II.d) Peritoneal malignancies and HIPEC and nurses

J1

HEALTH & WELL-BEING SUPPORT & ASSESSMENT OF SATISFACTION FOR PATIENTS WITH PERITONEAL TUMOURS

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Objectives

To allow patients to express their experience of their treatment for peritoneal disease and to modify the delivery of care in order to make it as patient focused as possible.

Patient centered health and well-being events for individuals with a peritoneal tumour were run in order to provide support, education and to offer a forum to empower patients/carers to communicate with others in a similar situation. These events were assessed with feedback forms provided to all patients and their carers which allowed modification of future events.

In addition, between 2016 and 2017, patient satisfaction questionnaires were issued to a number of patients undergoing treatment.

Methods

Prior to the health and well-being events, a focus group meeting was held to allow patients to direct appropriate content for the day.

Via the unit website, patients who had undergone or were awaiting treatment received an open invitation to attend the day along with a friend or relative.

The events allowed patients to meet and support each other and to ask the clinical team questions. There were interactive sessions including; smoking cessation, Stoma therapies, "look good feel good", the Christie Charity and Macmillan. The complementary therapy team offered treatments to all participants.

Attendance satisfaction was assessed by a multi response questionnaire that was provided for completion at the end of the day.

Further patient days have been modified in accordance with the responses provided by the feedback.

Patient satisfaction surveys were issued between 2016 and 2017 to a consecutive cohort of patients receiving treatment.

Results

Return rate of feedback forms 53%, the table below demonstrates the patients' responses.

	Excellent	Good	Satisfactory
Overall	72.5%	25%	2.5%
Venue	77.5%	20%	2.5%
Catering	75%	17.5%	7.5%

Examples of positive comments were:

"Whole day had a lovely friendly atmosphere - everyone was so welcoming"

"Great to share ideas and meet other people"

A patient satisfaction survey was sent to a total of 145 individuals and of which 95 were returned (65.5%). A summary of the results are as follows:

98.5% of patients were given a named key worker

83.8% of patients were given written information

9.4/10 for support given and 9.7/10 for the overall care received

Conclusion

Important to engage with patients in a holistic manner and to continue to do so. These results indicate a high level of patient satisfaction of the service.

J2

MAKING SENSE OF COST- EFFECTIVENESS OF CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN PATIENTS WITH COLORECTAL PERITONEAL CARCINOMATOSIS

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Objectives

Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (CRS-HIPEC) provide survival benefit in selected patients with peritoneal carcinomatosis but involves complicated surgical procedures and cross-disciplinary expertise that translates to higher resource demands. This study examines the factors that affect the cost- effectiveness of CRS and HIPEC in patients with colorectal peritoneal carcinomatosis (CPC) in an attempt to aid patient selection.

Methods

We performed a retrospective review of patients who underwent CRS-HIPEC for CPC at the National Cancer Centre Singapore (NCCS). Patients were stratified into 4 groups, according to the median cost and median overall survival, with groups 1, 2, 3, and 4 having low cost/ long OS, high cost/ long OS, low cost/ short OS and high cost/ short OS respectively.

Results

The average cost of CRS and HIPEC per patient was \$\$83,680.26 with a median overall survival of 47 months with a calculated cost per life year attained of \$\$21,365.19 per life year.

Group 1 patients derived the greatest benefit from CRS-HIPEC, with low cost incurred and long OS. When compared to the other 3 groups, they were older with a median age of 62 years old (44 to 78, p = 0.092), had a lower preoperative CEA of 2.0 (0.5–66.6, p = 0.134), CA 19–9 of 8.2 (2–48.9, p = 0.679) and CA 125 of 14.7(5.8–20.9, p = 0.182), although these were statistically insignificant. Their median PCI score was the lowest at 3 (0–9, p = 0.001). They also had the lowest rate of intra- and post- operative blood transfusion of 1.5 (0–5, p = 0.001) and 0 pints (p = 0.031) of packed cells respectively. The duration of SICU stay of 0 days (0–2, p = 0.167) and overall hospitalization days of 12.5 days. (9–18, p = 0.250) were also comparatively shorter.

When comparing group 1 and 4 specifically, group 4 had a higher preoperative CEA of 8.9 vs 2.0 (p = 0.044), and CA 125 of 36.6 vs 14.7. (p = 0.042). Group 4 patients had higher PCI score of 15 vs 2 (p = 0.011). There were no statistically significant differences in the patient demographics and tumor characteristics.

Conclusion

Patients with greatest benefit from cytoreductive surgery and hyperthermic intraperitoneal chemotherapy in terms of cost- effectiveness had low PCI scores with low peri-operative transfusions. We eventually aim to develop a scoring system to predict for this select group of patients to optimize management.

J3
CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY FOR
PATIENTS WITH PERITONEAL SURFACE MALIGNANCY: THE INITIAL EXPERIENCE OF A
REFERENCE CENTER IN PERITONEAL DISEASES IN SOUTHERN BRAZIL

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Objectives

The change in the concept of peritoneal carcinomatosis in recent years has altered the course of treatment of patients with gastrointestinal tract, gynecological and primary peritoneal disease. Sensitive to this issue, the service of Santa Rita Hospital - Santa Casa de Misericórdia of Porto Alegre decided to implement a specialized unit for the treatment of peritoneal diseases.

Methods

We conducted a retrospective analysis of the 19 cases treated for peritoneal carcinomatosis with cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) in our center. Data were taken from the review of medical and anesthetic records.

Results

Between March 2015 and April 2018, 19 patients were treated with CRS and HIPEC. Patients were predominantly female (94,7%) and the mean age was 55,9 years. Seven patients (36,8%) had undergone a previous operation related to the primary disease. The majority of cases were related to indications of pseudomyxoma (n = 9), colon cancer (n = 3), gastric cancer (n = 2) and ovarian cancer (n = 2). The other cases were uniformly distributed within the other non-routine indications of HIPEC. The average peritoneal carcinomatosis index was 13,8. The mean total procedure time was 10 hours and 46 minutes. The estimated mean value of bleeding was 1320 mL, and only four patients did not receive blood replacement. The mean of hospitalization days was 21,8 days. The 30-day postoperative mortality was 5,2% (with one case of acute liver failure). The incidence of morbity was 36.8% of complications grade III or more on the Clavien-Dindo scale. However, most complications were addressed with minimal interventions and without the need for reoperations, even the cases of bleeding. One patient underwent a pleuroscopy for an empyema due to esophageal fistula.

Conclusion

There were challenges in the introduction of CRS and HIPEC in our center, including the formation of a multidisciplinary team, concerns about patient safety and acceptance of the procedure by medical colleagues and health insurance plans. The attempt to identify factors that accelerate the learning curve, minimizing morbimortality, is a universal challenge that must be pursued. We believe that the reports of center implementation experiences may contribute to this scenario of the close relationship between maximum benefit and morbimortality, challenging economic viability and complex technical qualification.

J4

STAPLED VERSUS HAND-SEWN INTESTINAL ANASTOMOSIS IN PATIENTS UNDERGOING CYTOREDUCTIVE SURGERY WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (CRS/HIPEC)

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Objectives

CRS/HIPEC is a morbid operation often involving multiple visceral organ resections in order to obtain a complete resection of all tumor. This frequently requires reconstruction of the gastrointestinal tract. All of this is performed in the setting of the administration of heated intraperitoneal chemotherapy along with major fluid shifts resulting in bowel edema. Anastomotic leak rates after these procedures vary from 2–20%. Efforts to reduce this complication should be considered.

Methods

A retrospective review of a prospectively maintained database was conducted of all patients who underwent cytoreductive surgery with hyperthermic intraperitoneal chemotherapy with bowel resections for appendiceal adenocarcinoma with peritoneal dissemination of disease from January 1st 2010 to September 1st 2014 at MD Anderson Cancer Center. Clinico-pathologic characteristics, pre-operative systemic therapy, operative details including method of construction of the anastomosis (hand sewn (HS) vs stapled and sewn reinforced (HSS) vs stapled (S)) including location of anastomosis and post-operative leak rates were recorded.

Results

There were 165 intestinal anastomoses with 83 HS, 63 S, 13 HSS, and 6 of unknown type. The anastomosis by location included 12 colon to colon (CC), 12 low anterior (LA), 21 small bowel to small bowel (SB), 116 small bowel to colon (SC) and 4 unknown. Baseline demographics between the anastomotic groups were comparable. The over-all anastomotic leak rate was 7%. The leak rate by location was 0% SB, 7.7% SC, 8.3% CC, and 16.6% LA. The leak rate by method of construction was 3.6% HS vs 12.6% S (p = 0.039).

Conclusion

In our experience, there was a significant difference in anastomotic leak rate between hand-sewn and stapled anastomosis with highest rate noted for small bowel to colon anastomosis.

J5

SHORT-TERM OUTCOMES FOLLOWING CYTOREDUCTIVE SURGERY AND HEATED INTRA-PERITONEAL CHEMOTHERAPY AT WAIKATO

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Objectives

Pseudomyxoma peritonei is a rare disease that affects 1–2 per million population per year. Treatment with cytoreductive surgery with heated intraperitoneal chemotherapy (CRS with IPC) has been well described. The purpose of this study was to look at the short-term outcomes following CRS with IPC for all such patients treated in Waikato.

Methods

Records for all patients presenting to surgery for CRS with IPC were retrospectively reviewed. CRS with IPC was performed in accordance with the techniques described by Sugarbaker. Data recorded included patient characteristics, characteristics of surgical treatment and early post-operative outcomes.

Results

Sixty-eight patients underwent 72 procedures. Fourteen patients were deemed unresectable at surgery and were treated palliatively. The median age was 57 with the majority being female (59%). The median time, from the decision made for surgery to CRS with IPC, was three months. The median prior surgical score was 1 and the median peritoneal cancer index (PCI) was 19.5. The median operating time was 9.08 hours (5.43–15.20). The majority of patients (76%) had pseudomyxoma peritonei, while the remainder had a combination of other appendiceal, colorectal, ovarian, gastric and primary mesothelial primaries. The major complication rate was 24% and the 30-day mortality rate was 1.4%. The median hospital stay was 12 days.

Conclusion

Short-term outcomes following CRS with IPC at Waikato are comparable to those published in the literature. Further follow-up is anticipated for the publication of survival and recurrence data.

J6

IMPACT OF GARGANTUAN PERITONEAL DISEASE ON SURGICAL OUTCOMES IN AUSTRALIA'S HIGHEST VOLUME CENTRE

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Objectives

High Peritoneal Cancer Index (PCI) is associated with poorer prognostic factors for patients with peritoneal metastasis. The aim of this study in a high volume centre in Australia was to analyse highest PCI cases on short and long term outcomes.

Methods

A retrospective analysis of prospectively maintained data on 82 patients that underwent cytoreductive surgery (CRS) + intraperitoneal chemotherapy (IPC) with gargantuan peritoneal diseases (PCI 39) at St George Hospital, Sydney from 1996–2017. Patients with appendiceal cancers (AC) (inclusive of DPAM, PMCA/I), Peritoneal Mesothelioma (PM) and Ovarian Cancer (OC) were analysed. The contributing factors for high grade (III/IV Clavien-Dindo) morbidity and mortality were assessed.

Results

Total of 82 CRS+HIPEC were performed (AC 69, PM 10, OC 3). The overall survival rate at 3 and 5 years was AC 65%/56%, PM 10%/0%, OC 33%/0%. The median survival rate for AC 31 months, PM 3 months and OC 3 months. The mean number of grade III and IV complications across the board was 65.9%. The mortality incidence was 6.1%. The mean hospital length of stay was 46 days.

Conclusion

In an experienced centre it is considered safe to proceed to CRS+HIPEC in selected patients with the highest peritoneal metastases. Despite the high morbidity the overall survival rate at 3 and 5 years for AC is significantly favourable.