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12 YEARS RESULT OF SURGICAL TREATMENT FOR RECTAL PROLAPSE IN NARESUAN UNIVERSITY HOSPITAL

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Background: Rectal prolapse is a condition which the terminal end of large intestine protrudes out from the rectum. The main of the treatment is surgical management. Numerous surgical alternatives aim to restore physiology by correcting the prolapse and improving continence and constipation with acceptable mortality and recurrence rates.

Objectives: To study the outcomes of surgical treatment in rectal prolapse patients in Naresuan University Hospital who underwent different surgical techniques for rectal prolapse and the rate of recurrence.

Materials and Methods: Between 2007 and 2019, patients who had surgical treatment in rectal prolapse were collected data retrospectively. The data were analyzed about outcomes, complications, end-points were changed in bowel function (Wexner Constipation Score and Fecal incontinence Severity Index) at pre-operative and post-operative and recurrent rate in 2 years.

Results: 15 patients who had surgical treatment in total rectal prolapse were women. 93.3% had no history of previous rectal surgery. For this study, seven patients underwent Abdominal (Ventral) rectopexy with Mesh (n = 7, 46.6%), six patients (n = 6, 40.0%) underwent Altemeier procedure and two patients (n = 2, 13.4%) underwent Delorme procedure**.** There were not postoperative complications in all patients.

Two years after the surgery, we found the Altemeier procedure did not find a relapse. The recurrence of rectal prolapse had occurred in 4 patients (57.1%) that underwent Abdominal (Ventral) rectopexy with Mesh procedure was on the average 8.50 months after the procedure. For the Delorme procedure, 50% of the patients had recurrent of rectal prolapse on average of 3 months after the procedure.

Conclusion: All procedures are improvement in quality of life and Wexner score were noted and no complications after surgery and Altemeier procedure had better outcomes in Naresuan University. The decision between Perineal approach and Abdominal approach will depend on the surgeon's preference.

Keywords: Rectal prolapse, Altemeier, Rectopexy

A COMPARISON OUTCOME OF ANALGESIC EFFECT BETWEEN GENERAL ANESTHESIA VERSUS GENERAL ANESTHESIA WITH PECTORAL NERVE BLOCK IN MASTECTOMY

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Background: Breast cancer is most common cancer in female patients comprising 31% of all estimated new cancer cases in the Thailand in 2018. Breast surgery can result acute postoperative pain and up to two thirds

of female patients develop persistent pain. Regional anesthesia techniques can improve patient outcomes in terms of acute and persistent postsurgical pain. Preoperative pectoral nerve block is an easy to perform and superficial block technique and can reduces intraoperative and postoperative opioid consumption.

Objective: The author hypothesized that general anesthesia with intraoperative pectoral nerve block, compared to general anesthesia, provides comparable reduce postoperative pain and reduce opioid consumption.

Materials and Methods: From July 2019 - June 2020, 30 patients were randomized 1:1 ratio to either general anesthesia with pectoral nerve block or general anesthesia by single surgeon. Postoperative pain was evaluated by visual analogue scale (VAS) at 30 minutes, 2 hours, 6 hours, 12 hours and 24 hours. Post-operative opioid consumption was recorded during 24 hours.

Result: Patients in general anesthesia with intraoperative pectoral nerve block group got significantly less pain than patients in general anesthesia group in first 30 minutes after surgery (2.4 ± 3.2 and 6.5 ± 2.1, P = 0.00). Furthermore, patients in general anesthesia with intraoperative Pecs block II group required significant fewer postsurgical opioid consumption than patients in general anesthesia group [median (min-max); 0 (0-6) mg and 3 (0-6) mg, P = 0.01].

Conclusion: The pectoral nerve block reduces postsurgical opioid consumption for patients undergoing breast surgery.

ACCURACY OF PHYSICAL EXAMINATION OF INGUINAL HERNIA DETECTED BY LAPAROSCOPIC INGUINAL HERNIA REPAIR AND RELATED FACTORS

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Background: Inguinal hernia (IH) is one of the most common surgical problem. Studies has been shown that the accuracy of physical examination for diagnosis the types of IH is about 35-70%. Laparoscopic approach is better to demonstrate the type, size and occult hernia, compare to open approach. Previous studies showed pre-operative diagnosis of the type of IH is useful for operative planning for the beginner. To our knowledge, there is no study show the factor related with the accuracy of PE to diagnose the type of IH.

Objective: This study aims to determine the accuracy of PE and related factors for diagnosis of the type of IH.

Materials and Methods: The study design was a retrospective analytical study. The medical record of one hundred IH patients who underwent laparoscopic repair in 2019 were reviewed. All patients were examined by chief surgical resident. The cough and impulse test, invagination test, and occlusion test were used to differentiate the types of IH. Findings were compared with post-operative laparoscopic repair to determine the accuracy. Factors including age, sex, BMI, and recurrence-hernia, were analyzed and determined the correlation to the accuracy by using the Chi-squared test.

Results: The study showed the accuracy of PE was 79.4% (50 out of 68) for indirect inguinal hernia (IIH), 68.4 % (39 out of 57) for direct inguinal hernia (DIH), and 100% (6 out of 6) for pantaloon hernia ($p < 0.001$). Occult hernia was found in 12.2%. Fifty-two percent were given the corrected diagnosis in both groin hernia. There were no factors correlated with the accuracy of PE.

Conclusion: The physical examination for differentiation of inguinal hernia type was only 52%. The accuracy in diagnosis of IIH is higher than DIH. Age, sex, BMI, and recurrence-hernia status were not correlated with the accuracy of PE.

Keywords: Accuracy, Diagnosis, Inguinal hernia, Laparoscopy, Factors

ACCURACY OF PROGRAM FOR CALORIE AND PROTEIN INTAKE ESTIMATION IN SURGICAL PATIENTS IN THE RAJAVITHI HOSPITAL

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Background: Malnutrition has many negative effects on surgical patients. The lack of tools can be used to estimate calorie and protein intake in practice.

Objective: The aim of this study was to create the tool to estimate calorie and protein intake that correlate with the gold standard method.

Materials and Methods: The study was experimental development and observational cross-sectional study. Total food trays in this study were 140 trays, divide into regular diet 70 trays and soft diet 70 trays. After eating food trays were estimated calories and protein intake by using the program that the researchers created. Its name is RJH CAL-PRO version 1. In the same food tray, nutritionists measure calories and protein intake by weighing as the reference method. The researchers and nutritionists did not know the results of each other. In the final step Analysis was done to study the difference and correlation between 2 methods.

Results: Comparisons between using the program and using the gold standard to measure calorie intake were no statistical differences in soft diet and regular diet food trays ($p = 0.825$, $p = 0.419$). A high correlation was found between two methods to measure calorie intake in the soft diet ($r = 0.989$, $p < 0.001$) and regular diet food trays ($r = 0.991$, $p < 0.001$). No statistical difference was found between two methods to measure protein intake in the soft diet and regular diet food trays ($p = 0.875$, $p = 0.135$). Between using the program and using the gold standard for measure protein intake was a high correlation in both soft diet ($r = 0.982$, $p < 0.001$) and regular diet food trays ($r = 0.982$, $p < 0.001$).

Conclusion: RHJ CAL-PRO version 1 was created to suit for food serving of Rajavithi Hospital. The calorie and protein intake measurement by the program were high statistical correlation and no difference from the gold standard method.

Keywords: Calorie intake measurement, Protein intake measurement, Dietary assessment tool, Nutrition

ANALYSIS OUTCOME OF LAPAROSCOPIC COLORECTAL CANCER SURGERY: VAJIRA EXPERIENCE

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Background: Colorectal cancer is the third most common malignancy diagnosed and death worldwide. Laparoscopic colorectal surgery has widely used for treatment colorectal cancer with evidence support the feasibility, safety and benefit from several multi randomized trials.

Objective: This study aims to show outcomes of laparoscopic surgery for colorectal cancer in Vajira Hospital.

Materials and Methods: Retrospective study colorectal cancer patients who underwent laparoscopic resection between 2014 and 2019. Outcome including demographic data, tumor characteristics, complication in 30 days postoperative, five-year survival, disease free survival and factor associated with five-year survival and recurrence.

Results: Total 211 case performed laparoscopic colorectal surgery. Overall complication rate was 23.61%. Most were minor complication such as electrolyte imbalance, phlebitis in 52.9%, followed by anastomosis leakage in 19.6% Incidence of conversion shows in 13 patients (6.02%). The five-year overall survival rate was 75.24% and five-year disease-free survival was 73.99%. In subgroup of disease-free survival colon resection was 94.2% and rectum resection was 64.27% ($p = 0.04$). Factor associated with five-year survival were BMI ($p = 0.013$), CEA preop ($p = 0.019$) and length of hospital stay ($p = 0.002$). Factor associated with recurrence were neural invasion ($p = 0.05$), LVI ($p = 0.031$), staging ($p = 0.028$) and length of hospital stay ($p = 0.029$).

Conclusion: Laparoscopic surgery is a good and favorable technique for colorectal cancer with satisfied outcome similar to other literature.

Keywords: Laparoscopic surgery, Colorectal cancer, Complication, Survival rate

ANASTOMOSIS LEAKAGE IN LAPAROSCOPIC LOW ANTERIOR RESECTION PATIENT WITH RECTAL TUBE INSERTION

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Background: Anastomotic leakage is the most serious complication 1-24% (average 11%) after surgery for rectum and sigmoid cancer. One possible method to prevent anastomotic leakage without the use of a stoma is rectal tube placement.

Objective: To investigate that rectal tube insertion can reduce anastomotic leakage after sigmoid, rectosigmoid and rectum cancer surgery in Hatyai Hospital.

Materials and Methods 184 patients who underwent laparoscopic LAR for rectum and sigmoid cancer between 1 January 2016 and 30 June 2020 were assessed retrospectively. 77 patients not having rectal tube insertion, we exclude every fourth patient with rectal tube insertion (sort by admission number) to equal both groups. Statistical analysis was performed using SPSS software, Chi-square test and multivariate logistic regression.

Results Patient demographics, tumor location and staging were similar between the two groups. Preoperative chemo-radiation was significant higher in rectal tube group (13%, $p = 0.016$). The operative detail was significant difference in type of anastomosis (side-end or end-end, $p < 0.05$) and anastomosis level from AV was lower in rectal group ($p = 0.017$). The overall leakage rate was 12.3% (19/154), with no significant difference between the rectal tube (7.8%) and the non-rectal tube (16.9%, $p = 0.07$). But the rate of re-operation was lower in rectal tube group (6.5%, $p = 0.038$). All of the non-rectal tube patients with anastomotic leakage require re-operation. On multivariate analysis, the total operative time longer than 180 mins, was found to be independent risk factor for major anastomotic leakage.

Conclusion: Rectal tube insertion was effective for reduce the re-operation after the anastomotic leakage following laparoscopic rectal or sigmoid cancer surgery. The longer operative time than 180 mins was increased risk of anastomotic leakage approaching significance.

Keywords: Anastomosis leakage, Rectal tube insertion, Laparoscopic low anterior resection.

CHARACTERISTIC OF RECURRENT INGUINAL HERNIA AND FACTORS RELATED TO TIMING OF RECURRENCE

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Background: The recurrence rate of inguinal hernia ranges from 0.5-15% and tends to decline due to the principle of tension-free repair and the evolution of mesh. The recurrence patients can be classified into 2 major groups: early recurrence (within 1 year after operation) and late recurrence (after 1 year). The previous studies have shown many factors related to the recurrence such as overweight, Diabetes mellitus, smoking, Chronic obstructive pulmonary disease (COPD), Benign prostatic hyperplasia (BPH), mesh usage, mesh fixation technique, or complications after surgery. By the way, there are limited studies of the characteristics of recurrent hernia and related factors.

Objective: This study aims to determine the patient characteristics and factors related to early and late recurrence of inguinal hernia.

Materials and Methods: The study design was a retrospective analytical study. The medical record of 25 patients with recurrent inguinal hernia who underwent surgical correction from 2013 to 2020 were reviewed. Factors including age, sex, Body mass index (BMI), underlying diseases and recurrent inguinal hernia were analyzed and determined the correlation to the recurrence by using the Chi-squared test and Fisher's exact test.

Results: Among 25 patients performed surgical repair of recurrence hernia at Somdech Phra Pinklao Hospital from January 2013 to December 2020, 11 patients are early-recurrence group and others are late-recurrence. Almost early-recurrence patients' age was greater than 60 (90.9%). 42.86% of patients with BMI more than 25 (overweight) had recurrence within 1 year after surgery and 33.33% of patients with overweight had recurrence 1 year after. 83.33% of recurrent patients with previous BPH was early recurrence group. All of them who had recurrence within 1 year are lateral defect and 85.7% of late recurrence patient was medial defect.

Conclusion: Early recurrence inguinal hernia is associated with advanced age, overweight and underlying BPH. Recurrence within 1 year after surgery can be presumed to be lateral defect.

Keywords: Recurrent, Inguinal hernia, Characteristics, Factors

COLONOSCOPIC PERFORATION INCIDENCE AND RISK FACTORS IN RAJAVITHI TRAINING HOSPITAL

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Background: Colonoscopy become a common procedure to diagnosis and treatment pathological conditions in the colon. Colonoscopic perforation is one of the most serious complications during colonoscopy thus, it may cause high morbidity and mortality.

Objective: This study aims to determine incidence and risk factors of colonoscopic perforation in a training hospital.

Materials and Methods: A retrospective review of medical records was performed for patients undergoing colonoscopy in Rajavithi hospital between 2009 and 2019. The patient's demographic data, indication for colonoscopy, quality of bowel preparation, endoscopic procedure, perforation, diagnostic was recorded. All statistic process was done by IBM SPSS version 20.0

Results: Between 2009 and 2019 there were 12,239 colonoscopy performed and 2,182 colonoscopy was excluded due to exclusion criteria. In total 0.71% (71/10,057) colonoscopic perforation occurred. In univariate analysis was reveal history of previous surgery, anesthesia, endoscopist, indication for colonoscopy, and endoscopic procedures were statistically significant to colonoscopic perforation. Multivariate logistic regression analysis reveal that previous gynecologic surgery (OR 41.1, *p*-value < 0.001, 95% C.I. 16.40-102.73), general anesthesia (OR 7.74, *p*-value 0.016, 95% C.I. 1.46-40.97), trainee (OR 20.74, *p*-value < 0.001, 95% C.I. 11.25-38.35) and polypectomy (OR 6.08, *p*-value < 0.001, 95% C.I. 3.15-11.70), EMR (OR 23.32, *p*-value <0.001, 95% C.I. 6.02-90.41) and ESD (OR 89.99, *p*-value < 0.001, 95% C.I. 12.74-135.46) were significant.

Conclusion: Patients tend to have a higher colonoscopic perforation rate when (1) they have a history of previous gynecological surgery or (2) general anesthesia (3) the colonoscopy to be performed by a trainee or (4) polypectomy or EMR or ESD to be performed.

Keywords: Colonoscopic perforation, Risk factors, Incidence, Training center, Colonoscopy

COMPARATIVE STUDY OF CHLORHEXIDINE IMPREGNANTED DRESSING VERSUS NORMAL SALINE GAUZE DRESSING IN NECROTIZING FASCIITIS WOUND

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Background: Necrotizing fasciitis is a severe disease that sudden onset and spreads rapidly. Surgical debridement is the mainstay of treatment. Antibiotics should be started as soon as possible. Local wound care with appropriate dressing should be done.

Objective: The objective of this study was to compare efficacy between chlorhexidine impregnated dressing and simple NSS gauze dressing in necrotizing fasciitis.

Materials and Methods: This is a randomized control study. Patients who diagnosed necrotizing fasciitis were randomized into 2 groups, one receives chlorhexidine impregnated dressing and other receive simple NSS gauze dressing. The primary outcome was number of operations. Additional outcomes were postoperative pain, duration of hospital stay, amputation and mortality rate.

Result: A total of 50 patients were randomly assigned to receive chlorhexidine impregnated dressing (n = 25) or simple NSS gauze dressing (n = 25). Both groups had similar baseline characteristics. Chlorhexidine impregnated dressing had lower number of operations. The number of operations were 1.12 and 1.68 times ($p = 0.003$) for chlorhexidine impregnated dressing and simple NSS gauze dressing, respectively. Chlorhexidine impregnated dressing had lower postoperative pain and duration of hospital stay too. The results showed that there were no significant differences in amputation and mortality rate.

Conclusion: Chlorhexidine impregnated dressing is considered an effective method for dressing in necrotizing fasciitis patients. But long term follows up study should be performed to study the full efficacy of these dressing method.

Keywords: Necrotizing fasciitis, Chlorhexidine, Dressing

COMPARING CLEANLINESS OF 3 REGIMENS SODIUM PHOSPHATE BOWEL PREPARATION FOR COLONOSCOPY

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Background: Bowel preparation is an important

factor for an optimal outcome of colonoscopy. Sodium phosphate has been common use in Vajira Hospital for bowel cleansing for colonoscopy, and for many area in Thailand. But no any compare 3 regimens study for efficacy, tolerability, side effect and patient acceptability in each preparation.

Objective: The aim of this study is to comparing cleanliness, efficacy, safety, tolerability and patient acceptability of 3 regimens with sodium phosphate in bowel cleansing for colonoscopy at Vajira Hospital.

Materials and Methods: Prospective simple randomized control trial, included 90 patients requiring colonoscopy were randomly assign to one of three regimens (Group A, 45 ml. of NaPO4 solutions taken at 7 a.m. and 5 p.m. the day before examination; Group B, 90 ml. of NaPO4 solutions taken at 5 p.m. the day before examination and Group C, 45 ml. of NaPO4 solutions taken at 5 p.m. the day before examination and 45 ml. at 6 a.m. on the morning of examination). Surgeons were blinded to the preparation used and rated the quality of the bowel preparation. The primary end point was efficacy of cleanliness in each group. The secondary end point are safety, tolerability and patient acceptability

Results: Patients demographic data were no significantly different in three group. Efficacy of cleanliness for the three groups by Boston Bowel Preparation Score were 7.23 ± 1.278, 7.33 ± 1.583, 7.60 ± 2.094 (p = 0.685), Ottawa Bowel Preparation Score were 3.43 ± 2.635, 2.90 ± 2.482, 2.90 ± 3.546 (p = 0.718), Scoring System for Cleanliness/Visibility of Bowel were 3.53 ± 0.860, 3.97 ± 0.718, 4.17 ± 1.053 (p = 0.022) in Group A, B and C respectively. Constipation is the most indication for colonoscopy in three groups 71 (78.9%). Dizziness and headache are the most common side effect occurred 40%, 33.4%, 50% of patients, respectively. The most overall satisfaction was group C (80%). Patient tolerability in group C was significantly higher than group A and group B (p = 0.049).

Conclusion: Group C (45 ml. of NaPO4 solutions taken at 5 p.m. the day before examination and 45 ml. at 6 a.m. on the morning of examination) is superiorly to cleansing efficacy, overall satisfactory and tolerability. This alternate regimen may improve patient compliance and acceptance for colonoscopy.

Keywords: Sodium phosphate, Bowel preparation, Colonoscopy

COMPLIANCE OF USING THE SURGICAL SAFETY CHECKLIST IN DEPARTMENT OF GENERAL SURGERY, TRAINING-CENTER HOSPITAL

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Background: Marked reductions in postoperative complications after implementation of a surgical checklist have been reported. Implementation of the WHO surgical checklist reduced in hospital 30-day mortality. Therefore, the aim of this study was to audit the WHO surgical checklist practice in Rajavithi Hospital setting.

Objective: To evaluate compliance of using the surgical safety checklist in department of general surgery, training-center hospital between sound record and computer document record.

Materials and Methods: From August 2019 to October 2019, sound recording was used to audit the WHO surgical safety checklist compliance in general surgery operating room, Rajavithi Hospital and was compared with computer documents.

Results: Among 306 operation during 3 months, there were high compliance in all of item of computer documents (99%). While there were high compliance of patient identification (96.7%), team members identification (96.7%), mark site (83.7%), Complete anesthesia checklist (81.7%) in sound record. Low compliance items were communicated possible problem (39.9%) and equipment problem (39.5%), according to WHO surgical safety checklist. All of item of surgical safety checklist in sound record were lower compliance than computer documents with statistical significance (P-value < 0.05).

Conclusions: Sound record proved to be a valuable tool in the qualitative analysis of WHO surgical safety checklist compliance and gave more insight than a mere completeness check of ticks in computer documents.

Keywords: Audit, Compliance, Checklist, General surgery, Sound record

DEFINING CLINICAL COMPLETE RESPONSE USING COMBINED ENDOSCOPY, ENDOSCOPIC BIOPSY AND COMPUTED TOMOGRAPHY FOR ASSESSMENT OF ESOPHAGEAL CANCER PATIENTS UNDERGOING CHEMORADIOTHERAPY

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Background: The validity of clinical complete response (cCR) in predicting the pathological complete response of esophageal cancer patients who underwent chemoradiotherapy (CRT) is still debatable. Moreover, using different tools and criteria for diagnosing treatment response can cause an effect on the correlation between cCR and oncologic outcomes. This study aims to assess the outcome of post CRT patients with cCR using available combined tools as endoscopy with biopsy and CT scan.

Materials and Methods: Locally advanced esophageal cancer patients who received CRT for preoperative and definitive settings at our institution were retrospectively reviewed. After completion of CRT, combined endoscopy and CT scan findings were used to defined cCR, and correlated with treatment outcomes.

Results: A total of 79 patients were identified. cCR was observed in 13 of 41 (32%), and 10 of 38 (26%) patients treated with tri-modality and definitive CRT (DCRT) group, respectively. The sensitivity, specificity, positive predictive value, and negative predictive value of cCR for predicting pCR were 75%, 96%, 85%, and 92%, respectively. In tri-modality group, there were trends toward better overall survival (OS) ($p = 0.056$) and disease-free survival (DFS) ($p = 0.130$) in patients with cCR. The esophageal cancer specific survival was significantly better in cCR patients ($p < 0.05$). In DCRT group, the OS and DFS of patients with cCR were significantly greater than those with non-cCR ($p < 0.01$). Patients with non-cCR in both groups had more rate of disease recurrence than those with cCR ($p < 0.05$).

Conclusion: cCR applied in this study correlates well with the PCR and survival outcomes in esophageal cancer patients undergoing CRT. However, it still cannot represent the absence of residual cancer cells. Further studies with a greater number of patients and proper methodology are required to validate the results.

EARLY VERSUS DELAYED CHOLECYSTECTOMY IN ACUTE CHOLECYSTITIS: A RETROSPECTIVE COST ANALYSIS AT SURIN HOSPITAL

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Background: Early laparoscopic cholecystectomy has been advocated for the management of acute cholecystitis, but most hospitals in Thailand cannot performed that, most of operation in early cholecystectomy is performed in open surgery.

Objective: To compare early cholecystectomy (EC; performed within 7 day of admission) with delayed cholecystectomy (DC; performed at least 4 weeks after symptoms) in term of hospital costs, length of stay and perioperative complications.

Materials and Methods: This is a retrospective study of 229 patients with acute cholecystitis who go cholecystectomy during October 2015 – September 2019, primary outcomes were hospital costs and secondary outcomes were length of stay, perioperative complications were elicited from database and IPD charts.

Results: 229 patients were included (135 in EC and 44 in DC), ASA physical status in the EC was higher than DC ($p < 0.001$) and disease severity in the EC was greater than DC ($p < 0.001$). But hospital costs were similar for both groups (44289.87 baht for EC, 49598.11 baht for DC, $p = 0.452$), less length of stay for EC (7.5 vs. 10.3, $p = 0.006$), but EC had more blood loss (360 mL vs. 72 mL, $p = 0.001$) and more operative time (94 min vs. 71 min, $p < 0.001$). Overall complications were higher for EC (27 vs 0, $p = 0.0012$), but no significant differences were observed in bile duct injury or bile leakage (6 vs. 0, $p = 0.156$).

Conclusion: Although hospital costs were not significantly different between two groups, the EC group had shorter hospital stays. EC group patients experienced more perioperative pain, blood loss, and complications could be caused by more severe disease and higher ASA physical status.

Keywords: Acute cholecystitis, Early cholecystectomy, Delayed cholecystectomy, Cost, Thailand

EFFECTED FACTOR OF BOWEL ISCHEMIA IN PEDIATRIC MIDGUT VOLVULUS

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Background: Intestinal malrotation occurs as a result of failed extracelomic rotation around the narrow-based mesenteric pedicle, causing twisting of the superior mesenteric artery and superior mesenteric vein. Outcomes for children with malrotation and midgut volvulus depend on the degree of intestinal ischemia and the extension of intestinal resection. If intestinal ischemia is extensive and/or the child presents with overwhelming sepsis, death or short bowel syndrome are the usual results.

Objective: The purpose of this study is to describe the effected factor of bowel ischemia in pediatric midgut volvulus.

Materials and Methods: Retrospective analysis of patients with midgut volvulus who were treated at Queen Sirikit National Institute of Child Health during January 2013 to December 2019. The patients were divided into two groups: bowel ischemia and viable bowel. Demographic data, clinical presentation, radiological findings, laboratory findings, operative findings, procedures and outcome were collected in order to demonstrate the relationships. Statistical analysis was done by SPSS program using Chi-square test and multiple logistic regression.

Results: Forty-three patients were enrolled in this study. Five patients (10%) had bowel ischemia the remaining had viable bowel 38 (90%). Univariate analysis found abdominal tenderness, peritonitis, abdominal redness and lethargy were statistically significant for bowel ischemia. However, age, weight, prematurity and onset of presentation did not affect the bowel viability.

The multiple logistic regression analysis found no statistical significance in the effected factors above but subgroup analysis found that abnormal abdominal examination was statistically significant for bowel ischemia (RR 3.497, 95% CI 1.084-11.236).

Conclusion: The abdominal tenderness, peritonitis, abdominal redness and lethargy were affected factors to bowel ischemia in pediatric midgut volvulus.

Keywords: Midgut volvulus, Intestinal malrotation, Bowel ischemia

EFFICACY OF CEFMINOX VERSUS CEFTRIAXONE COMBINE WITH METRONIDAZOLE FOR PROPHYLAXIS OF SURGICAL SITE INFECTIONS IN LAPAROSCOPIC COLORECTAL SURGERY: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL

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Background: Post-operative surgical site infection is a common complication especially in a colorectal surgery of which wound is in a high-risk group. Prophylactic antibiotic is a well-established standard for this type of surgery. Laparoscopic surgery is a method which results in small incision, faster recovery and less chance of infection in the surgical wound. However, there is still an infection rate of 8-23%. According to Guidelines on the Management of Intra-Abdominal Infection by The Surgical Infection Society, it is recommended to use cefuroxime/ceftriaxone in conjunction with metronidazole. However, today there is a cefminox which is a new 3rd generation cephalosporin that covers anaerobe bacteria.

Objectives: The aims of the study are to compare the effectiveness of the usage of cefminox and ceftriaxone in conjunction with metronidazole in order to prevent surgical site infections after laparoscopic colorectal surgery.

Materials and Methods: 64 patients who schedule laparoscopic colorectal surgery are randomly separated into two groups. Group A receives prophylactic antibiotics with ceftriaxone 2 g and metronidazole 500 mg before surgery, and Group B receives cefminox 2 g.

Patient characteristics, intraoperative factors and postoperative surgical site infection and complication in 30 days were recorded and compared between two groups.

Results: The study includes 64 patients (37 males and 27 females). There is no significant difference of patient characteristics and intraoperative factors between the two groups. The rate of surgical site infection in group A is 18.8% (wound infection 12.5% and intra-abdominal infection 8.8%) and group B's is 21.9% (wound infection 18.8% and intra-abdominal infection 3.1%).

Conclusion: Cefminox is one of the choices in prophylactic antibiotic laparoscopic colorectal surgery. It can be used in single antibiotics with a reducing risk of side effect or drug allergy. Nevertheless, there is no significant difference in terms of effectiveness when comparing with traditional prophylactic antibiotics.

Keywords: Cefminox, Prophylactic antibiotic, Surgical site infection

HANDMADE SILK LOOP VERSUS HEM-O-LOK CLIP IN SINGLE PORT LAPAROSCOPIC APPENDECTOMY, RANDOMIZED CONTROLLED STUDY

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Background: In laparoscopic appendectomy has several variants of technique to seal stump.

Objectives: To evaluate operative time using hand-made silk loop (SL) compare with nonabsorbable polymeric surgical clips (hem-o-lok clip) (HK) to close the appendicular stump in patients diagnosed acute appendicitis underwent single port laparoscopic appendectomy (SPLA).

Materials and Methods: Forty-seven patients who was diagnosed acute appendicitis at Hatyai Hospital in Songkhla, Thailand were enrolled from January 2018 to September 2019. The primary outcome was operative time. Five patients diagnosed ruptured appendicitis and four patients diagnosed other disease were exclude from study (neuroendocrine tumor, corpus luteal cyst, ruptured gallbladder and cecal mass). All of the patients were randomized using computer generation in SL group and HL group. The data collected included age, gender, body mass index (BMI), operative time, pathological report, cost, numeric rating scale (NRS) at 4, 8, 12, and 24 hours postoperative, time of hospital stay, 30- day postoperative complication.

Results: Thirty-eight patients were included in this study. There were no significant differences between age, gender, body mass index, and American Society of Anesthesiologists classification (ASA). The mean operative time was no significant difference in both group ($p = 0.14$); mean operative time was 41.4 ± 14.8 minutes in SL group and 50.2 ± 19.8 minutes in HL group. The numeric rating scale (NRS) at 4, 8, 12, and 24 hours postoperative and time of hospital stay were similar in both groups. No 30-day postoperative complication was observed in both groups. The cost of three hand-made silk loops group is 17 baht, and three hem-o-lok clips is 795 baht.

Conclusion: In acute appendicitis, the closure appendicular stump by hand-made loop in single port laparoscopic appendectomy has shorter operative time than hem-o-lok clip but no significant difference. Hand-made silk loop is cheaper and safe for closure appendicular stump.

Keywords: Hand-made silk, hem-o-lok, Single port laparoscopic appendectomy, Acute appendicitis, Appendicular stump

HUMAN PAPILLOMAVIRUS (HPV)AND EPSTEIN-BARR VIRUS (EBV) IN PENILE CANCER IN THAILAND

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Background: Penile cancer is rare worldwide, but relatively common in developing countries. A few studies have been conducted on the involvement of Human papillomavirus (HPV) and Epstein-Barr virus (EBV) in penile carcinoma.

Objectives: This study aimed to determine the prevalence of HPV and EBV infection in penile cancer Thai patients.

Materials and Methods: Forty-three formalin-fixed paraffin-embedded penile cancer tissue samples were analyzed in this study. The HPV and EBV detection in tissue specimens were performed using immunohistochemically staining of p16 and Epstein-Barr encoding region (EBER) in situ hybridization. The clinical data were compared using the Log-rank test and overall survival (OS) was calculated using the Kaplan-Meier method.

Results: The prevalence of HPV and EBV in penile cancer was 27.9% (12/43) and 4.6% (2/43) respectively. No HPV and EBV co-infection were detected. There were no significant differences between the HPV positive and negative patients regarding age, histological grading, and TNM staging at presentation. There was a trend toward better survival in HPV+ patients compared with the negative with the median OS of 8 vs 6.8 years, the hazard ratio (HR) 0.48 (0.16-1.42).

Conclusion: HPV was positive in one-third of penile cancer patients in Thailand with the trend toward better survival compared to HPV negative patients.

Keywords: Human papillomavirus, Epstein-Barr virus, Penile cancer, Prevalence

INCIDENCE OF ABNORMAL CEA IN COMPLETE RESECTION OF COLORECTAL CANCER

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Background: Serum carcinoembryonic antigen (CEA) is used as surveillance tool during follow-up in colorectal cancer patients. However, it is clear that preoperative serum CEA is a prognostic factor for colorectal cancer.

Objective: The aim of the study is to determine the incidence of elevated preoperative serum carcinoembryonic antigen levels (CEA > 5 μg/L) in patients who underwent curative surgery for colorectal cancer and determined when surveillance of this marker was useful for detect locoregional and distant recurrence of the colorectal cancer in Vajira Hospital.

Materials and Methods: This single center retrospective observational cohort study includes patients who underwent curative surgery for colorectal cancer between 2012 and 2018, had pre- and postoperative serum CEA measurements. In the surveillance, we studied the reduction rate of serum CEA level after the surgery and relationship between elevated postoperative serum CEA levels and the recurrence disease.

Results: Preoperative serum CEA level was measured in 314 patients with resectable colorectal cancer. Incidence of patients who have elevated preoperative serum CEA levels (CEA > 5 μg/L) was 47.1%. In the surveillance, 40.9 % of patients with elevated preoperative CEA have serum CEA levels reduction (decreased serum CEA level < 5 μg/L or < 80% of preoperative CEA) at 1 month, 67.3% at 3 months and 74.6% at 6 months respectively. Among 47 patients with a recurrence disease, 26 patients have elevated preoperative serum CEA levels (55.3%). Elevated preoperative serum CEA levels was independent prognostic factors for tumor recurrence ($P = 0.03$). At the diagnosis of tumor recurrence, we found that 22 in 47 patients (46.8%) have elevated postoperative serum CEA levels.

Conclusion: In resectable colorectal cancer patients in Vajira hospital, high preoperative CEA level still be useful for follow postoperative and surveillance, and normal preoperative CEA level still be useful for compare with postoperative CEA level for surveillance and evaluate the recurrent. However, more than a half of patients with recurrence tumor have normalized serum CEA levels.

Keywords: CEA, Colorectal cancer, Recurrence, Clinical and molecular epidemiology, Follow-up

OUTCOME OF NEEDLE LOCALIZED EXCISIONAL BREAST BIOPSY UNDER LOCAL ANESTHESIA IN RAJAVITHI HOSPITAL A SINGLE SURGEON EXPERIENCE

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Background: With increasing use of mammogram and ultrasound in breast cancer screening and others indications. Thus, large number of non-palpable breast lesions are being detected. Breast biopsy is recommended in BIRADS 4 or higher category.

Needle or wire localization was widely used for a long time with a favorable result. This type of biopsy has been operated in Rajavithi Hospital since 2012. We aim to evaluate outcome of this procedure which were done as one day surgery under local anesthesia.

Objectives: To evaluate outcomes of needle localized excisional biopsy under local anesthesia (complications, patient's satisfaction and pathologic results). To ensure that this procedure could be done safely & effectively in outpatient department which can shortened time to diagnosis and may be curative in invasive cases that favorable resection margin archived.

Materials and Methods: Twentynine women were enrolled in this study. Needle localization under ultrasound guide followed by excisional biopsy was done in the same day. Pain score and level of satisfaction were asked after biopsy was done. complications and pathological report were reviewed after 2 weeks.

Results: 3 of 29 patients were diagnosed with invasive ductal carcinoma.1 was DCIS. 2 were solid intraductal papillary carcinoma. Mean pain score was 3.17 (± 2.17). Mean satisfaction score was 4.59 (± 0.57). 3 patients had minor complication. each of bleeding, seroma and infection.

Conclusion: This study showed that needle localized excisional biopsy under local anesthesia in non-palpable breast lesion could be done safely with favorable outcomes in low-cost setting such as outpatient department which saved resources, shortened time to diagnosis and prompt definite treatment.

OUTCOMES OF PERCUTANEOUS TRANSLUMINAL ANGIOPLASTY IN TRANSPLANT RENAL ARTERY STENOSIS

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Background: Percutaneous transluminal angioplasty (PTA) with or without stent placement is the first-line treatment in transplant renal artery stenosis (TRAS) patients who have allograft dysfunction or uncontrolled hypertension. However, there is heterogeneity of the clinical outcomes.

Objective: To determine the effectiveness and safety of PTA or stent placement in TRAS in our transplant unit.

Materials and Methods: Retrospective review of the patients who underwent PTA with or without stent placement in TRAS from July 2010 to July 2019. The primary outcome was clinical success defined as improvement in renal function, or blood pressure, or reduction of antihypertensive drugs. The secondary outcomes were technical success, patency, and complications. The outcomes were evaluated at 1 week, 1 month, 3 months, 6 months, and 12 months.

Results: Thirty-nine patients underwent PTA with stent placement and one patient was performed only PTA. Clinical success rates were 80% (95% confidence interval [CI]: 64.35, 90.95%). Renal function and mean arterial pressure were significantly improved starting at one week and over the time at 12 months, median difference of GFR was 12.7 ml/min/1.73m^2 (95% CI: 5.2, 20.2 ml/min/1.73m^2; $p < 0.001$), serum creatinine was -0.4 mg/dL (95% CI: -0.7, -0.2 mg/dL; $p < 0.001$), mean arterial pressure was -6 mmHg (95% CI: -11, -1.33 mmHg; $p = 0.003$). The number of antihypertensive drugs was significantly reduced at 12 months, median difference was -1 (95% CI: -2, 0; $p < 0.001$). Technical success rates were 100%. Patency rates at 12 months were 87.5%. Complications occurred in 3 (7.5%) patients, with two puncture site hematoma and one renal artery dissection.

Conclusion: PTA with or without stent placement in TRAS showed favorable outcomes with improving renal function and hypertension.

Keywords: Percutaneous transluminal angioplasty, Transplant renal stenosis, Kidney transplantation

OUTCOMES OF TRANSCATHETER ARTERIAL EMBOLIZATION FOR RENAL HEMORRHAGE

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Background: Transcatheter arterial embolization (TAE) is a useful method in treating iatrogenic and

penetrating renal trauma and bleeding renal tumor. The aim of this study was to evaluate the clinical efficacy and safety for emergency embolization.

Objective: The objective of the study is to determine the clinical success rate of TAE for renal hemorrhage and factor associated with unsuccessful outcome.

Materials and Methods: This retrospective study included patients treated with emergency TAE for acute renal hemorrhage between 1 January 2009 to 31 October 2019 in Srinagarind Hospital. The embolization was performed using coils, glues, and/or gelfoams. Factors associated with successful outcome were analyzed using uni- and multivariate regression analysis.

Results: A total of 94 patients treated at the center during the study period. Of those, 56 patients (59%) were male, and the median age was 47 (19-78) years. The causes of renal hemorrhage were iatrogenic (76.6%), ruptured tumor/aneurysm (12.8%), and trauma (10.6%) respectively. The success rate was 91.5% and only two patients needed nephrectomy. Hypertension and bleeding tumor were two independent factors for unsuccessful embolization.

Conclusions: TAE is an effective procedure for acute renal hemorrhage. Hypertension and ruptured tumor/aneurysm were negative predictor for success.

Keywords: Transcatheter arterial embolization, Renal artery embolization, Renal trauma, Renal hemorrhage

PREDICTING FACTOR IN MISS FREEHAND CORE NEEDLE BIOPSY IN BREAST CANCER

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Background: Biopsy of palpable breast masses can be performed manually by freehand (palpation) core needle biopsy (FCNB) guidance or under imaging guidance, under imaging guidance is superior in terms of a lower false negative rate, the practice of freehand biopsy still persists in some breast units especially in rural hospital. In our breast unit a significant proportion of core biopsies are performed freehand sometimes necessitating a repeat biopsy under image guidance cause delay diagnosis and treatment.

Objective: Establish the proportion of patients undergoing freehand core biopsies who proceeded to a repeat procedure and to determine any factors associated with a missed freehand biopsy.

Materials and Methods: 425 randomly selected female breast cancer patients 15 years old or older at Chiangrai Prachanukroh Hospital, between October 2014 to September 2019. Demographic data, pathological report, location, depth of breast mass from skin, size of breast mass, and number of core biopsy were record.

Results: Twenty-one percent (91/425) freehand biopsies were repeated. Multivariate analysis shows that FCNB were strongly associated with deep lesions and small size, therefore mass that depth from skin more than 6 mm. ($p = 0.018$) or small size than 20 mm ($p = 0.010$) should selected to used ultrasound guide core needle biopsy that effect of reducing the freehand biopsy miss rate by almost one-fifths.

Conclusion: Core biopsies should be performed under ultrasound guidance. A freehand technique could be limited to superficial lesions and large lesion. Depth and size of lesion is more predictive for a missed biopsy than number of core biopsy.

Keywords: Breast cancer, Predicting factor, Miss freehand core needle biopsy, Size, Depth of breast mass

PREDICTIVE RISK FACTOR FOR OCCULT NIPPLE AREOLAR COMPLEX INVOLVEMENT IN PATIENT UNDERGO MASTECTOMY

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Background: Patients who considered breast conservative surgery with preserved nipple must carefully selected because concerning about occult malignancy involvement in nipple areolar complex (NAC) can occur and it could increase local recurrent rate and effect in disease free survival.

Objectives: To predict risk factors for occult nipple involvement in patients undergo mastectomy and collect data of incidence in Thammasat university hospital.

Materials and Methods: Retrospective cohort charts and pathologic specimens review of 157 patients

undergo mastectomy. Analyzed correlation of clinical, imaging, and histologic finding with nipple areolar involvement.

Results: Number of occult nipple involvement was 45 of 157 cases (28.66%) in this study. Clinical predictive risk included nipple retraction ($p < 0.001$), location in UOQ (p 0.014) and central ($p < 0.001$). Association of nipple-tumor distance in imaging present in median of 2.1 cm [IQR (1.4,3.3), $p < 0.001$]. Tumor size 3.0 [IQR (2.5,4.5), $p < 0.001$]. Histopathological exam includes positive lymph node status (p 0.001), PNI ($p < 0.001$) and LVI (p 0.007). Reviewed positive nipple specimen showed ductal invasion 37.78%, direct invasion 26.67% and both 17.78%.

Conclusion: Nipple-sparing mastectomy is a surgical option for breast-conserving surgery that may satisfy patients and increase quality of life so it should consider in cases with low risk factor for occult nipple involvement. We suggest that tumor size > 3 cm or locate on UOQ or central area, distance < 2.1 cm form NAC and pathologic result for positive LN or PNI or LVI should carefully exclude for this operation.

Keywords: Nipple areolar complex, Occult nipple involvement, Breast cancer, Mastectomy, Nipple sparing mastectomy

PRESENTATION OF RUPTURED ABDOMINAL AORTIC ANEURYSM IN CHIANG RAI HOSPITAL DURING 2008-2017

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Background: Ruptured abdominal aortic aneurysm (AAA) is one of the complications of abdominal aortic aneurysm. Once this complication occurs, mortality rate rises to 90%. Classic triads for diagnosis are presented only 25-50% of all cases, making it difficult to diagnose. In Chiang Rai Hospital, diagnosis was often made wrong and mortality rate was high so this study was conducted.

Objectives: The aim of this study is to collect data of clinical presentation of patient diagnosed ruptured AAA in Chiang Rai Hospital. To find out what diagnosis was made when ruptured AAA was not diagnosed, and whether clinical presentations play a role in missed diagnosis or not.

Materials and Methods: descriptive retrospective study was performed. 254 patients diagnosed ruptured abdominal aortic aneurysm during the fiscal year 2008-2017 were included in the study. Patients diagnosed as ruptured AAA were observed and compared to other diagnosis group. Clinical presentation, nationality, time visiting hospital, and treatment outcome was collected.

Results: 152 out of 156 patients presented with classic triads, but only 37 patients fulfilled the triads. 20 out of 156 patients presented with non-triads symptom. Patients diagnosed ruptured AAA at first (n = 111), fulfilled triads 16 patients (14%). In other diagnosis group (n = 45), patients presented with fulfilled classic triads were 24 patients (46%). Time visiting hospital and nationality were not different in two groups.

Conclusion: most of patients presented with two of classic triads, only 23% fulfilled classic triads. Few of them present with other symptoms (12%). Provisional diagnosis as ruptured AAA was made despite non fulfilled triad. Clinical presentations are not relevant with wrong diagnosis.

Keywords: Ruptured AAA, Classic triads, Chiang Rai Hospital

PROLIFERATIVE BENIGN BREAST DISEASES DIAGNOSED ON CORE NEEDLE BIOPSY UPGRADING TO CARCINOMA ON SURGICAL EXCISION: THE RETROSPECTIVE STUDY OF UPGRADE RATE AND PREDICTIVE FACTORS FOR PATHOLOGICAL UPGRADING IN PHRAMONGKUTKLAO HOSPITAL

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Background: Proliferative benign breast diseases have potentially risk to become malignancy. Benign diagnosed on core needle biopsy can be upgrade to carcinoma when perform surgical excision. The previous studies have determined only single benign breast lesion in each study. The upgrade rate and predictive factors for pathological upgrading were found differently for each lesion.

Objectives: To determine upgrade rate and predic-

tive factors for pathological upgrading in proliferative benign breast diseases.

Materials and Methods: Patients with proliferative benign breast diseases diagnosed on core needle biopsy and undergone surgical excision from January 2010 to December 2019 in Phramongkutklao Hospital were retrospectively reviewed. Multivariate analysis was performed using logistic regression to analyze predictive factors for pathological upgrading.

Results: 49 out of 149 patients had pathological upgrading to carcinoma on surgical excision (32.9%). On multivariate analysis, there were two predictive factors that significantly associated with pathological upgrading; lesions on imaging studies more than 1 cm in size (OR: 2.72, 95% CI: 1.10-6.69, $p = 0.03$) and atypical cells found on core needle biopsy (OR: 15.48, 95% CI: 5.73-41.77, $p \leq 0.01$). Subgroup analysis was performed in proliferative benign breast diseases without atypia (n = 98). Atypical cells found on core needle biopsy was found significantly associated with pathological upgrading (OR: 21.07, 95% CI: 2.95-150.43, $p \leq 0.01$). 17 upgrading patients with intraductal papilloma or papillary lesions were reviewed. Discordant triple assessment and symptomatic lesions indicated for surgical removal by attending surgeons.

Conclusion: Patients with proliferative benign breast diseases which had lesions on imaging studies more than 1 cm in size or had atypical cells found on core needle biopsy should undergo surgical excision due to risk of malignancy. In case of intraductal papilloma or papillary lesions with atypical cells found on core needle biopsy, patients presented with breast mass or nipple discharge, and discordant triple assessment, should undergo surgical excision regardless of lesion size.

Keywords: Proliferative benign breast diseases, Upgrading

ROLE OF COLONOSCOPE IN PATIENTS PRESENTING WITH BRIGHT RED BLOOD PER RECTAL CROSS-SECTIONAL STUDY, HATYAI HOSPITAL

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Background: Each year many patients are presenting with bright red blood per rectal, but it is a source of controversy as bright red blood per rectal necessitates colonoscopy.

Objectives: To identify the type and prevalence of endoscopic finding in patients with hematochezia such as cancer and significant lesion* and to identify risk factor in this population.

Materials and Methods: This cross-sectional study was performed in Hatyai Hospital (January 2010-May 2020). Data included demographics, endoscopic finding. Lesions were labeled according to location. Excluded were those with incomplete data.

Results: The study included 381 with bright red blood per rectal and undergone a colonoscope. 320 patients (83.9%) had any one of these risk factors for colon cancer and 61 patients (16.1%) had no risk factor. There was no age-related risk of colon cancer in both groups but risk of found significant lesions such as polyps, arteriovenous malformation, inflammation, diverticula is significantly greater than 50 years old. (OR = 2.77 95% CI 1.53-5.21, $P = 0.003$). Significant lesions can be found throughout the colon.

Conclusion: Colonoscope in patients with bright red blood per stool still benefit, especially in people over the age of 50 years, who have higher chance to find a significant lesion.

Keywords: Hematochezia, Neoplasia, Colonoscope, Colonic neoplasm

***Significant lesions:** Polyps, Arteriovenous malformation, Inflammation, Diverticula

SINGLE-CENTER RATE AND PREDICTIVE FACTORS OF LOWER LIMB SALVAGE IN ACUTE LIMB ISCHEMIA

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Background: Acute limb ischemia (ALI) is an emergency condition for treatment due to its complications. If not treated immediately, it could lead to loss of limbs and fatality. (1) The main cause of ALI is the result from arteriosclerosis arterial occlusion, either thrombus or embolism leading to the reduction of the perfusion of distal limb part.

Currently, ALI is still receiving attention and challenges for treatment. The global incidence of ALI is 1.5 per 10,000 population per year. The rate of amputations caused by ALI is 10-15 percent (2-3), while the 30-day mortality rate of this condition is 15-25% (4). By long-term follow up, the mortality rate as high as 20-40% (5-8). In the context of Thailand, there are restrictions on rights and disbursements regarding vascular devices, drugs and also referral system. It makes role of treatment more likely to be open thrombectomy or open embolectomy rather than an endovascular treatment.

Objectives: To evaluate rate limb salvage and predictive factors and mortality in ALI.

Materials and Methods: Retrospective review of all patients diagnosed ALI since January 2014 to December 2019 admitted Vajira Hospital, and collected data including time prior to arrival, clinical of "6 P", patients demographics, Rutherford classification, level of occlusion, cause, operative records and procedure were reviewed. SPSS version 22.0 was used for analysis.

Results: Sixty-nine cases were diagnosed acute limb ischemia with cause of thrombosis 63.8% and due to embolism 36.2%. Median of time-to-visit was 48 hours (CI 95% = 53.3-86.1). Patients are classified into Rutherford IIb (69.6%), IIa (13%), III (15.9%) and I (1.4%) Initial operative approach were open approach (39.1%), endovascular (40.8%), initial amputation (5.8%). Overall limb savage rate was 76.8%, sixteen patients (23.2%) were amputated. Predictor for amputation include clinical paralysis (p = 0.004) and aortoiliac level occlusion (p = 0.035). Mortality was reported nineteen cases. Causes were Acute kidney injury (52.6%), Pneumonia (36.8%), Reperfusion (31.6%), Myocardial infarction (21.1%). There was no statistic significant in comorbidity, time to visit, operative approach.

Conclusions: Predictive factor for limb salvage in acute limb ischemia based on first presentation and severity. Clinical of paralysis is the poor prognostic for limb salvage. Aortoiliac level occlusion was significantly associated with limb lost.

Keywords: Acute limb ischemia (ALI), Rutherford classification, Limb salvage, Amputation

SURVIVAL ANALYSIS IN ELDERLY FEMALE BREAST CANCER PATIENTS

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Background: Breast cancer is the most frequent cancer among of women, Factor that effect increase risk of breast cancer is long time estrogen exposure and elderly age. The most aged incidence average 50-74 years old.

Objective: To determine 5-year survival rate of elderly female breast cancer patients undergone in Srinagarind Hospital.

Materials and Methods: Retrospective Chart review breast cancer patients aged ≥ 70 who received treatment between 2008-2017 in Srinagarind Hospital, Khon Kaen University.

Results: Median age of patients was 74 years old, the factor that effect survival were hormonal treatment 76%, negative surgical margin 69.5% and none recurrent tumor 65.1%.

Conclusion: 5-year overall survival of elderly female with breast cancer was 61.5%. The associated risk factor were hormonal treatment, surgical margin and recurrent rate.

Keywords: Elderly breast cancer, 5-year survival, Factor that effect survival

SURVIVAL ANALYSIS OF ANATOMICAL AND PROGNOSTIC STAGING GROUP BASED ON THE AMERICAN JOINT COMMITTEE ON CANCER IN RAJAVITHI HOSPITAL

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Background: Breast cancer is the most frequently diagnosed cancer globally and in Thailand. The incidence rate of the cancer is increasing. The staging system most often used for breast cancer is the American Joint Committee on Cancer TNM system. Since the 12th St Gallen consensus meeting, there has been more interest in the molecular subtype of the cancer that impacts on

the variety of breast cancer. The implement of molecular testing for prognostic staging has been used in the 8th edition of AJCC since year 2017.

Objective: This study aims the evaluate the 5 years overall survival rate of patients with breast cancer in Rajavithi Hospital.

Materials and Methods: The data was retrieved retrospectively from 303 patients with breast cancer that were staged using the anatomical staging. This study was conducted in Rajavithi Hospital including data from year 2007-2014. We re-staged the breast cancer using the prognostic staging and compared the survival rate compared to the anatomical staging.

Results: From 303 patients, mean age is 58.5 ± 13.3 years, mean survival 70.7 ± 16.0 months, the most common cell type is invasive ductal carcinoma. compared to anatomic stage group, prognostic system resulted in 152 of 303 patient to different group. Most of them (97/152) downstage to better prognostic group. There were no statistically different between each subgroup in 5 years overall survival.

Conclusion: The prognostic staging system, which serve as a bridge from population-based to a more personalized approach. More clinical trial is needed to prove significant in guiding the selection of proper systemic therapy and predicting the prognosis.

SURVIVAL OF UNRESECTABLE METASTATIC COLORECTAL CANCER WITH DIFFERENT HEALTH CARE COVERAGE

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Background: Metastatic colorectal cancer carries a grim prognosis. Chemotherapy is one of modalities which can improve survival of these patients. Thai health care system offers different types of health insurances with different access to chemotherapy.

Objective: To compare survival of unresectable metastatic colorectal cancer between patients with government officer coverage (OFL et al.) and patients with universal coverage (UC) and social security service (SSS.)

Materials and Methods: This is a retrospective comparative analytical study collecting data from medical records. Data include patients with government officer coverage, universal coverage or social security service, who were diagnosed with unresectable metastatic colorectal cancer from 1st January 2012 to 31st December 2013. Survival analysis was conducted using Kaplan-Meier curve and Log Rank test.

Results: This study includes 119 metastatic colorectal cancer patients; 73 being in UC/SSS group, another 46 in OFL et al. group. Median survival time is 16.03 months (95% CI 11.52-20.55) for UC/SSS group and 16.00 months (95% CI 10.98-21.02) for OFL et al. group. There are 65 patients receive chemotherapy and 5 patients (7.69%) receive targeted chemotherapeutic agents in UC/SSS group, while 38 patients receive chemotherapy and 24 patients (63.16%) receive targeted chemotherapeutic agents in OFL et al. group. For those who received chemotherapy, median survival time is 15.13 months for UC/SSS group and 18.20 months for OFL et al. group. In UC/SSS group 1, 3, and 5-year survival is 63.08%, 7.69% and 3.08% consecutively. In OFL et al. group survival is 63.15%, 13.16% and 7.89% at 1, 3, and 5 year.

Conclusions: This study shows that survival of unresectable metastatic colorectal cancer patients between government officer coverage and universal coverage and social security service are not statistically different.

Keywords: Metastatic colorectal cancer, Thailand health care system, Chemotherapy, Survival

THE PREVALENCE AND PREDICTORS OF SYNCHRONOUS LUNG METASTASIS IN RECTAL CANCER

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Background: Lung is a common metastasis site of rectal cancer. Metastatic site, size of tumor, lymph node involvement effect survival in rectal cancer. Isolated lung metastasis has better prognosis than other organ**.** Identification of rectal cancer cases with isolated lung metastasis would improve management of patients.

Objectives: To study the prevalence and predictors

of synchronous lung metastasis in Thai rectal cancer patients.

Materials and Methods: Investigators retrospectively reviewed medical records of patients whom was first diagnosed with rectal cancer with pathologic confirmation at Siriraj hospital, Thailand between 2012 and 2017 and had computed tomography (CT) of chest and abdomen. The data included gender, age, weight, smoking, diabetes mellitus, hypertension, lymph node, tumor size, tumor location, histopathology, CEA level, history of prior cancer, history of cancer in family, and synchronous liver and lung metastasis.

Results: We analyzed data from 427 patients. Two hundred and forty-one patients (56.4%) were male. Mean age and weight were 61 years and 61 kg, respectively. Mean tumor size was 31.5 mm. Most of tumor located at upper rectum (30.8 %). Mean CEA level was 12 ng/mL. The prevalence of lung metastasis in rectal cancer was 25%. A univariable analysis revealed that CEA level, tumor size and lymph node metastasis were statistically significant predictors of synchronous lung metastasis. A multivariable analysis found that tumor size > 30 mm (Odds ratio 1.9, $p = 0.006$) and lymph node metastasis (Odds ratio 2.3, $p < 0.001$) were statistically significant predictors of synchronous lung metastasis in rectal cancer.

Conclusion: The prevalence of synchronous lung metastasis in rectal cancer was 25 % and factors that predicted synchronous lung metastasis in rectal cancer were tumor size > 30 mm and lymph node metastasis.

Keywords: Rectal cancer, Synchronous lung metastasis

THE PROGNOSTIC VALUE OF LYMPH NODE RATIO IN RECTAL CANCER STAGE III

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Background: Rectal cancer was using the TNM staging system to determine the treatment plan and prognosis. Accuracy of N-stage depended on number of harvested lymph node. Practically in rectal cancer operation cannot always harvest adequate 12 nodes. Some studies suggested using Lymph node ratio to predicted survival of patient. This study aims to evaluate prognostic value of lymph node ratio (LNR) specifically in rectal cancer stage III and without pre-operative concurrent chemoradiation therapy (CCRT).

Objective: Evaluate prognostic value of lymph node ratio to survival of rectal cancer stage III.

Materials and Methods: This study was a retrospective cohort conducted at Rajavithi Hospital. From January 2012 to December 2016. The LNR was calculated by the number of positive lymph nodes divided by the total number of lymph nodes sampled. The LNR was compared to the overall survival and recurrent status of each patients.

Results: The data included all 103 rectal cancer patients. ROC curve shown LNR of 13% is the best value for predicted survival (sensitivity: 78.6%; specificity: 43.6%; AUC 0.618). LNR > 13% significant corelated to 3-year overall survival *P*-value = 0.022 and to 3-year disease-free survival *P*-value = 0.016. LNR also associated with local recurrent with HR 3.214 (95% CI: 1.283-8.052). This study also evaluated recommendation of number harvested 12 lymph nodes for staging the disease which found the quantity of harvested lymph node did not associated with survival of the disease.

Conclusion: LNR is reliable predictor for prognosis of rectal cancer patient. Optimum cut off point of 13% is best value for predicted both 3-year overall survival and 3-year disease free survival.

Keywords: Lymph node ratio, Rectal cancer, Overall survival, Disease-free survival

THE RECURRENCE RATE OF ACUTE CHOLANGITIS IN ADVANCED CHOLANGIOCARCINOMA: SURGICAL BYPASS VERSUS PERCUTANEOUS TRANSHEPATIC BILIARY DRAINAGE

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Background: Cholangiocarcinoma (CCA) is the 2nd most common cancer in Thailand. Obstructive jaundice is the most common presenting symptom in advance stage. Biliary drainage is the mainstay treatment to relieve symptoms and improve quality of life.

Objectives: To compare the recurrence rate of acute cholangitis in patients undergoing surgical bypass (SB) versus Percutaneous Transhepatic Biliary Drainage (PTBD).

Materials and Methods: A retrospective study was conducted in Surin Hospital from January 2009 to December 2019. Those patients diagnosed as advanced CCA were included. The rate of recurrent cholangitis and length of hospital stay (LOS) was determined for a period of 12 months after either SB or PTBD.

Results:65 patients were included in this study. 33 patients underwent SB and 32 patients underwent PTBD. The mean age was 65.5 ± 15.2 vs 67.4 ± 16 in SB and PTBD respectively. Most of patients were in ASA class-1 [26 (78.8%) vs 22 (68.8%), SB VS PTBD]. LOS was lower in PTBD group (8.2 vs 13 days, *P*-value < 0.001). The total bilirubin (TB) before the operation was higher in PTBD group (20.99 VS 15.45 mg/dl). The recurrent rate of acute cholangitis at 12 months were significantly lower in SB than in PTBD (10 (30.3%) vs 4 (12.5%), *P*-value < 0.001).

Conclusion: The recurrent rate of acute cholangitis after surgical bypass in patient with advance cholangiocarcinoma is lower than patients underwent PTBD.

THE STUDY OF EARLY PARENTERAL NUTRITIONAL SUPPORT AND FACTORS ASSOCIATED WITH CLINICAL OUTCOMES IN MAJOR PEDIATRIC BURN PATIENTS

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Background: Nutrition support is important for successful major burn treatment by modulating body systemic inflammatory responses. Early enteral nutrition was proven to decrease morbidity and mortality in burn patients. In pediatric burns, initial phase cannot tolerate full enteral feeding from multifactor. Parenteral nutrition (PN) is one of the good choices for nutrition supplements in these patients. However, to date, there is limited information to support the benefit of early PN in the acute phase of pediatric burns treatment.

Objective: To study an association between route of early nutritional support and factors with clinical outcomes, i.e., length of stay (LOS) and 30-day mortality in major burn pediatric patients.

Materials and Methods: A retrospective study was done with pediatric burn patients in Burn Unit of Siriraj Hospital, Thailand between January 1999 and September 2019. Of these, 124 pediatric patients with over 15% total body surface area (TBSA) second- and third-degree burn, and fed with early 7-day supplemental nutrition were reviewed and classified to parenteral nutrition (PN) and enteral nutrition (EN). Univariable and multivariable linear regression analysis were used to assess association between the route of early nutritional support and factors with length of stay (LOS) while univariable and multivariable binary logistic regression were used for 30-day mortality.

Results: Of the 124 patients, 86 (65.2%) were male and median age was 3 years (range 0.3-15 years). Multivariable analyses showed that early supplemental nutrition was not associated with both LOS ($p = 0.480$) and 30-day mortality ($p = 0.529$). Age, wound infection and abdominal distension were the independent associated factors of LOS ($p = 0.025$, 0.001, 0.003 respectively). Pneumonia and urinary tract infection were independent factors associated with 30-day mortality ($p = 0.025$ and N/A respectively).

Conclusions: Early PN could be considered as alternative route of feeding in these patients. Patients with wound infection and abdominal distension should be intensive care in order to reducing LOS.

Keywords: Early PN, Early EN, Pediatric burn, LOS, 30-day mortality

URGENT VERSUS SCHEDULED COLONOSCOPY AMONG ACUTE LOWER GASTROINTESTINAL HEMORRHAGE PATIENT IN RAJAVITHI HOSPITAL

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Background: Acute lower gastrointestinal hemorrhage is a common surgical problem. Colonoscopy is the primary modality for diagnosis and treating. Early colonoscopy referred to within 24 hours can increase the detection rate. Lower gastrointestinal hemorrhage case at Rajavithi Hospital usually undergo resuscitation and bowel preparation before colonoscopy.

The limitation, colonoscopy can be done in working hours, thus some patients may not undergo colonoscopy within 24 hours. This study aims to evaluate the identification source of bleeding by colonoscopy in Rajavithi Hospital.

Objective: To compared between urgent and scheduled colonoscopy in acute lower GI bleeding. Primary outcome was identification source of bleeding. Secondary outcome was 30 days mortality rate, length of hospital stays (LOS), blood transfusion volume, re-bleeding within 30 days.

Materials and Methods: Retrospective study compared Inpatient with lower GI bleeding who underwent colonoscopy for initial evaluation in Rajavithi Hospital between January 2015 – December 2019. They were divided two group. First group were urgent colonoscopy that were defined as performed colonoscopy within 24 hours after admission. Second group were scheduled colonoscopy that were performed colonoscopy after 24 hours in the same admission period.

Results: 164 inpatient patients who was performed colonoscopy in the same admission. Urgency group had 104 patients and elective colonoscopy had 60 patients. There was no difference in detection rate (82.7% vs 76.7%, *P*= 0.348), mortality rate (2.9 vs 3.3, *P* = 0.837), LOS (4.94 ± 5.05 vs 6.23 ± 10.46, *P = 0.*185), blood transfusion volume (528.85 ± 720.12 vs 445.83 vs 629.59, *P = 0.458*), and re-bleeding within 30 days (4.8% vs 6.7%, *P* = 0.619)

Conclusion: Urgent colonoscopy not show benefit when compared with scheduled colonoscopy in identification rate, mortality rate, LOS, blood transfusion volume and re-bleeding even.

Keywords: Acute lower gastrointestinal bleeding, Urgent colonoscopy, Mortality rate