

Surgical Studies

Chair: N Duncan

(O – 20)

Long-term survival from colorectal cancer in Jamaica

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Objective: To determine the intermediate and long-term survival of patients diagnosed with colorectal cancer (CRC) and to determine factors that affect survival.

Method: Patients were identified from a prospectively maintained colonoscopy database. All patients who underwent colonoscopy during the period January 2008 to December 2012 and had histologically confirmed invasive carcinoma were included. These patients were contacted at the end of 2013 to determine their survival status. In addition to demographics, variables analysed included indication for colonoscopy and tumour site.

Results: Of 1757 patients being subjected to colonoscopy, 118 had endoscopic and histologic documentation of invasive CRC. Of these, the survival status of 102 was determined as of December 2013 and they formed the basis of this study. The mean age of the group was 62 years, with approximately 20% of the group being age 50 years or younger. Females (54%) slightly outnumbered males. Anaemia or overt rectal bleeding was a dominant indication (44%) and 65% of the tumours were left-sided. There were 58 (57%) deaths and the median overall survival time was two years post diagnosis. Log-rank tests for equality of survivorship looking at age, gender, tumour site and presentation revealed that only presenting complaint was a predictor of survivorship ($p < 0.001$). Patients presenting with bleeding or anaemia have the best survival.

Conclusions: Long-term survival from colorectal cancer remains poor with only about 33% of patients being alive five years after their diagnosis.

(O – 21)

Clinicopathologic characteristics of rectal cancer in Jamaica

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Objective: To determine the clinical and pathologic features of rectal cancer in a Jamaican population and to assess the current quality of surgical resections.

Methods: Data were obtained from a prospective national colorectal cancer database over a three-year period (2011–2013). All cases of rectal cancer were included. Descriptive analyses of tumour characteristics and surgical pathology outcomes were performed.

Results: One hundred and ten cases of rectal cancer were identified. This accounted for 18.8% of the cases. The mean age of the cohort was 63.5 years (range: 31–89 years). A male predominance (60.9% of cases) was noted. Seventy-nine cases were biopsy specimens, while the remainder were surgical specimens. Adenocarcinoma (not otherwise specified) was the predominant histologic type with ‘moderately differentiated’ being the most common degree of tumour differentiation, accounting for 83.6% and 67.3% of cases, respectively. Of the 31 surgical specimens included, mean lymph node yield was 12.7 (range: 2–29) with a mean of 1.5 (range: 0–7) positive nodes. No margins were positive, with circumferential, proximal and distant margins being an average of 2.2 cm, 2.3 cm and 2.3 cm, respectively. According to the tumour, node, metastasis (TNM) staging classification, T stage was recorded as T1 (1 case), T2 (6 cases), T3 (8 cases) and T4 (2 cases). Nodal status was recorded as NX (1 case), N0 (8 cases), N1 (8 cases) and N2 (2 cases).

Conclusion: The proportion and histological characteristics of rectal cancer in the Jamaican population mirror international results. Oncologic principles of surgical resections are maintained based on adequacy of lymph node harvest and resection margins.

(O-22)

The incidence, causes, and pattern of day of surgery cancellation at the Kingston Public Hospital and the implications for patients

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Objective: To investigate the incidence and reasons for day of surgery cancellation at the Kingston Public Hospital (KPH) and the implications for affected patients.

Methods: A prospective, descriptive survey and an interviewer-based questionnaire were administered between January and March 2013. Descriptive statistics evaluated incidence, causes and pattern of elective surgical cancellation. The psychometric Positive and Negative Affect Scale (PANAS) was used to assess the emotional effects of cancellation on patients. Data were stored and analysed using the SPSS version 19.

Results: Of 739 patients scheduled for elective surgeries, 384 (52%) were cancelled. Inpatient cancellation rate was 52%, (364/704) compared to 61%, (20/33) outpatient/ambulatory cancellation rate ($p < 0.001$). Neurosurgery, 50/69 (72.5%), orthopaedics, 156/275 (56.7%) and ear, nose and throat (ENT), 67/130 (51.1%) had the highest cancellation rates. The most common reason was over-run time, 66.1% (254). Patient-related reasons, 43 (11.3%), for cancellation were significantly less than administrative reasons, 339 (88.7%); $p < 0.001$. Of 188 patients interviewed, all had a low positive affect score (PAS) of 14.53 ± 3.91 . The majority, 134 (71.3%), had high negative affect with mean negative affect score (NAS) of 19.99 ± 7.52 . Affect was significantly negatively influenced by increasing patient age, neurosurgical sub-specialty, prolonged fasting, when no explanation for cancellation was given or was considered inadequate.

Conclusion: The KPH has an unacceptably high surgical cancellation rate when compared to the internationally accepted rate of 5%. Patients displayed high levels of negative emotions associated with cancellation. Administrative causes can be addressed by implementing policies to effectively manage operating theatre scheduling, thereby improving operating theatre efficiency and patient satisfaction.

(O-23)

Destroying the myth: contraindication of lidocaine with adrenaline in the ear

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Objectives: To establish the safety of using lidocaine with adrenaline in the ear.

Methods: The study is a retrospective review in a single institution of persons with ear lobe keloids. The keloids were surgically excised after the blockade of the affected area with a lidocaine and adrenaline mixture. The patients were then treated with adjuvant trimcinalone or superficial radiotherapy. The patients' pain control during the procedure and any postoperative haemorrhage was recorded. The patients' wounds were reviewed on the fourth and fourteen postoperative day, recording any evidence of ischaemia and infection.

Results: There were a total of 14 patients: eight males and six females. The ages ranged from nine to thirty-four years. The anatomical sites were 12 at the lobule and two at the helix. The adjuvant modalities used were patients with triamcinolone in five and with superficial radiotherapy in the remaining nine. The patients all scored 0 using a visual analogue in pain scoring during the procedure. There was no skin necrosis in the patients and no local wound complications.

Conclusions: The literature has warned against the use of lidocaine with adrenaline in the sites of end arteries, such as ears, digits, nose and genitalia. The experience of our series with no adverse outcomes has questioned this dogma.

(O-24)

Surgical quality in colorectal cancer

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Objective: To determine the quality of surgical management offered to patients with colorectal cancer (CRC) and compare variations across the major hospitals.

Method: Data were obtained from the CRC Registry for cancers diagnosed and treated surgically during the three-year period commencing January 1, 2011. Variables analysed included tumour site, stage and adequacy of nodal resection.

Results: Sixty per cent (349) of 586 patients formed the basis of this study. Forty-nine per cent were treated at the University Hospital of the West Indies (UHWI), 27% from

the Kingston Public Hospital (KPH) laboratory, 15% from Cornwall Regional Hospital (CRH) laboratory and 8% from a private laboratory. Patient distribution was similar at UHWI compared to the others, with mean age (61 vs 62 years) and with slightly more women having surgery (53% vs 54%; UHWI vs others). For tumour grade, margin status, lymphovascular and depth of invasion (majority T3), there was no difference between UHWI and the other sites, although a smaller percentage of tumours treated at UHWI had Crohn's like reaction ($p = 0.01$). There was a larger proportion of sigmoid cancer at UHWI while the reverse trend was seen in cancers of the rectum ($p = 0.027$). The tumours treated at UHWI had a larger median number of regional nodes when compared to the other facilities (14 vs 10; $p < 0.001$). Comparison across facilities revealed that the proportion of tumours classed as well differentiated, circumferential margin involvement, and having lymphovascular invasion were higher for specimens processed at the private facility ($p = 0.021, 0.035, 0.01$, respectively). Tumours treated at UHWI and the private facility had median 14 and 18 nodes, respectively while at NPH and CRH laboratories, they were nine and 10, respectively ($p < 0.001$). Tumours of the ascending, descending, sigmoid colon and rectum had median 15, 11, 13 and 11 nodes, respectively ($p < 0.001$).

Conclusions: This review demonstrates measurable differences in the surgery and histopathological reports for CRC patients treated across the island. Given adjuvant treatment and prognostic implications, there is room for improvement.

(O – 25)

Red blood cell deformability is reduced in homozygous sickle cell disease patients with chronic leg ulcers

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Objective: It has been posited that abnormal haemorheology may play a part in the development of leg ulcers in persons with sickle cell disease (SCD). Previous reports are divided as to whether decreased red blood cell (RBC) deformability is associated with leg ulcers in affected persons. A single report, based on a small sample, found no association between RBC aggregation and leg ulcers. We sought to determine whether haematological and rheological parameters were associated with the incidence of chronic leg ulcers in patients with haemoglobin (Hb) SS disease.

Methods: The study was of a cross-sectional design. Fifty patients were recruited; 27 with ulcers and 23 with no history of ulceration. Haematological indices were measured using a CELL-DYN Ruby automated haematology analyser. Plasma viscosity and whole blood viscosity (WBV) were determined using a Vilastic rheometer. Red blood cell deformability and aggregation indices were determined by a laser-assisted optical rotational red cell analyser (LoRRca). Data were normally distributed and presented as means $\pm$ SD. Analysis of variance and Kruskal-Wallis equality of variance were used to test for differences between variables and significance taken as $p < 0.05$.

Results: Erythrocyte deformability was significantly lower in the group with ulcers (0.30 ± 0.07 vs 0.35 ± 0.07 ; $p = 0.03$). However, RBC aggregation indices were not different in those with and without leg ulcers (70.3 ± 13.4 vs 73.5 ± 20.9 ; $p = 0.7562$). Haematological indices, WBV and plasma viscosity were also not different by patient groups.

Conclusion: Erythrocyte deformability, but not aggregation, was associated with leg ulcers in Jamaican patients with sickle cell disease.