoscopic Skills Workshop on nursing officers knowledge through a pre- and post-workshop survey.

### **Methodology**

A self-administrative structured questionnaire was given to 44 nursing officers to collect data on educational qualifications and work experience. The questionnaire also included 30 structured questions to evaluate their knowledge of the fundamentals of laparoscopic equipment handling and safety including sterility. The same questionnaire was given to assess the knowledge pre- and post-workshop and a score was given. The mean pre- and post-workshop scores were compared by paired t-test and  $p < 0.05$  was considered statistically significant.

### **Results**

The mean years of experience as a nursing officer in operation theatre is  $10 \pm 6$  years. The number of laparoscopic surgeries assisted per week was reported as 2 to 5 and  $>10$  by 54.5% and 20.5%, respectively. However, only 15.9% had received prior education on laparoscopic surgeries. The mean pre-test knowledge score of  $13.7 \pm 2.6$  was improved to  $18.5 \pm 2.2$  after the workshop. Pre- and post-workshop scores were positively correlated ( $r = 0.303$ ,  $p < 0.05$ ). There was a significant average difference between pre-and post-workshop scores ( $t_{43} = -10.82$ ,  $p < 0.001$ ). On average, pre-test scores were 4.7 points lower than post-test scores (95% CI [-5.63, -3.86]). The mean pre-test safety score was  $6.84 \pm 1.4$  and there was a slight improvement after the workshop but not as significant as knowledge.

### **Conclusion**

A statistically significant knowledge improvement was identified following the interventional workshop, highlighting the importance of continuous professional development in healthcare.

### **PP 48 - Hydatid cyst: the wanderer and its management approach**

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### **Introduction**

Hydatid cyst disease, stemming from the larval stage of *Echinococcus granulosus*, poses a significant public health issue. Liver is the most common location (75%), followed by lung (5%) and other organs. Advanced imaging techniques led to early detection, even in asymptomatic patients. This abstract provides an overview of hydatid cysts emphasizing their presentation, diagnostic approaches, and contemporary management strategies.

### **Methods**

This longitudinal study conducted at tertiary care hospital over a year (June 2023 to June 2024). Patients were thoroughly evaluated clinically along with laboratory and imaging studies, followed by appropriate treatment.

### **Results**

Our study found that patients presented at a mean age of 41 years with male predominance. Among the 22 patients, 17 had hydatid cysts in liver, 3 in lungs, and 2 in peritoneum. One patient had disseminated hydatid disease. Treatment modalities varied, with 9 patients undergoing surgical management (7 laparoscopic and 2 open cystectomies), 2 receiving ERCP stenting, 3 underwent PAIR, and 4 managed conservatively. Combined approaches were used for the remaining cases.

### **Discussion**

Hydatid disease can affect various sites in the body, although it is rare. Laboratory tests are often inconclusive, as eosinophilia can result from other parasitic infestations. Pharmacological therapy is useful for inoperable cysts, preventing recurrence, and reducing cyst viability before surgery. Surgical intervention, ranging from conservative cystectomy to radical hepatic resection, remains the primary treatment for uncomplicated and medically resistant cysts. Minimally invasive techniques like PAIR and laparoscopy offer reduced morbidity and shorter hospital stays.

### **Conclusion**

Hydatid cysts pose diagnostic and therapeutic challenges, necessitating individualized management approach based on cyst characteristics, patient factors, and available resources.

**PP 49 - Imaging and histological characteristics of Renal cell carcinoma invading the Inferior Vena Cava – A case series from a tertiary care centre**

**J Arudchelvam, J N V Tissera, J H P W B Jayamaha, R P S Prasanga, S S Godahewa, TD Gooneratne, S M Wijeyaratne, MR N Cassim**  
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**Introduction**

Renal cell carcinoma (RCC) is known to invade Inferior Vena Cava (IVC) in 10- 25% cases which result in poor prognosis.

**Methodology**

All the patients presenting with RCC with IVC invasion who underwent tumour resection were included. Incomplete data were excluded. The data on demography, type of surgery, imaging findings and histology findings were collected.

**Results**

18 were included in the analysis. Male to female ratio was 5:4 with a mean age of 60.4 years (37-79). In histology, 44.44% were clear cell carcinoma and 5.56% papillary carcinoma. The mean tumour size at presentation was 101.67 mm (57 - 120) Levels to which tumour invades into the IVC was classified as level 1 within the renal vein (4 (22.22%)), 2- extending to IVC but below the liver (4 (22.22%)), level 3- extending into the retro hepatic IVC but below hepatic veins (8 (44.44%)) and level 4 - above the hepatic vein (2 (11.11%)). Mortality was high in level 3 and 4 tumours (75.00%), however this was not statistically significant. ( $p=0.078983$ ) probably due to low numbers.

**Discussion and conclusion**

This series shows that the invasion at level 3 and 4 lead to high mortality (75.00%). Further follow up with higher numbers are needed to come to further conclusions.

**PP 50 - Analysis of Perceived Versus Actual Costs of Prescribed Medications Among Patients with Pharmacological Awareness in a Surgical Clinic**

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**Introduction**

Assessing patient perceptions of healthcare costs is important for effective healthcare delivery. This study examines the disparity between perceived costs of prescribed medications and actual costs sourced from governmental healthcare databases among patients in a surgical clinic.

**Methods**

Data were collected from a cohort of 181 surgical clinic patients over two days. Patients awareness of their prescribed medications and their perceptions of associated costs were assessed through structured interviews. Actual medication costs were obtained from the government healthcare database "Swastha". Statistical analysis included calculating the median overestimation of perceived costs compared to actual costs and conducting a paired t-test among the subset of 31 patients who demonstrated pharmacological awareness.

**Results**

Patients significantly overestimated medication costs, with a median overestimation of 2343.82 Sri Lankan Rupees ( $t(df=30) = 3.76, p < 0.001$ ). Despite their awareness, there was no significant difference in actual medication costs between patients who were aware and unaware of their prescriptions ( $t(df=30) = 1.22, p = 0.224$ ).

**Discussion**

The findings highlight a notable overestimation of healthcare expenses among patients with pharmacological awareness, indicating potential misconceptions or lack of detailed information regarding medication costs. Educational interventions aimed at enhancing cost transparency and patient education are critical to addressing these discrepancies and improving informed healthcare decision-making.

**Conclusion**

Efforts to improve patient understanding of healthcare costs are pivotal for optimizing resource allocation and patient satisfaction in surgical clinic settings. Future research should explore longitudinal impacts of educational interventions on healthcare cost awareness across diverse patient populations to inform healthcare policy and practice effectively.

**PP 51 - Patterns of colorectal polyps observed in lower GI endoscopes at a general surgical unit in the teaching hospital badulla**

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**Introduction**

Polyps are found in 27% of lower GI endoscopies and 19% of them were adenomas. This study aimed to identify polyp detection rate and histological types of polyps in a cohort of patients who underwent lower GI endoscopies in a teaching hospital in Sri Lanka.

**Methods**

A retrospective analysis of the Lower GI endoscopy registry and pathology reports of one surgical unit from July 2019 to June 2024 was done.

**Results**

One-fifty-eight patients (8.6%) had polyps after 1837 LGIE. Male: female was 109: 48. Mean age of the polyp cohort was 60.95 years (SD- 12.52 years). Most polyps were detected in the rectum ( 41.8%) and sigmoid colon ( 20.9%). Commonest histological type was adenomas ( 38.65%), followed by adenocarcinoma n= 41 (26%) and hyperplastic polyps n=26(16.4%).

**Conclusions**

In our cohort, polyp detection rate is lower than the western figures but the adenoma detection rate is above it. About ¼ of the polyps were malignant. We plan to expand the study to extract regional figures.

**PP 53 - Factors and techniques associated with ERCP with periampullary diverticulum:Results from tertiary care centre**

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**Background**

Endoscopic Retrograde Cholangiopancreatography (ERCP) for patients with periampullary diverticulum(PAD) is a challenge. PAD are found in 9-32% of patients who undergo ERCP. Several endoscopic studies have revealed the association between PAD and CBD stones. Objective of this study is to examine the factors and techniques related to successful and safe ERCP in patients with PAD

**Methods**

Retrospective descriptive study was conducted in

professorial unit Csth analysing the records of patients undergone ERCP from November 2022 to June 2024. For each patient were analysed data regarding sex, age, indication to ERCP, cannulation rate and endoscopic treatment. The difficult cannulation rate, technical success rate, clinical success rate and adverse events were compared between patients with or without PAD.

**Results**

391 records were analysed and 22(5.6%) patients were detected with PAD. ( male-11 (50%) , mean age- 60) Indications for ERCP were CBD stones(n=312) , Others (n=79 ) Success rate -95.5% , Procedures done ( balloon sweeping, stone extraction...etc) Patients with PAD had higher Rate of failed cannulation compared with patient without PAD

**Conclusion**

Our data show that ERCP is safe procedure also in patients with PAD with good success rate and low complications when performed by experienced endoscopist

**PP 54 - Ruptured abdominal aortic aneurysm repair; a single unit experience**

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**Introduction**

Abdominal aortic aneurysm (AAA) is a potentially life-threatening condition due to the risk of rupture. This study describes the open repair of abdominal aortic aneurysms at a single unit.

**Methodology**

This is a retrospective study of AAA repairs done at the Vascular unit operating theatre at the National Hospital of Sri Lanka (NHSL) from January 2022 to December 2023. Missing data was excluded. Data on demography, type of surgery, blood loss, details of grafts used, the hospital stay, and perioperative mortality were collected.

**Results**

15 patients were included of which 93.33% were males. The mean age was 72.42 years (60-92) All repairs were done as open surgery. There were 40.00% infra renal AAA repair and 13.33% juxta renal AAA repairs. All the surgeries utilised polyester grafts with a mean diameter of 15.3 mm (14mm-16

mm). Mean blood loss for leaking AAA repair was 880 ml (130 - 1500). Increased blood loss was associated with prolonged hospital stay, however this was not statistically significant ( $p=0.414216$ ). The overall perioperative mortality was 6/15 (40.00%) and the causes of the deaths were myocardial infarction, pneumonia.

### Discussion and Conclusion

The overall mortality for ruptured AAA in this series was 40.00%. Common causes were myocardial infarction and pneumonia. Introducing Endovascular aneurysm repair in the future can improve survival. Improving ICU care facilities would likely improve this further.

### PP 55 - Patterns, severity & outcomes of injured victims presented to surgical casualty following human-elephant-conflicts (hec) in Sri Lanka.

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### Introduction

Human-Elephant-Conflict (HEC) related trauma is a health related concern in Sri Lanka leading significant mortality. This study assesses the patterns and severity of HEC related trauma and outcomes.

### Methods

Retrospective descriptive study was conducted among HEC related injured victims admitted to trauma casualty for 1 year duration.

### Results

Total of 52 patients included in this study. Mean age  $46.9 \pm 7.8$  years. 82.7% ( $n=43$ ) were males. 73.1% ( $n=38$ ) incidences reported from June to November and 86.5% ( $n=45$ ) reported between 1700-0900hrs. Calculated mean injury severity score (ICS) of victims was  $24.4 \pm 4.8$ . 34.6% ( $n=18$ ) in category of minor-moderate injuries, 28.9% ( $n=15$ ) serious injuries and 36.5% ( $n=19$ ) with severe-critical injuries. 40.4% ( $n=21$ ) had mild-critical thoracic injuries. 23.0% ( $n=12$ ) had single or multiple rib fractures, 21.1% ( $n=11$ ) haemo/pneumothoracies and 11.6% ( $n=6$ ) flail chest/lung contusions. 17.3% ( $n=9$ ) reported abdominal injuries and, 9.6% ( $n=5$ ) had liver contusions/lacerations, 5.7% ( $n=3$ ) gastric/bowel perforations. 13.5% ( $n=5$ ) of victims underwent an emergency laparotomy and emergency thoracotomy in 1.9% ( $n=1$ ), 19.2% ( $n=10$ ) and 15.4% ( $n=8$ ) had upper and lower limb fractures respectively. 15.4% ( $n=8$ ) of total had open fractures required urgent orthopedic

interventions. On admission GCS  $\geq 8$  in 17.3% ( $n=9$ ) and required intubation and ventilation. 9.6% ( $n=5$ ) and 7.7% ( $n=4$ ) respectively had radiologically proven traumatic brain and spinal injuries. 7.7% ( $n=4$ ) with Maxillofacial injuries, 1.9% ( $n=1$ ) with rare traumatic Purtscher's retinopathy, 9.6% ( $n=5$ ) with other ophthalmic injuries reported. 34.6% ( $n=18$ ) required ICU/HDU care. HEC trauma related overall 30-day mortality was 19.2% ( $n=10$ ). Initial GCS ( $<8$ ) and high ICS ( $>50$ ) had statistically significant association with high mortality. ( $p < 0.05$ )

### Conclusion

This study highlights the needfulness in establishing scientifically valid preventive strategies to minimize mortality and health care burden related to HEC related trauma.

### PP 56 - Clinical presentation and Quality of Life of patients with Breast cancer-related lymphedema

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### Introduction

Breast cancer-related lymphedema (BCRL) is a well known complication following axillary node clearance in breast cancer patients. This study describes the clinical presentation, symptom severity and QOL among patients diagnosed with BCRL.

### Methods

Patients diagnosed with BCRL between 2022 Jan to 2024 Jan were included in the study. BCRL was diagnosed using subjective and objective tape measurement method. QoL was assessed using WHOQOL-BREF questionnaire.

### Results

Fifty-five female were diagnosed with BCRL aged 39-83 (mean age 59.09). Subclinical lymphedema was diagnosed in 9%. 29 and 21 patients had clinical stage 1 and stage 2 BCRL respectively. Mean arm measurement differences 1.4cm and 3.2cm in stage 1 and 2 respectively. Common symptoms included arm heaviness (21.8%), tingling (30.9%), and arm aching (21.8%). There was a significant correlation between severity of BCRL and number of lymph nodes removed. Patients with BCRL had lower QOL scores (mean rank: 15.50) compared to those without BCRL (mean rank: 43.00).

Physical and psychological domains were significantly affected.

### **Discussion and Conclusion**

BCRL is a common side effect following axillary surgery. Patients with BCRL report arm symptoms and lower QOL, highlighting the need for targeted interventions. Despite the small sample size, the findings underscore the importance of comprehensive management for BCRL to enhance patient outcomes.

**PP57 - A cadaveric study on superior hypogastric plexus**  
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### **Introduction**

The superior hypogastric plexus (SHP) is found around the level of aortic bifurcation. It is important in surgical procedures in pelvis.

### **Methods**

Ten (5; M & 5; F) fresh intact adult cadavers were dissected. Following the initial dissection, all of them were further sectioned sagittal in the midline and separated in to the half pelvises, and assessed. The study was carried out in the Department of Anatomy, Faculty of medicine Ragama, Sri Lanka from 2022 to 2024. The ethical clearance was obtained.

### **Results**

In all samples, left connecting nerve fibers from the inferior mesenteric plexuses were found traversing across the left common iliac artery and joining to the superior hypogastric plexuses. In 80%, right connecting nerve fibers from the inferior mesenteric plexuses travelled across the right common iliac artery and joined the superior hypogastric plexus. Eighty percent of the specimens had, well-defined nerve strands, whereas 20% contained a delicate and irregular meshwork. In all of the specimens, the median root, or a continuation of the abdominal aortic plexus from the inferior mesenteric plexus were present. In 80% specimens, the superior hypogastric plexus located between the aortic bifurcation and the sacral promontory. In 20%, it extended across the pelvic brim and ended on the body of the S1 vertebra.

### **Conclusion**

The majority of the SHP were located below the aortic bifurcation and had well-defined nerve strands, rest extended

across the pelvic brim and ended on the body of the S1 vertebra. Further larger sample studies are recommended.

**PP 58 - Five years follow up of patients who underwent management of acute extradural hematoma in National Hospital of Sri Lanka**  
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### **Introduction**

Prompt recognition and intervention of extra dural hematoma (EDH) is crucial for a good surgical outcome. This study aimed to analyze the long-term outcome of EDH management in a resource limited setting.

### **Methods**

A retrospective study was conducted on 64 patients diagnosed with EDH in the National hospital of Sri Lanka in 2018. Five-year outcome analysis was completed using an investigator-administered questionnaire focusing on mortality, functional status and Extended Glasgow Outcome Score (GOS-E).

### **Results**

The mean age of study population was 39.5 years with majority being males. Surgical evacuation was done on 67.2%. The mean EDH volume was 85.78 ml (range,22-269) and 14.72 ml (range,4-67) in the surgical and conservative groups respectively. In-hospital mortality of the surgical group was 14.6% and in the conservative group it was 4.8%. In the surgical group 39.6% had good recovery on discharge (GOS-E>7). In five-year follow up, surgical group had an 18.5% mortality rate and 52.4% showed good recovery. Five-year mortality of conservative group was 4.8%. At five years residual weakness (4.7%), seizures (2.3%) and cognitive impairment (2.3%) were observed in surgical group. Initial higher GCS was associated with favorable long-term outcomes in the surgical group ( $P < 0.05$ ) while age, gender, pupil reactivity, volume of EDH, effacement of basal cisterns did not show significant impact on the outcome.

### **Discussion and conclusion**

Currently the five-year mortality of surgically managed EDH remains high. This study highlights the impact of prompt recognition and timely management of EDH in improving the surgical outcomes at resource limited settings.

**PP 61 - Personal laparoscopic trainer box from disposable items for surgical trainings in Sri Lanka: The way forward for trainee centered basic laparoscopic training in a low resource setting**

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**Introduction**

Laparoscopic surgery has the potential to improve care in resource-deprived low- and-middle-income countries. Funding, availability and maintenance of equipment, local access to experienced laparoscopic trainers and practical opportunities for trainees were among key barriers for laparoscopic surgical training. In low-resource settings, technological advances may offer low-cost solutions in the successful implementation of laparoscopic training and improve access to surgical training.

**Aims-**This exercise is to provide instructions for building a simulator for basic laparoscopic training with affordable and disposable items.

**Methods**

Building a low-cost, simple-to-assemble laparoscopic training box composed of disposable items (discarded laparoscopic instruments, cardboard boxes and plastic pens) with supplemented car inspection endoscope, that may replicate the unique features of the laparoscopic environment makes it an effective tool for technical skill training.

**Results**

The total cost of the materials used to construct the simulator was less than US 4.0 (1000 LKR) which includes the car inspection endoscope used by the mechanic. Laparoscopic instruments were either single-use or discarded items at the hospital. The remaining items used for the training exercises were made with day-to-day household items, which didn't cost anything.

**Conclusion**

The suggested low-cost and effective substitute can help basic laparoscopic surgical trainees from low-income countries to be taught and practiced. It will facilitate to expedite their skill learning curve.

**PP 62 - Endoscopic Retrograde Cholangio-Pancreatography; The experience of a Tertiary care referral Centre in Sri Lanka.**

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**Introduction**

Endoscopic Retrograde Cholangio-Pancreatography (ERCP) is a sophisticated therapeutic procedure used to treat disorders of the bile ducts and the pancreatic duct. This minimally invasive procedure combines endoscopy and fluoroscopy, allowing for precise examination and interventions within the biliary and pancreatic systems. ERCP has revolutionized the management of a spectrum of conditions, offering both diagnostic clarity and therapeutic solutions to patients worldwide.

**Methods**

Indications, demographic details, complications were recorded for all patients undergoing ERCP in Colombo South Teaching Hospital, during the time period of 01/04/2023 to 01/04/2024. Selective cannulation and successful intervention were used as outcome measures. Indications were classified according to the American Society of Gastro-Enterology (ASGE) guidelines and success rates were compared with the ASGE grade.

**Results**

A total of 585 ERCPs were performed during the assessed one-year period. Out of the above patients, 56.6% were males and 43.4% were females. Mean age was 50 years where minimum was 11 years and maximum 88 years. Out of the indications, 8.8% were classified as ASGE 1, 43.5% as ASGE 2, 36.5% as ASGE 3 and 11.2% as ASGE 4. Rate of post procedure complications were 8.5% with post ERCP pancreatitis being the commonest. Success of cannulation reduced with the advancing ASGE grade.

**Conclusion**

The overall success rate and the complication rate of the ERCPs done in Colombo South Teaching Hospital falls within the acceptable range according to the literature.

**PP 63 - Techniques and outcomes of resurfacing soft tissue defects in open tibial fractures - A retrospective study in a tertiary care centre.**

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**Plastic and Reconstructive Surgical Unit - National Hospital of Sri Lanka, Colombo, Sri Lanka**

### **Introduction**

Resurfacing soft tissue defects in open lower limb fractures comprise a major workload in reconstructive plastic units. This study aimed at analyzing demographics, mechanisms, management

techniques and outcomes of open tibial fractures in a tertiary care centre.

### **Methods**

Patients referred to the Plastic and Reconstructive Surgical Unit of The National Hospital of Sri Lanka - Colombo from 01-05-2022 to 31-12-2022 for lower limb soft tissue reconstruction were included. Data on demographics, injury mechanisms and management techniques were collected retrospectively for analysis.

### **Results**

51 subjects were included. Majority were males (n=42) in 18y-41yr age group (n=33). Commonest mechanism was motor vehicle accidents (MVA) (n=43). Most were transferred from peripheral units (n=35). Majority had to undergo multiple surgeries (n=48). Wound debridements, vacuum therapy, bone stabilizations were commonest initial surgeries. Soft tissue cover was achieved with flaps (n=24), Skin grafting (n=14), serial closures (n=6). N=5 underwent amputations.

### **Discussion**

Open lower limb fractures consume a major portion of resources and time in tertiary care centres. Majority affected are young males. Commonest mechanism is MVA. Most limbs can be salvaged using flaps and skin grafts.

### **Conclusion**

Timely surgical interventions, access to tertiary care and interdisciplinary collaboration are crucial for optimal management of lower limb trauma. Emphasis should be given for primary prevention of MVA.

**PP 64 - Incidence and pattern of gastric cancer in Sri Lanka from 2001-2019**

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### **Introduction**

Varying patterns in the incidence of gastric cancer (GC) has been reported globally. This study aims to describe the trends in the incidence of gastric cancer in Sri Lanka.

### **Materials and methods**

The trends in the incidence of gastric cancer were calculated using the published data from the Sri Lanka Cancer Registry for the period from 2001 to 2019. The trends in the WHO age standardised incidence rates were presented using the Joinpoint regression analysis.

### **Results**

From 2001 to 2019, 7914 gastric cancers were diagnosed, with a male preponderance of 71%. The overall mean age was 60.7 years, which was similar for males and females. The incidence of gastric cancer was highest in the 70-74 year age group. The WHO age-standardised incidence of gastric cancer in Sri Lanka has increased from 1.06 to 3.3 per 100,000 from 2001–2016, followed by a decreasing trend to 2.9 per 100,000 in 2019. During the rising trend, the estimated annual percentage change (EAPC) was 8.3 (p<0.05). Females showed a higher proportional increase in incidence (EAPC: 9.9 vs. 8.2).

### **Discussion and conclusion**

A rising incidence of gastric cancers is likely due to the combination of better reporting and a true increase in incidence. A greater and more significant proportional increase in incidence was noted in females. Future studies analysing tumour characteristics and mortality would enable a better understanding of the burden of gastric cancer and potential underlying causes for the increasing incidence.

**PP 65 - Innovative approaches to reduce costs in Surgery: A review of literature**

**GBKD Bandara, LAN Silva, University Surgical Unit, National Hospital of Sri Lanka / District General Hospital, Ampara, Sri Lanka**

### **Introduction**

In an era where robotic surgery is waiting to invade the theatres around the world, low-income countries like Sri

Lanka struggle to supply basic surgical equipment and consumables. A literature review of innovations aimed at minimizing expenditures in surgical practice will give us insights and suggestions to improve our care with new innovations.

### Methods

A web search was made in PubMed and Google scholar platforms using the keywords innovation, low-resource settings and cost-effective techniques. Articles describing innovative cost-effective techniques and strategies using available resources were selected.

### Results

4 original articles, a review article and a systemic review was selected for the review after an extensive keyword search. Using reusable instruments, locally made endo-loops and ligatures and using custom made retrieval bags are some cost-effective strategies in laparoscopic surgery. A mini-lap cholecystectomy is a modification of the conventional technique aimed at reducing the costs of laparoscopy and minimizing the disadvantages of open surgery. Sterilized polypropylene mosquito nets have been used for hernial repair in low-income settings with comparable results and can be regarded as a suitable alternative to expensive synthetic meshes. In the management of omphalocele and in laparostomies sterile urine bags are made use of to prevent desiccation of tissues.

### Discussion and Conclusions

Being innovative with available resources can pave the way to minimize expenditures for surgical infrastructure. These approaches and the attitude in itself will improve patient care irrespective of the economic status of a country.

### PP 67 - Assessing Quality of Life in Colorectal Cancer Patients in Sri Lanka: A Cross-Sectional Study

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### Introduction

Colorectal cancer (CRC) was the 3rd commonest cancer among males and females in Sri Lanka, which has a significant public health concern, impacting patients quality of life (QoL) due to physical and emotional burdens. This study aims to assess the QoL of CRC patients, looking into their functionality and symptom burden.

### Methods

A cross-sectional study was conducted among stage 1-3 CRC patients. Participants completed the translated and validated Sinhala version of EORTC QLQ-C29/C30 questionnaires. Scores were calculated according to the EORTC scoring manual, and correlative analysis were performed to identify associations with QoL.

### Results

The study included 120 participants, male (n=61), with a mean age of 57.39±12.29 years. The commonest tumor site was Rectum(n=93), The mean raw QOL score was 4.61±1.59 on a scale of 7. Physical, Emotional, Role, Social and Cognitive Functioning was (73.16±19.35), (73.53±26.19), (67.42±27.14), (81.51±22.36) and (81.82±20.26). QOL positively correlated with physical and cognitive functioning ( $\rho=0.415$ ) and ( $\rho=0.46, p<0.001$ ), negatively with stoma care problems ( $\rho=-0.51, p<0.044$ ). The Karnofsky Performance Scale positively correlated with QOL, Physical and Social Functioning and body image( $\rho=0.510, p<0.001$ ), ( $\rho=0.403, p<0.001$ ), ( $\rho=0.303, p=0.001$ ) and ( $\rho=0.378, p<0.001$ ).

### Discussion and conclusions

Overall QOL was comparable to those in similar studies, which also identified strong associations between quality of life and physical, cognitive functioning, and performance status and CRC.

### PP 66 - An audit on laparoscopic complicated appendicectomy in paediatric population in a district hospital Sri Lanka

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### Introduction

Laparoscopic appendicectomy is a safe and effective procedure in treating complicated appendicitis. Even though most of the centers in Sri Lanka are in the learning curve of complicated laparoscopic appendicectomy, laparoscopic appendicectomy is the gold standard.

### Methods

This study included a total of 37 paediatric patients operated via laparoscopic appendicectomy from 2019 to 2021 in a single unit in district general hospital.

### Results

Patient age ranged from 5 to 16 years. Out of 37 (20 boys and 17 girls) patients treated by laparoscopic appendicectomy, 21 had complicated appendicitis. Eight of them had gangrene

with abscess, 7 had perforated appendix with abscess and 6 had abscess only.

Mean duration of surgery in uncomplicated appendix was 41 minutes and complicated appendix was 98 minutes. None were converted to open surgery.

Average post-operative stay was 1 day for uncomplicated appendix and 5.5 days for complicated appendix. 4 patients had post-operative paralytic ileus and managed conservatively. Total duration of antibiotics for complicated appendix was 7 days with 5 days intravenous antibiotics. Two patients with complicated appendix were readmitted and managed with laparoscopic wash out.

### Discussion

Although laparoscopic appendicectomy may take more time and need more skills and training, advantages of laparoscopic appendicectomy include less postoperative pain, shorter length of hospital stay, decreased risk of wound infection.

In female patients with suspected appendicitis, laparoscopic appendicectomy will help to find more accurate diagnosis at the time of surgery.

### PP 68 - Laparoscopic Partial Nephrectomy; Is it a Feasible Option in an Advanced Urological Center in a Resource Poor Setting

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### Introduction

Partial nephrectomy(PN) has become the standard management option over radical nephrectomy, in management of Stage-I renal cell carcinoma(RCC);with good oncological outcomes and preserved renal function. Laparoscopic PN despite being complex surgery should be considered over open PN when possible as it has better morbidity profile.

### Method

All patients who underwent PN from March-2014 to March-2024 were divided and analyzed as two groups;laparoscopic(LP) vs open(OP). Basic demographics, clinico-pathological characteristics and clinical outcomes were assessed. Outcome was evaluated using Trifecta-index

encompassing post-operative eGFR reduction,tumour margin involvement and urological complications assessed using Clavien-Dindo classification.

### Results

54 patients underwent surgery with 36(66.67%) LP and 18(33.33%) OP. Mean age,gender,BMI and co-morbidities were comparable between LP and OP groups( $p > 0.05$ ).

Majority of tumours were incidentalomas (LP:OP=44.44%:27.78%). Average tumor size was comparable (LP:OP=4.46cm:4.71cm; $p=0.528$ ). Commonest histological type was clear cell(LP:OP=80.50%:83%).

The eGFR drop from immediate pre-operative to 3-months post-operative was 11.43% and 16.53% respectively in LP and OP groups( $P=0.322$ ), excluding patients with pre-existing CKD. Margins negativity was reported in 91.6% of LP and 88.89% of OP. Majority were uncomplicated(LP:OP=94.44:94.44%, $p=1$ ) with no deaths or renal loss. Mean hospital stay in LP and OP groups were 7(5-9)days and 10(3-16)days respectively( $P=0.034$ ). Five-year cancer free survival was 100%.

### Conclusion

Laparoscopic PN,despite being a complex surgery with a steep learning curve,has comparable safety to open surgery with reduced morbidity and hospital stay duration, and is feasible in the Sri Lankan setup. However long-term data is needed.

### PP 69 - Demographic, clinical and radiological profile of patients with Gallbladder carcinoma in a tertiary care center of eastern India: A prospective observational study

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### Introduction

Gallbladder cancer (GBC) is a highly aggressive and malignant disease with poor prognosis. GBC shows a marked ethnic and geographical variation with India being a notably high incidence region. By identifying and studying the risk factors of GBC, we can gain insights into the factors that contribute to the development and progression of this disease. Early identification of characteristic radiological findings associated with gallbladder cancer can aid in its timely diagnosis and staging.

## Methodology

It was a hospital based observational study. Patients who are diagnosed cases of GBC presenting to AIIMS Patna, India during the study period of one year.

## Results

A total of 134 patients were included, with a mean age of 55.9 years. The study population consisted of 65.7% females and 34.3% males. Lower socioeconomic status was prevalent among the patients, and a small percentage reported smoking, tobacco chewing, or alcohol consumption. The most common presenting symptoms were pain abdomen, weight loss, anorexia, nausea, and vomiting. Icterus, hepatomegaly, and palpable lumps in the right upper quadrant.

## Conclusion

This study highlights key findings regarding demographic and clinical characteristics of gallbladder cancer patients. We realize that GBC is a disease with late presentation, screening campaigns in the high-risk zones would raise awareness regarding GBC. Efforts to improve early diagnosis by increasing access to diagnostic imaging such as ultrasound and contrast enhanced computed tomography scans.

## PP 70 - The association between the duration of laparoscopic cholecystectomy with intraoperative findings of the liver, cystic duct, and gallbladder: A single center cohort study in Sri Lanka

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## Introduction

The operative time of laparoscopic cholecystectomy may depend on obesity, intra-abdominal adhesions, previous abdominal surgeries, and intraoperative complications like spillage of stones, bile duct injury, and bleeding.

## Methodology

A descriptive study was conducted using prospective data from 29 patients who underwent laparoscopic cholecystectomy by a single surgeon in National Hospital Kandy, Sri Lanka, from April 2020 to October 2020.

## Results

A total of 29 patients were included in the study, consisting of 18(62.1 %) females. The mean age of the population was 53.8±12.0 years. The mean duration of surgery was 110±38 minutes (min:30 minutes, max:180 minutes). The intraoperative liver was cirrhotic in 3(10.3%) patients and

non-cirrhotic in 26(89.7%) patients. The mean duration of surgery for patients with cirrhotic livers was 122±19 minutes compared to those with non-cirrhotic livers, 109±40 minutes ( $p=0.383$ ). The intraoperative cystic duct was short in 7(24.1%) patients, normal in 20(69.0%), and long in 2(6.9%). The mean duration of surgery for patients with short, normal, and long cystic ducts was 110±37, 107±36, and 145±49 minutes ( $p=0.384$ ). The intraoperative gallbladder was normal in 10(34.5%) patients, while it was abnormal in (65.5%) of patients. The mean duration of surgery for those with abnormal intraoperative gallbladder was 112±41 minutes compared to those with normal gallbladders, 109±36 minutes ( $p=0.844$ ). Bile leakage did not happen in any patient, and stone spillage occurred in 1 patient with a duration of surgery of 110 minutes.

## Conclusion

The duration of laparoscopic cholecystectomy does not depend on the liver morphology, cystic duct length, or gallbladder appearance.

## PP 72 - Application of Virtual and Augmented Reality in Neurosurgery: a Systematic Review

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NHSL, Sri Lanka

## Introduction

Mixed reality systems, including Virtual reality(VR) and augmented reality(AR) have revolutionised neurosurgery by enhancing visualisation, precision, neuronavigation, and approaches for minimally invasive surgery. This study reviews the current evidence on the practical application of AR and VR in neurosurgery.

## Methods

The systematic review confined to human subjects was done according to the PRISMA guidelines. The patients who underwent VR or AR-assisted neurosurgery for brain pathology were selected. Those who had spine surgery, and training on models and cadavers were excluded. A keyword search was conducted across PubMed, EMBASE, Scopus, and Cochrane library of all articles published from 2019 to 2024 June using “Virtual reality”, “Augmented reality”, “Neurosurgery”, “Minimally invasive neurosurgery”. The abstract review was done by two independent reviewers.

## Results

Twelve papers were included from 65 screened articles, including 282 subjects with a mean age of 49.6 years in the study. There were 84% of patients with brain tumours, 13%

of patients with vascular pathologies. The registration was done automatically(1) and manually(3) or as a combination(2). The actual data source was hand-held or worn camera(8), microscope(3), endoscope(1). The benefits of this technology are surgical planning(5), understanding complex anatomy in real life(6) and facilitating precise resections(3). Still, there is less accuracy(3), interference with blood and light(3), and techniques may be time-consuming(1). Poor study designs (5) and small sample size(2) were also noted.

## Conclusions

AR and VR technologies would be upcoming advancements in planning and intraoperative dissections and resections in surgery. It is a versatile and reliable device to be used in neurosurgery. However, there

## PP73 - Non contrast brain CT: are we ordering it right?

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## Background

Traumatic brain injury is a major health concern in young population. Nearly 40% of all trauma admissions were head injuries, yet reliable statistics are difficult to discover from routinely collected data. Non contrast CT has a very high sensitivity and specificity in detecting traumatic brain injury. Since it is a limited resource and carries a high radiation risk, need to request cautiously. National Institute for Health and Care Excellence (NICE) guidelines provide a good guidance to order them, but there are some limitations when we order in our setting.

## Methods

Prospective study was conducted at Colombo South Teaching Hospital Accident Services Unit over two months regarding patients undergone NCCT brain. Their basic demographic factors indications and findings were analyzed using statistical software.

## Results

Total of 108 NCCTs were done within the period and 81% were in males. Forty eight patients had traumatic brain injuries. In 12 patients NCCTs were done due to having GCS below 13 on admission and in 10 patients due to the suspicion in initial X rays. Thirty patients were under influence of alcohol and 66% of them undergone NCCT brain only due to unsuccessful initial evaluation because of alcohol influence.

Twenty six NCCTs were done without clear indication according to NICE guidelines and 2 were positive for brain injury.

## Conclusions

NCCT brain is an important tool to assess traumatic brain injury and it should be used in a cost effective way. NICE recommendations can be used as a good guidance when requesting in our practice with some modifications.

## PP 75 - Assessment of the nutritional status of inward patients in a general surgical unit in a Sri Lankan tertiary care centre.

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## Introduction

Malnutrition among hospitalised patients has been shown to impair outcomes. This study aimed to determine the nutritional status and factors related to it among surgical inward patients in a surgical unit.

## Methods

An interviewer-administered questionnaire with validated nutritional screening tools were used. Patients were only included if they stayed longer than 48 hours.

## Results

The study included 253 patients, 57% males (144) and 43% females (109). The mean age was 56 years (range: 75 years). The main indications for admission were acute abdomen (n = 46, 18.2%) and routine surgery (n = 31, 12.3%). At least one comorbidity was present in 162 patients, with diabetes mellitus (n = 25; 9.9%) and hypertension (n = 28; 11.1%) being the most common. BMI categories were as follows: Normal BMI (18.5–25) 110 patients (43.5%), BMI < 18.5–64 (25.3%), BMI > 25–79 (31.2%) No significant associations were found between BMI categories and diagnosis (p = 0.230) or comorbidities (p = 0.705). The mean BMI did not significantly differ among patients with levels of weight loss, decreased appetite, unintentional weight loss, or supplementation/tube feeding. Weak, non-significant negative correlations were observed between BMI and serum albumin (r = -0.118, p = 0.312) and serum creatinine/blood urea levels (r = -0.038, p = 0.572).

## Conclusion

A quarter of the cohort had a low BMI. No statistically

significant correlations were found between BMI and diagnosis, comorbidities, weight loss, appetite changes, supplementation/tube feeding, or serum markers. Further multi-centre studies with more participants are needed to understand these findings better.

#### **PP 76 - Did Covid-19 Pandemic Cause a Reduction in the Incidence of Common Paediatric Surgical Emergency Admissions?**

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##### **Introduction**

With travel restrictions and fear created during the Covid-19 pandemic, a reduction was noted in the presentation of acute paediatric surgical conditions worldwide. We evaluated data over 4 years (before and during the pandemic) for admissions with acute appendicitis, intussusception and acute scrotum (most common conditions requiring emergency surgery) to analyze these trends.

##### **Methods**

2,211 patients admitted to Lady Ridgeway Hospital for Children from 2018 January to 2021 December with the above 3 conditions were evaluated retrospectively. Those who didn't require surgery were excluded. Data were analyzed on an annual and monthly basis. 2018 and 2019 were identified as pre-pandemic with 2020 and 2021 as pandemic periods. All 3 conditions were analyzed separately and together to identify trend changes.

##### **Results**

889 presented during the pandemic compared to 1,322 in pre-pandemic period. When monthly numbers were compared between these 2 groups, a significant difference was observed (95% CI 24.55-47.45,  $p < 0.0001$ ). Subgroup analysis also reveals significant reduction in the numbers for appendicitis (520 vs 690, 95% CI 7.9-22.1,  $p = 0.0002$ ), intussusception (228 vs 415, 95% CI 9.01-22.15,  $p < 0.0001$ ) and surgeries for acute scrotum (141 vs 217, 95% CI 3.23-9.43,  $p = 0.0003$ ). Trend analysis during the pandemic also reveals further reduced numbers during peak months of Covid-19 and lockdown months. Analysis of individual years reveal 2021 to have the most significantly reduced numbers.

##### **Discussion/Conclusions**

A significant reduction was noted in the number of operations performed for most common paediatric surgical emergencies requiring surgery during the pandemic.

Although several reasons could be thought of, further studies are needed to ascertain causes for reduced presentations of these conditions.

#### **PP 77 - A trainee experience of functional outcome of tendon repairs of forearm in a tertiary care centre**

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##### **Introduction**

Hand injuries are one of the most common cases presented to the emergency department. This study is to assess the functional outcome of tendon repairs done by a trainee in a single unit.

##### **Methodology**

This is a retrospective review of prospectively maintained data of all the patients who have undergone extensor or flexor tendon repair of the hand by a surgical trainee during a year period. As per the unit policy, all the tendon repairs were done with braided siliconised polyester (cardioxyl) using double cores of Kessler technique. Data regarding demographics, associated injuries, repair technique, suture material used, provision of occupational therapy, and period of splint were gathered. Functional outcome was assessed after 12 weeks using TAM, ASSH, and DASH scores.

##### **Results**

A total of 12 patients underwent tendon repair for 23 tendons. Out of them, 12 were flexor tendons. The mean age of the patients was 36.8. 91.7% ( $n = 11$ ) were males, and 8.3% ( $n = 1$ ) were females. The mean DASH score was 13.5. Out of the 23 tendons repaired, the functional outcomes of 22 were graded as good ( $> 75\%$ ), and 1 was graded as fair ( $> 50\%$ ) as per the ASSH score. Two patients had surgical site infections.

##### **Discussion and conclusion**

Tendon injuries are common among the male working age group. Surgeons use various techniques to repair tendons. The outcome of the present study is comparable to the published literature. Various techniques can be used to repair it. Meticulous surgical technique and early commencement of occupational therapy are intimate in the normal functional recovery of the tendons.

**PP 78 - A regional audit of hand and wrist infections referred to high volume centre**

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**Introduction**

Various types of infections, such as cellulitis, superficial and deep abscesses, septic arthritis, and osteomyelitis, can manifest in the hand. They can present de novo or as a complication of a surgery. Through this study was able to characterize the risk factors, responsible microbes, spectrum of clinical presentations, and the effectiveness of treatment modalities.

**Methods**

This is a retrospective cohort observational study done among 281 patients. Details were taken from medical records with the consent of the study participants. Collected data was analysed using SPSS 29th version.

**Results**

Median age of the study participants is 37. Most were males (93.8%) and belong to ASA-1 (91%). The commonest admission was cut injuries (52.1%) and the second was crush injuries (33.6%). The commonest site of pathology is the palm (40.6%). The dominant hand is affected in the majority (64.5%). Six patients had signs of infection or are culture positive (2.13%). One has MRSA positivity, which represents 16.7% of the infected patients. Five of the six infected patients belong to ASA-1 while one has an ASA-3 and that patient developed septic shock.

**Conclusion**

Many of the affected population are from their middle ages and are men suggesting that occupational injuries as a leading cause of hand injuries. Although infections are not highly prevalent among patients, the pathogens associated with these infections are also found to be nosocomial in nature. We recommend measures to minimize hospital associated infections.

**PP 79 - Indocyanine Green Fluorescence of Parathyroid gland for predicting post thyroidectomy hypocalcemia**

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**Introduction**

Post thyroidectomy (TT) hypoparathyroidism is the commonest complication. Parathyroid gland identification using invasive techniques entail risk of disrupting their blood supply, thus not routinely preferred. Parathyroid gland perfusion (PGP) studies to predict parathyroid function have largely been subjective. Aim: To study the correlation between intraoperative quantitative assessment of PGP using ICG with post TT hypocalcemia.

**Methods**

This is an interim analysis of an ongoing prospective interventional study in the Endocrine Surgery Department, KGMU, India. Two ml of ICG dye is injected into a peripheral vein and PGP is objectively assessed using the Stryker Spy-phi machine. The QP value of the PG is compared to post-operative Parathyroid hormone (PTH) levels on Day 0/ 1 and serial calcium values (Day1-5) and signs/symptoms of hypocalcemia.

**Results**

Seventy five patients (16 male, 59 female) ranging from 17-76 years underwent TT (70) or TT with LN dissection (5) for benign (64) and malignant (11) aetiology. Ten patients required oral and IV calcium supplementation and 15 required oral supplementation. Correlation of QP score with post-op PTH and calcium value was statistically significant ( $P = < 0.01$ ). The ROC curve analysis showed QP cut off value of 55 for AUC of 0.78, had a sensitivity of 80% and specificity of 74%. The QP value is not corroborative with PTH value in hyperthyroid states.

**Conclusion**

ICG is an useful adjunct for quantitative assessment of PGP for predicting post TT hypocalcemia. QP score of  $> 55\%$  in at least 1 PG after TT reliably rules out of post-operative hypocalcemia.

**PP 80 - Efficacy of pre-operative Lugol's Iodine in reducing peri-operative complications in patients with Graves' disease following thyroidectomy–A Randomized control trial**

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**Introduction**

Surgery for Grave's disease is challenging and may be associated with significant life long morbidity. Status of short course of pre operative Iodine preparation in making thyroidectomy safe remains elusive. This study was aimed at evaluating the efficacy of Lugol's iodine in reducing difficulty and postoperative complications of surgery for Graves' disease.

**Methods**

Patients were randomised to two groups– Intervention group receiving Lugol's iodine and control group receiving placebo. Doppler, Elastography, intraoperative parameters and postoperative complications were compared between these two groups.

**Results**

There were 20 patients (10 intervention and 10 control group). Volume of the gland was increased in the intervention group (mean difference  $+3.774 \pm 1.99$  ml vs  $-0.438 \pm 1.25$  ml). There was a reduction in Average PSV (mean difference  $-10.244$  cm/s vs  $+0.495$  cm/s) and increase in resistance index ( $0.0865 \pm 0.041$  vs  $0.0275 \pm 0.059$ ) in the intervention group. Elastography showed increase in stiffness in intervention group (Shear wave mean difference  $+4.31 \pm 1.97$  kPa vs  $-0.01 \pm 0.73$  kPa; Strain ratio mean difference  $0.515 \pm 0.62$  vs  $-0.048 \pm 0.12$ ). Intra-operative blood loss ( $52.4 \pm 21.7$  ml vs  $49 \pm 32.2$  ml), duration of surgery ( $109.6 \pm 17.9$  vs  $90 \pm 14.5$  min), Average TDS (10.4 vs 9.8) were higher in the intervention group. Two patients in both groups had severe symptomatic hypocalcemia, whereas biochemical hypocalcemia and hypoparathyroidism was higher in control group. There was no vocal cord palsy or re-exploration for bleeding in either group.

**Conclusion**

Lugol's iodine causes reduction in blood flow to the thyroid gland but does not significantly reduce post-operative complications.

**PP 81 - Anatomic study of extra hepatic biliary anatomy(EHBA) with methylene blue during laparoscopic cholecystectomy methylene blue**

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**Introduction**

Laparoscopic cholecystectomy(LC) is the gold standard of surgical management of symptomatic gallstone disease. However, LC remains a challenging procedure with risk of intra operative bile duct injuries(BDI) due to varied extra hepatic biliary anatomy. Aim: To study extra hepatic biliary anatomy during LC using methylene blue its efficacy in enhancing the visibility of biliary anatomy and preventing BDI.

**Methods**

This study was conducted in 84 patients undergoing LC in the Department of General Surgery, KGMU, India. GB was punctured and bile aspirated followed by injection of an equivalent amount of 50% methylene blue and EHBA delineated by bluish discoloration.

**Results**

84 (10 post pancreatitis, 15 with multiple attacks of biliary colic) patients (M-26; F-58) were included and followed up for 1 year post-procedure. GB and cystic duct turned blue in all patients. However, CBD was painted in 84% of patients. Cystic duct was of normal length in only 11 patients (elongated- 7, Short- 47). GB was intrahepatic in 4 and CBD was tortuous in 2 patients. GB was adhered to colon in 2 and contracted in 4 patients. None of the patients had BDI and had an uneventful follow-up for a minimum period of 1 year. MB leakage occurred in 5 patients. No patient developed allergic reaction.

**Conclusion**

Intra operative visualisation of EHBA is safe, cheap and easy using methylene blue. It does not require any additional costly adjuncts and possibly increases the safety of LC more so in difficult scenarios.

## **PP 82 - Non-functioning kidney due to PUJO- outcome analysis**

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### **Introduction**

A non-functional kidney (NFK) has been defined as one having paper thin parenchyma, and split renal function (SRF) of <10% on nuclear scan. There are differences of opinion about nephrectomy or pyeloplasty in these patients. The present study was conducted to assess our management strategy for managing NFK.

### **Materials and Methods**

In this retrospective study from January 2015 to March 2024, the patients having SRF <10% were included. These patients underwent ultrasound guided percutaneous nephrostomy (PCN). A repeat nuclear was performed after three months. If SRF increased to >10%, pyeloplasty was performed.

### **Results**

Eighteen patients were managed. The age range was 2-72 months. Male to female ratio was 5:1. The complaint in these patients was a flank mass for a long time. The mean SRF was 3-9% in all of them. After three months of PCN, the SRF increased to 11-18% in all except one. All except one underwent dismembered pyeloplasty. Nephrectomy was performed in one patient. There was evidence of urinary flow obstruction in one patient, which improved on conservative management.

### **Discussion and Conclusion**

Initially there was a trend towards nephrectomy for these patients; however, current literature suggests various management options, such as primary pyeloplasty either via flank incision or laparoscopy, or PCN. Primary pyeloplasty may not be successful if chances of recovery are less. In NFK due to PUJO, expectant treatment in form of PCN followed by pyeloplasty appears to be the primary treatment modality, and nephrectomy may only be needed in limited patients.

## **PP 83 - Robotic vs. Laparoscopic Surgery for Rectal Cancer: A Single-Center Experience** **Dr Poojan Thakkar,**

### **Introduction**

The integration of robotic technology into minimally invasive surgery marks a significant advancement, particularly in rectal cancer surgery, where its adoption has

rapidly increased over the past decade in India. This study aims to compare robotic and laparoscopic approaches in the treatment of rectal cancer.

### **Methods**

Between October 2021 and April 2024, a total of 32 patients underwent either robotic (n = 15) or laparoscopic (n = 17) surgery with curative intent for rectal cancer. Data collected included baseline characteristics (age, sex, BMI, ASA score, previous abdominal surgery, tumor location, and pre-operative therapy), operative time, postoperative outcomes (Clavien-Dindo [CD] Score, surgical site infection [SSI], hospital stay, mortality), and histopathological data (quality of total mesorectal excision, completion of circumferential rectal margin, distal margin status).

### **Results**

The robotic approach was associated with a significantly longer operative time compared to the laparoscopic approach. However, postoperative outcomes, including CD score, incidence of SSI, and overall hospital stay did not differ significantly between the two groups. No mortality was reported in either group. In terms of histopathological outcomes, TME quality (complete, nearly complete, incomplete) was comparable between robotic and laparoscopic groups (86.7%, 6.7%, 6.7% vs 70.1%, 12.0%, 9.4%; p = 0.534). Distal margin involvement occurred in one laparoscopic case (5.9%). CRM involvement was similar between robotic and laparoscopic groups (6.7% vs 5.9%; p = 0.34).

### **Conclusion**

The short-term clinical and histopathological outcomes of robotic approach are equivalent in effectiveness to those of the laparoscopic approach for rectal cancer, suggesting that robotic surgery is a viable alternative.