II.b) Clinical cases

B01

CYTOREDUCTIVE SURGERY AND HIPEC FOR PRIMARY PERITONEAL ANAPLASTIC EPENDYMOMA WITH EXTENSIVE PERITONEAL CARCINOMATOSIS

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Objectives

Ependymomas generally arise in the central nervous system and behave in an indolent, slow growing manner. Among several histologic types, anaplastic ependymoma is reported to have malignant clinical behavior. Although rare, anaplastic ependymoma can metastasize to extraneural sites. Worldwide, the incidence of extraneural ependymoma is very low and only three cases of primary abdominal or peritoneal ependymoma have been reported. We present a case of primary peritoneal anaplastic ependymoma with extensive peritoneal carcinomatosis successfully treated with cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (HIPEC).

Methods

A 17-year-old nulliparous Asian woman was referred to our hospital for huge pelvic mass. She had one-month history of progressive abdominal bloating and dyspnea. The abdomino-pelvic CT scan showed greater than 17 cm-sized cystic-solid papillary mass lesion with large amount of ascites and extensive peritoneal carcinomatosis. Her serum CA-125 was elevated to 205.5 U/mL.

Results

Under the impression of ovarian cancer, exploratory laparotomy was performed. At surgical exploration, about 20 cm-sized pelvic mass was seen in the cul-de-sac. Multiple metastatic nodules involving the entire peritoneum, omentum, and bowel mesenteries were found. Biopsy of the pelvic mass revealed anaplastic ependymoma arising from the peritoneum. The PCI was 27 and there were no enlarged retroperitoneal lymph nodes. Primary cytoreductive surgery was performed and the procedures were as follows; total parietal peritonectomy, total hysterectomy, bilateral salpingo-oophorectomy, rectosigmoid colectomy with end-to-end colorectal anastomosis, greater omentectomy, lesser omentectomy, omental bursectomy, stripping of the small bowel mesenteries, and appendectomy. HIPEC using cisplatin (100 mg/m² for 90 min) was followed by the cytoreductive procedures. After the surgery, there was no gross residual disease and CC score was 0. The postoperative course was uncomplicated. In order to rule out extraneural metastasis of CNS ependymoma, the patient had MRI of the CNS system and the finding was negative. She received 3 cycles of adjuvant systemic chemotherapy using BEP (bleomycin+etoposide+cisplatin) regimen without any severe complication and has been followed up without disease recurrence until now.

Conclusion

This is the first demonstration of primary peritoneal anaplastic ependymoma with extensive peritoneal metastases successfully treated with cytoreductive surgery and HIPEC.

B02 CRS AND HIPEC IN "NON-STANDARD" CANCERS TREATMENT

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Objectives

Cytoreductive surgery with HIPEC are standard procedure in many centers in peritoneal metastases of colorectal cancer, ovarian cancer, gastric cancer, PMP and mesothelioma. Peritoneal metastases in other neoplasms are rare cause for qualification to CRS with HIPEC.

Methods

We present results of treatment these patient in material of 3 polish centers (Gdansk, Lublin, Wrocław).

In the perion 01.2010–03.2018 in 3 centers 434 patients with peritoneal metastases were treated with CRS and HIPEC. Out of them 13 patients (0,03%) were treated for neoplasms other than "standard". All these patient have no distant metastases.

In these 13 patients were succeeding diseases: gall bladder cancer – 3 patients, pancreas cancer – 3, cancer of body of the uterus – 2 and singular cases: testis cancer (seminoma), cervix cancer, Yolk Sack Tumour, carcinosarcoma of body of the uterus, primary tumour unknown. In one patient CRS+HIPEC was performed due to peritoneal metastases and unknown of primary tumour, but patients passed ovariectomy because of mutation of BRCA1 5 months before. In histopathologic assessment of resected ovaries no cancer cells were identified.

Results

The time from diagnosis of peritoneal metastases to CRS+HIPEC procedure was from 1 to 19 months. 8 patients passed surgical procedures and systemic chemotherapy before HIPEC. The follow-up after CRS+HIPEC in 13 patients:

Testis cancer (seminoma) – 11 months (death)

Gall bladder cancer – 6 months (death)

Pancreas cancer – 8 months (death)

Cervix cancer – 4 months (death)

Pancreas cancer (low grade) – 54 months (death)

Gall bladder cancer – 4 months (death)

Carcinosarcoma of body of the uterus – 5 months (alive)

Gallbladder cancer – 7 months (death)

Yolc sack tumour – 40 months (alive)

sA140

Cancer of body of the uterus – 32 months (alive)

Cancer of body of the uterus – 4 months (death)

Primary tumour unknown – 24 months (alive)

Primary tumour unknown (BRCA1) – 29 months (alive)

Conclusion

Patients with peritoneal metastases of neoplasms other than "standard" are rare qualificated to CRS+HIPEC. Patients with peritoneal metastases as primary symptom of disease, without other organ metastases, in whom CRS+HIPEC was performed in 1 month since diagnosis, the follow-up was better (24, 29 and 54 months).

Based on the small clinical material conclusions should not be binding, but it seem, that peritoneal metastases as primary sign of cancer disease should be treated with CRS and HIPEC procedure as primary treatment.

B03

SURVIVING WITH UNRESECTED PERITONEAL METASTASIS FROM RECTAL CANCER BEYOND 7 YEARS

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Objectives

Peritoneal metastases (PM) from colorectal primaries are associated with poor survival. With the advent of cytoreductive surgery (CRS) and heated intraperitoneal chemotherapy (HIPEC), there is a shift towards treating suitable patients with radical surgery and chemotherapeutic regimes. This has resulted in improved survival rates. However to our knowledge, prolonged survival (more than 5 years) in the presence of unresected PM from colorectal origin has not been described before. We present an unusual case of a patient with metachronous PM from rectal cancer which remained relatively indolent for 7 years before undergoing CRS and HIPEC.

Methods

The patient's medical records was reviewed. Details such as surgical procedures, imaging, and chemotherapy history were noted. A literature search in English looking at survival of unresected PM from colorectal origin was performed.

Results

A 60 year old (at time of first diagnosis) Chinese male, initially presented with locally advanced low rectal cancer and perirectal abscesses in July 2008. No metastasis were present. Diverting sigmoid colostomy and sigmoidoscopy for biopsies was performed then, which was complicated by perforation of the distal sigmoid colon during endoscopy. This was repaired primarily.

He received neoadjuvant long-course chemoradiation (Capecitabine) with partial disease response and an abdominoperineal resection in November 2008. Histology was ypT3N0 adenocarcinoma (KRAS mutant) with clear margins. He completed adjuvant Capecitabine in April 2009.

Scans showed a new right perihepatic peritoneal nodule in 2010. It was managed with surveillance alone and demonstrated slow growth. A percutaneous biopsy in 2015 confirmed the presence of metastatic adenocarcinoma and he was restarted on Capecitabine. Isolated progression of the PM continued and the patient finally agreed for CRS/HIPEC in November 2017. Final histology confirmed metastatic adenocarcinoma consistent with his primary rectal histology.

Conclusion

This unique case is an exception to the dismal survival rates seen in rectal cancer patients with PM. Despite no chemotherapy for 5 years post-detection of the peritoneal nodule, followed by 2 years of Capecitabine alone, there was only slow isolated growth of this nodule. This unusual natural history may hint at underlying genetic peculiarities that may be worth exploring for future research.

B04

COMBINED TREATMENT OF NEAODJUVANT CHEMOTHERAPY, SURGICAL RESECTION AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY FOR PANCREATIC ADENOCARCINOMA PRESENTING WITH PERITONEAL CARCINOMATOSIS

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Objectives

Patients diagnosed with pancreatic adenocarcinoma (PA) with peritoneal carcinomatosis are considered not suitable for surgical resection and deemed palliative. In this setting, it has not been proven that surgery improves the outcomes once compared to systemic therapy alone.

We present the outcomes of a young patient diagnosed of PA with peritoneal carcinomatosis who underwent surgical resection and hyperthermic intraperitoneal chemotherapy (HIPEC).

Methods

Description of the case of a patient with PA and peritoneal carcinomatosis operated in a high-volume cancer center providing multidisciplinary care.

Results

A 43-year-old man who presented with proximal small bowel obstruction was diagnosed of a pancreatic tumor of the body with invasion of the duodenum and root of the transverse mesocolon. Pathology assessment confirmed the diagnosis of PA.

The patient underwent a planned laparotomy that found multiple nodules of peritoneal carcinomatosis in the right and left paracolic gutters and Douglas pouch. Para-aortic lymph nodes were also positive for adenocarcinoma. A gastro-enterostomy was performed as palliative treatment.

sA142

The patient was enrolled in a palliative protocol and received 9 cycles of Folfirinox and 8 cycles of Folfiri. Imaging after chemotherapy demonstrated complete radiological response. The case was discussed at multidisciplinary oncological rounds and the decision to perform an exploratory staging laparotomy with possible resection was made.

Laparotomy demonstrated absence of peritoneal carcinomatosis and adenopathy. A monobloc total pancreaticoduodenectomy, splenectomy and transverse colectomy was performed. The procedure was completed with HIPEC consisting of oxaliplatin for thirty minutes. Reconstruction involved an hepatico-jejunostomy and an end-to-side entero-colonic anastomosis.

The patient presented with a post-operative colonic and biliodigestive leak which warranted exploratory laparotomy on two occasions. The patient was discharged home 55 days after the procedure.

Specimen analyses revealed a complete pathological response. Peritoneal carcinomatosis and lymph-node involvement was not found.

Follow-up imaging at 8 months did not reveal any signs of local or peritoneal recurrence. CA 19.9 levels were within normal limits.

Conclusion

Surgical resection combined with HIPEC may be considered an useful treatment in highly selected patients with PA and peritoneal carcinomatosis who have presented a good response to neoadjuvant chemotherapy.

B05

ROUTINE USE OF LARGE TUBE DRAINS POST HIPEC

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Objectives

Coagulopathy is a known complication in cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC). Intra-abdominal drains are routinely placed to prevent the accumulation of fluid and it provides a window to the nature of fluid contents in the surgical field post operatively. Frank blood or enteric contents in drainage tubes are herald signs to a bleeding surgical wound bed and gastrointestinal anastomosis breakdown respectively. We report the usage of thoracic tube drains and discuss its role for abdominal drainage in the management of a patient who underwent CRS and HIPEC and experienced significant post-operative hemorrhage secondary to coagulopathy.

Methods

A 43-year-old lady underwent total hysterectomy, bilateral salpingo-oophorectomy and tumour debulking by the gynae-oncologist. Histology revealed metastatic appendiceal adenocarcinoma. She then underwent systemic chemotherapy before CRS and HIPEC. Peritoneal Cancer Index (PCI) score was 17 and Completeness of Cytoreduction score (CC) score was 0. Jackson-Pratt (JP) drains were routinely placed.

Results

Post-operative recovery was complicated by coagulopathy and persistent hemorrhagic drain output with concomitant hemoglobin drop despite correction of coagulopathy medically. The patient underwent a first relook laparotomy and 2.5 litres of blood clots and bloody ascites were evacuated. There was no single source of active bleeding, but generalized oozing was noted from the raw surfaces from the surgical bed. Hemostasis was achieved, and JP drains were replaced. However, five days later, patient developed tachycardia and a dive in hemoglobin count despite low drain output. Hence, decision was made for a second relook laparotomy with similar findings of hemoperitoneum and clotted drains. Thoracic tube drains were finally used for abdominal drainage instead in view that blood clots have caused blockage of the JP drains. These drains were removed sequentially, and patient made a complete recovery.

Conclusion

The direct effect of HIPEC and multiple transfusions associated with fluid shift and resuscitation contribute to perioperative coagulopathy. Small caliber tube drains or fenestrated drains may get obstructed with blood clots and fail in its intended purpose of drainage. One may consider placing a large caliber tube drain such as the thoracic drains at the index surgery. This case has changed the practice in our institution. We therefore recommend routine usage of large tube drains post-HIPEC.

B06

PATHOLOGICAL COMPLETE RESPONSE TO CHEMOTHERAPY IN METACHRONOUS COLORECTAL PERITONEAL CARCINOMATOSIS

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Objectives

Pathological complete response from perioperative chemotherapy for peritoneal carcinomatosis from colorectal cancer was first reported by Passot et al in 2012 and described a strong prognostic impact on survival. We describe our experience of a patient with metachronous colorectal peritoneal metastases who had systemic chemotherapy followed by cytoreductive surgery and heated intraperitoneal chemotherapy. Final histology showed pathological complete response.

Methods

Patient records and imaging were reviewed retrospectively.

Results

A 76 year old gentleman was diagnosed with a stage III ascending colon adenocarcinoma and underwent a right hemicolectomy in October 2016. He completed 8 cycles of adjuvant chemotherapy with capecitabine in May 2017. Surveillance imaging in June 2017 showed new mesenteric lymphadenopathy and enhancing peritoneal nodules in the right iliac fossa. PET confirmed these FDG-avid foci. He was restarted on chemotherapy with capecitabine and oxaliplatin and completed 4 cycles with partial radiological response demonstrated on imaging in October 2017. Cytoreductive surgery with heated intraperitoneal chemotherapy was performed in January 2018. A 6 cm peritoneal nodule was resected and revision of the previous ileocolic anastomosis was performed to remove the mesenteric adenopathy. Final histology showed reactive lymph nodes but no residual malignancy.

Conclusion

pCR of colorectal peritoneal metastases to systemic chemotherapy is an interesting phenomenon since peritoneal carcinomatosis was once considered incurable. Given the increasing interest in nonoperative management of rectal cancer after complete clinical response to neoadjuvant therapy, we may potentially avoid the morbidity of cytoreductive surgery in colorectal peritoneal metastases if we can accurately predict for pathological complete response. Unfortunately, radiological and morphological response has shown poor correlation with pathological response. Functional imaging or analysis of molecular markers may provide better prognostic information, which can direct further research.

B07

PERITONEAL PSEUDOMYXOMAS ARISING IN MATURE TERATOMAS TREATED WITH CYTOREDUCTION AND HIPEC. REPORT OF 4 CASES

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Objectives

We present our experience in 4 cases of PSM arising in a mature teratoma, effectively treated by complete cytoreduction plus hyperthermic intra-peritoneal chemotherapy (HIPEC). The attenders will be able to discuss this treatment as an option of care of the patients.

Methods

Peritoneal pseudomyxoma (PSM) is a slow and progressive accumulation of mucin or mucinous tumor in the peritoneal cavity, with the most frequent origin site in the appendix, however, it has been described arising in teratomas. Mucinous tumors within the teratoma can range from a mucinous cystadenoma to mucinous adenocarcinoma, however, the clinical relevance and prognosis is driven by the PSM features, varying according to if it is classified into mucinosis, adenomucinosis or mucinous adenocarcinoma. Treatment of these patients is not clear. We collected the data of 4 patients with PSM arising in ovarian teratomas.

Results

The age of presentation ranged from 21 to 67 years. All patients arrived with increased abdominal perimeter and weight loss. The tomography showed in three of them free fluid and in all of them an image compatible with teratoma. All patients underwent exploratory laparotomy, mucin drainage and cytoreductive surgery. HIPEC was performed with closed technique using cisplatin and mitomycin. All had a favorable evolution and did not present grade 3 or 4 morbidity during the first 30 days and patients are well and free of disease up to 39 months.

Conclusion

Mucinous tumors are present in 2–11% of mature teratomas, however, the association with PSM is rare. The treatment of choice in PSM is cytoreduction with HIPEC, independently of the primary tumor site. Immunohistochemical tests do not allow a clear distinction between a mucinous tumor of the lower gastrointestinal tract and a primary ovarian tumor associated to teratoma because both are positive to CDX2, CK20, CK7 and SATB2. The appendix was evaluated in all cases and had no associated pathology.

B08

CYTOREDUCTIVE SURGERY AND LAPAROSCOPY-ENHANCED HIPEC FOR PERITONEAL DISSEMINATION OF PLEURAL MESOTHELIOMA

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Objectives

Peritoneal manifestations of pleural mesothelioma can occur from direct extension of the disease through the diaphragm or as a result of peritoneal seeding after resection of the diaphragm. Patients who achieve local control in their chest cavity after surgery and chemotherapy, but experience isolated peritoneal progression of the disease, can be considered for cytoreductive surgery and HIPEC for disease control in their peritoneal cavity. Limited case series are currently reported in the literature.

Methods

A 54 years old man with asbestos exposure was diagnosed with left pleural epithelioid mesothelioma. He underwent left pneumonectomy followed by a 54Gy total dose of radiation therapy. One year after his surgery, a PET-CT scan showed a diffuse intra-abdominal progression of the disease, which was confirmed at laparoscopy. After completion of 8 cycles of systemic chemotherapy with cisplatin and pemetrexed, his CT and PET-CT scans showed a maintained complete response in the thorax, no distant metastases and a partial response in the peritoneal cavity. After careful clinical evaluation, he was considered for cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. The Laparoscopy-Enhanced HIPEC technique was used for better management of hyperthermia, to improve the tolerability of the procedure.

Results

At laparotomy, peritoneal metastases were found in the mesentery, the greater omentum, the left hemidiaphragm, the paracolic gutters and the anterior and pelvic peritoneum (PCI score = 9). Complete parietal peritonectomy, partial resection of the left hemidiaphragm, omentectomy and complete removal of the mesenteric nodules were performed, and a CC0 score was achieved after cytoreductive surgery. Laparoscopy-Enhanced HIPEC was delivered with cisplatin 80 mg/m2 and doxorubicin 15 mg/liter of perfusate, for 90 minutes at 41°C. No perioperative complications occurred. Bowel function recovered on his 2nd postoperative day. The patient was discharged on his 13th postoperative day. A CT scan performed after 3 months showed a complete response, and the patient is currently scheduled for two further cycles of consolidation chemotherapy.

Conclusion

In selected patients with isolated intra-abdominal progression of pleural mesothelioma, cytoreductive surgery and HIPEC can provide local control of the peritoneal disease. The Laparoscopy-Enhanced HIPEC technique can be safely used to achieve a homogeneous distribution of heat and chemotherapy and reduce thermal dispersion.

B09

CURRENT STATUS OF CLINICAL TRIALS IN CRS AND HIPEC: WHERE DO WE STAND?

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Objectives

The practice of cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) for peritoneal carcinomatosis of various origins has suffered from a lack of clinical trials to validate its expanding use. We aimed to evaluate the published and ongoing clinical trials seeking to better define role of CRS/HIPEC in the treatment of peritoneal surface malignancies.

Methods

Systematic review by PubMed search was performed using terms "Clinical trial," "intraperitoneal chemotherapy," and "HIPEC." EudraCT, UMIN-CTR, and ClinicalTrials.gov registries were searched for active clinical trials up to 2017. Eligibility included CRS/HIPEC trials investigating adult patient populations from published clinical reports and/or trials currently accruing patients or those continuing to collect follow-up data.

Results

Fourteen clinical trials have been published since 2000, while sixty active clinical trials were included for review.

Conclusion

Published and ongoing clinical trials for CRS and HIPEC are defining important parameters that include improving patient selection, strategic sequences of treatment, cytoreductive techniques, optimizing choice of chemotherapy, modifying intraperitoneal conditions, and toxicity profiles. Main barriers or limitations to trial development remain patient enrollment, trial design, and oncologic community collaboration. Overall progress is positive with increasing number of clinical trials throughout the world. Collaboration between surgeons and the wider oncologic community will be crucial to validate this important treatment strategy.

B10

RECURRENCE AFTER 30 YEARS DISEASE FREE SURVIVAL OF A MULTICYSTIC PERITONEAL MESOTHELIOMA

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Multicystic peritoneal mesothelioma (MCPM) is a rare neoplasm, with uncertain malignant potential and no current standard therapy. Disease recurrence after debulking surgery often occurred with a short median time-to-recurrence. A combination of extended surgery plus HIPEC could lead to a satisfactory result.

Methods

We report our high-volume cancer center experience of cancer treatment for a woman with a recurrent MCPM, 30 years after debulking surgery.

Results

A 56-year-old woman presented with a 12 months symptomatic history of constipation and right lower quadrant pain 30 years after posterior exenteration for benign cystic tumor. Pathological analysis of the previous specimen was unavailable due to laboratory flood.

Imaging included a pelvic ultrasound and a CT of the abdomen and pelvis. The transabdominal ultrasound demonstrated a 5 cm lobulated multicystic mass in the inferior part of the anterior abdominal wall. CT showed especially cystic masses along jejunum, abutting the abdominal wall, on the right part of the Glisson's capsule and in presacral space. The case was discussed at multidisciplinary oncological rounds and the decision to perform an exploratory laparotomy with resection plus HIPEC was made (failure of diagnostic laparoscopy related to postoperative adhesion).

Laparotomy confirmed disseminated peritoneal cystic masses (PCI = 21). Frozen-section analysis confirmed mesothelial proliferation. A total peritonectomy with omentectomy and partial glissonectomy was performed with complete cytoreductive surgery (no visible residual tumour). HIPEC was performed with cisplatin and doxorubicin for 60 minutes at 42,5°C.

The patient presented with a post-operative digestive leak which warranted laparotomy and ostomy (Clavien IIIb). The patient was discharged home 65 days after the procedure.

Specimen analyses revealed multicystic peritoneal mesothelioma with no atypia.

At the time of this writing, the patient is still alive without recurrence at 12 months after surgery.

Conclusion

This report is a very rare condition. According to the literature, the treatment of choice is cytoreductive surgery plus HIPEC to remove all visible lesions and avoid recurrence.

B11

WHICH TREATMENT FOR LOCALLY ADVANCED RECTAL CARCINOMA WITH PERITONEAL METASTASIS? FEASIBILITY OF TOTAL PELVIC EXENTERATION ASSOCIED WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY

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Patients diagnosed with locally advanced rectal carcinoma with peritoneal metastasis are often considered not suitable for surgical resection and deemed palliative. No proven data can provide a reference treatment in these cases. A combination of extended surgery plus HIPEC could lead to a satisfactory result.

Methods

Description of the case of a patient with a rectosigmoid cancer which invaded the urinary bladder and with peritumoral peritoneal carcinomatosis treated with total Pelvic Exenteration associed and Hyperthermic IntraPeritoneal Chemotherapy.

Results

A 58-year-old man presented with a 5 months symptomatic history of constipation and bleeding. The patient underwent a planned laparotomy after chemoradiotherapy that found few nodules of peritumoral carcinomatosis and bladder invasion. He was considered not suitable for surgical resection and he was referred to our institution, following a diagnosis of advanced rectosigmoid adenocarcinoma with localized peritoneal carcinomatosis.

The patient was enrolled in a chemotherapy protocol and received 4 cycles of Folfirinox. Imaging after chemotherapy demonstrated local stability. No hepatic or pulmonary metastasis was evident. The case was discussed at multidisciplinary oncological rounds and the decision to perform an exploratory laparotomy with resection plus HIPEC was made.

Laparotomy confirmed peritumoral peritoneal carcinomatosis (PCI = 4) and far-advanced rectosigmoid tumor. A monobloc total supralevator pelvic exenteration was performed with complete cytoreductive surgery. The procedure was completed with HIPEC consisting of oxaliplatin for thirty minutes. Reconstruction involved a bilateral ureterostomy and a terminal colostomy.

After no major postoperative complication (Clavien II: perineal wound infection and prolonged parenteral nutrition), the patient was discharged home 26 days after the procedure.

Specimen analyses revealed a complete resection. Peritumoral peritoneal carcinomatosis was confirmed. The patient was prescribed adjuvant chemotherapy (6 cycles of FOLFOX).

At the time of this writing, the patient is still alive without recurrence at 12 months after surgery.

Conclusion

Total pelvic exenteration plus HIPEC may be considered an useful treatment in highly selected patients with locally advanced pelvic cancer and peritoneal metastasis.

B12

PRIMARY PERITONEAL HEPATOID CARCINOMA - CASE REPORT

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To present an unusual case of primary peritoneal hepatoid carcinoma (PPHC).

Hepatoid carcinoma (HC) is a rare and aggressive tumor, defined as a primary extrahepatic tumor with morphology similar to hepatocellular carcinoma (HCC). The diagnosis is usually difficult only by the clinical basis and histological examination, but the association with immunohistochemistry may facilitate the diagnosis.

Methods

A case report of primary peritoneal hepatoid carcinoma.

Results

He is 61 years-old patient with multiple mesenteric and peritoneal tumor nodules. He received neoadjuvant treatment with 9 cycles of GEMOX and sorafenib with partial response and 90% reduction in alpha-fetoprotein level (AFP) followed by optimal cytoreductive surgery (CRS) and intraperitoneal chemotherapy (HIPEC) with cisplatin. During the 5 month follow-up, there was an increasing in AFP and the investigation showed small peritoneal nodules on the CT Scan. He resumed 5 cycles of same regimen with tumor stabilization followed by second CRS and HIPEC with mitomycin C. He has been followed up, with a 14-month and until now, there is no evidence of recurrence disease.

Conclusion

CRS and HIPEC showed be feasible and safe in the treatment of primary peritoneal hepatoid carcinoma.

B13

EARLY AND LONG-TERM OUTCOME DATA OF PATIENTS WITH PERITONEAL SURFACE MALIGNANCIES TREATED BY SURGERY AND HYPERTHERMIC INTRAOPERATIVE INTRAPERITONEAL CHEMOTHERAPY FROM SINGLE CENTER EXPERIENCE FROM TURKEY

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Objectives

Cytoreductive surgery (CRS) and Hyperthermic Intraoperative Intraperitoneal Chemotherapy (HIPEC) are well accepted treatment option in patients with peritoneal surface malignancies (PSM). Here, we present the results of the patients with PSM admitted to the center of peritoneal surface malignancies in Turkey

Methods

Early and long term outcomes of the patients who admitted to the center for PSM in Turkey between 2013 and 2018 were evaluated retrospectively.

Results

Cytoreductive surgery (CRS) and hyperthermic intraoperative intraperitoneal chemotherapy (HIPEC) were performed in one hundred twenty six out of 124 patients with PSM. The mean age of the patients were 54.9 ± 8.75 (34–72) and 83.9% (104) of them were female and 16.1% (20) of them were male. Of these, 53.2% of the tumors were originated from colorectal cancer whereas 35.5% of them were from ovarian cancer. Mean peritoneal cancer index (PCI) was 16.89 ± 11.46 . Mean blood loss was $677.82 \pm 282.1\%$. All patients underwent to surgery and HIPEC were followed up in intensive Care Unit for one or two days. Elevated creatinine levels were detected in 29.8%(37) patients, decreased magnesium levels were found in all patients. Two patients were death due to heart failure and intracranial hemorrhage in thirty days. Pneumonia was developed in 5 patients. Grade II complications were detected in 4.03% of the patients. In long term, parastomal hernia was developed in one patient, incisional herni was detected in three patients. Mean hospital stay was 8.6 ± 2.1 days. Disease free survival was 17.5 months and overall survival was 20.2 months.

Conclusion

Cytoreductive surgery and Hyperthermic intraoperative intraperitoneal chemotherapy can be an option in patients with peritoneal surface malignancies with acceptable morbidity and mortality in well trained centers. Long term and continuous training in centers of PSM seems to be essential to avoid surgical complications in these complex procedures.

B14

PERFORATED MUCOCELE OF THE APPENDIX IN LUQ; A CHALLENGING ANATOMICAL ABNORMALITY AND AN IMPROVISED SURGICAL TECHNIQUE

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Objectives

To report a unique case of pseudomyxoma peritonei (PMP) in an incidentally found malrotation managed by CRS/HIPEC making it probably the first to be described in the world and to describe a new/improvised surgical technique to overcome a challenging anastomosis.

Methods

A case report of PMP and malrotation.

Results

Conclusion

Mucocele of the appendix is not a rare disease entity. Presentation can be variable but can be also misleading. This is even more pronounced when an underlying malrotation is present creating a confusing clinical picture. This can lead to significant delay in management and diagnosis resulting in perforation and ending with the devastating sequel of pseudomyxoma peritonei (PMP).

For a long time, PMP of the appendix has been considered a lethal and terminal disease & the prognosis and outcome have improved dramatically after the advent of Cytoreductive Surgery and Heated Intraperitoneal Chemotherapy (CRS & HIPEC).

Herein, we report a 36 year old male with PMP associated with abnormal rotation of the intestines causing the appendix to be in the LUQ that was managed with CRS & HIPEC.

This case is probably the first to be reported in the literature with such constellation of unique challenges. Also, we describe an improvised surgical technique to overcome some of these difficulties.

B15

RESPONSE TO LAPARASCOPIC HIPEC AS AN INDUCTION CHEMOTHERAPY IN PATIENTS WITH UNRESECTABLE PERITONEAL SURFACE MALIGNANCIES

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Objectives

Induction chemotherapy is a preferred procedure to provide resection and to reduce the tumor volume in unresectable or locally advanced intraabdominal tumors. Here, we present retrospectively the outcome data of laparoscopic hyperthermic intraoperative intraperitoneal chemotherapy (lap HIPEC) as an induction chemotherapy in patients with unresectable peritoneal surface malignancies (PSM) from the center for treatment of PSM in Turkey.

Methods

The patients with unresectable PSM performed laparoscopic HIPEC were evaluated retrospectively between 2013 and 2018.

Results

Sixteen patients evaluated as unresectable during diagnostic laparoscopy underwent to laparoscopic HIPEC. The mean age was 53.8 ± 8.75 (32-74). Thirteen of them were female and three of them were male. Mean duration time of the procedure was 3 hours 30 minutes. Eight of the tumors were originated from gastric cancer, 4 of them were from colon cancer, two of them were from biliary cancer, one of them was from peritoneal mesothelioma and one of them was from ovarian cancer. Peritoneal cancer index was reduced in 3 of 8 gastric cancer patients, in one of ovarian cancer and mesothelioma patients . All the patients with reduced tumor burden underwent to cytoreductive surgery and HIPEC. There were no surgical complications

noted in all patients. Ascites were controlled in all patients except one gastric cancer cases with both peritoneal and liver metastases. Disease stable survival was 6 months and overall survival was 11 ± 3.28 months.

Conclusion

Laparoscopic HIPEC might be an option as an induction chemotherapy to reduce tumor burden and control ascites in patients with unresectable peritoneal surface malignancies.

B16

LATE, RARELY REPORTED SKIN COMPLICATION AFTER THE USE OF HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN A FEMALE PATIENT

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Objectives

To bring attention to this rare, late complication after HIPEC.

Methods

Single case report on a female patient

Results

Case: 41 year old, non-diabetic, female with metastatic colon cancer to the peritoneum. She was diagnosed with a stage 2 colon cancer in 2011 and had surgery only. She developed a local recurrence in 2013 and had a total colectomy. She came to MD Anderson and underwent FOLFOX through March 2013. An enlarging abdominal mass in March 2016 on CT was biopsy positive. She had stability on FOLFIRI/Avastin. In Dec 2016 she underwent a CRS/HIPEC with Oxaliplatin; CCR 0, PCI 16. She was placed on Irinotecan x 6 cycles post op by her home oncologist. She developed a new, isolated metastatic implant in the splenic hilum in late Aug 2017. She underwent a repeat complete CRS, splenectomy and HIPEC with Mitomycin C with a PCI of 6 in Oct 2017. In Jan 2018 she contacted the clinic with increasing pain and darkening of her right inguinal and labial area. She had seen her PCP and local EC for her painful condition, and was prescribed antibiotics and pain medication. Her pain had become excruciating when urinating. It was post-op day 74. On exam here she was noted with a brown discoloration of her right groin with mild induration and bilateral swelling of her labia with a black eschar on her right labia, but no infection. She was admitted for pain control and Foley catheter placement. She was managed with local wound care and oral analgesia, and currently continues to follow up in clinic with improving symptoms.

Conclusion

CRS/HIPEC has many complications, however, extremely painful skin ulcerations/eschar formation perineum are not frequently reported. We have seen a number of male patients who have presented with scrotal ulceration and eschar formation after CRS/HIPEC with Mitomycin C. However, this is the first female patient with this complication. Embryologically, the anatomy of the labia is analogous to that of the scrotum and the distribution of this lesion is logical. We postulate patients with this complication have a patent process vaginalis, allowing chemotherapy into this area but with no exit, allowing prolonged contact.

sA153

These lesions are agonizingly painful and problematic, and develop months after the procedure, so the underlying relationship can be missed. Awareness of this rare complication can prevent potentially overtreating with surgical debridement. All of our male patients and this female patient have been successfully treated with conservative management.

B17

PERITONEAL MUCINOUS CARCINOMATOSIS WITH UNKNOWN PRIMARY SITE- A REPORT OF CLINICAL PRESENTATION AND OUTCOMES IN 4 CASES

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Objectives

To study the clinicopathologic characteristics and treatment outcomes in patients with mucinous peritoneal carcinomatosis (PC) with unknown primary site.

To determine the histologic origin of these tumors

Methods

4 patients presenting with mucinous ascites/peritoneal implants without an overt primary site on clinical and radiological evaluation and following surgical exploration were included in the study. A panel of immunohistochemistry (IHC) markers were tested on paraffin embedded tissue from CRS/debulking surgery. Morphologically, all tumors resembled those arising from the lower GI tract. Hence, the panel comprised of CK7, CK20, CDX2, SABT4, villin, D240 and CK19 (to determine the site of origin from - gastrointestinal (GI) tract, pancreas, stomach or mesothelium)

The clinical outcomes were reviewed.

Results

All 4 patients were male. 2 patients had mucinous ascites and 2 had mucinous peritoneal deposits without ascites. The preoperative peritoneal biopsy revealed a high grade mucinous adenocarcinoma in 3 patients. Colonoscopy was normal in all 4. On imaging (CT/PET-CT) appendix was normal in 3 patients and obscured by a large deposit in that region in 1 patient. Other sites of origin like the urachus, small bowel and pancreas were normal in all 4. The CEA levels were raised in all 4 patients. An appendectomy was performed in 3 patients during CRS/debulking and one patient had a total colectomy. None of the resected specimens showed the primary tumor. The PCI ranged from 26 to 39. 2 patients had a CC-0/1 resection and 2 had debulking surgery. All patients received 6 months of perioperative systemic chemotherapy. The IHC ruled out a mesothelial origin in all 4 patients with D240 being negative in all and CK7 being negative in 3 and focally positive in one patient. All 4 tumors expressed CK20, CDX2 and SABT4 confirming an origin in the lower gastrointestinal tract. Of the 4 patients, 2 are alive- one without disease and the other with disease at 13 and 6 months after surgery respectively. One patient who had a debulking surgery died of disease progression at 24 months and another at 9 months following surgery.

Conclusion

Mucinous PC can present with an occult primary site. All 4 patients presented with high grade tumors and extensive peritoneal spread. CRS and HIPEC may be beneficial in these patients. The site of origin (de novo from peritoneum or an occult primary) and pathogenesis of these tumors needs further investigation and treatment strategies devised accordingly.

B18

RECURRENT PERITONEAL CARCINOMATOSIS AND REPEATED CYTOREDUCTIVE SURGERY (CRS) WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC): 2 CASE REPORT

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Objectives

Cytoreductive surgery with HIPEC is a well-established treatment for resectable peritoneal metastases of digestive and gynecological tumors improving survival rates, but most of these patients will develop a peritoneal recurrence, and many patients will die due to a complication related to this relapse. An isolated intraperitoneal recurrence could be considered a form of surgical failure, secondary to the inability of intraperitoneal chemotherapy to eradicate all tumor cells. Up to 50% would be potentially resectable so repeated CRS/ HIPEC should be considered. We share our experience with a 2-case report.

Methods

Between July 2015 and March 2018, 34 CRS/HIPEC procedure were performed at our institution. 2 patients were selected for repeated CRS/HIPEC due to a local recurrence. Type of primary, ECOG status, peritoneal cancer index (PCI), completeness of cytoreduction (CC), length of hospital stay, postoperative morbidity, mortality, and disease-free/overall survival were reviewed.

Results

2 patients (5,8%) underwent a second CRS/HIPEC, one apendicceal adenocarcinoma and one rectum adenocarcinoma. The disease-free interval between first CRS/HIPEC and peritoneal recurrence was 16 months for the apendicceal and 17 for the rectum. The PCI was 12 and 3 respectively during the first and 22 and 8 during the second CRS/HIPEC. We achieved a 100% completeness of cytoreduction score of 0 in all first and second procedures. Intensive care unit stay was 1 day for both, and hospitalization stay was 30 days and 11 days respectively. Both patients suffered a grade II complication (abdominal collection vs central line infection + neutropenia), and there was no 30-day mortality after the second CRS/HIPEC. After a follow-up of six months both patients are alive and disease free.

Conclusion

Repeated CRS/HIPEC is an effective and save treatment for localized peritoneal recurrences with similar morbidity and mortality rates than the first procedure.

Prognostic indicators such as low tumoral load, isolated peritoneal recurrence, and at least one year of disease-free survival, are the most important factors to achieve control of the disease.

More multicenter trials are needed to settle the standard criteria for selection and management of patients with a peritoneal recurrence after CRS/HIPEC.

B19

INDICATIONS OF CRS AND HIPEC IN THE MANAGEMENT OF PATIENTS WITH PERITONEAL METASTASIS AND MULTIPLE PRIMARIES

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Objectives

Up to 2–17% of cancer patients present a synchronous or metachronous cancer. The practical implications of the management of these patients are rarely discussed, and we lack reports and trials to guide the treatment of patients with peritoneal metastasis and multiple primaries. The aim of this review is to report our experience and define the indications of cytoreductive surgery and intraperitoneal chemotherapy in those patients with peritoneal carcinomatosis and a secondary neoplasm.

Methods

This is a 3 case report serie of patients with peritoneal carcinomatosis and a second primary tumor, treated with CRS and HIPEC in our center from 2016 to 2017. The selection criteria for CRS and HIPEC where based on the general conditions reported on the international guidelines for CRS and HIPEC. Regarding the oncological status of the second tumor, we selected those patients with an expected survival related to the second tumor which could warrant a CRS and HIPEC treatment.

Results

Case 1: 59 years old man diagnosed with synchronous leyomiosarcoma and appendiceal mucinous neoplasm. He was treated by a right hemicolectomy and en bloc resection with left nephrectomy. It was reported as mucinous adenocarcinoma with mucinous carcinomatosis. He followed 4 cycles of FOLFIRI and 3 months later he was treated by CRS+HIPEC and advuvant FOLFIRI.

Case 2: 73 years old man with 7 years history of prostate cancer T2N0M0 treated by radiotherapy and endocrine therapy. Presents with obstructive CRC treated by an emergency Hartmann procedure. He followed adjuvant CT. One year later he presented an isolated peritoneal recurrence and was treated by CRS+HIPEC.

Case 3: 71 years diagnosed with Lynch Syndrome and 11 years history of prostate cancer treated by external RT. Diagnosed with 2 metachronous colon cancers and treated by a subtotal colectomy with a report of signet cell carcinoma. 3 years later presented a prostatic recurrence and peritoneal carcinomatosis. He was treated with prostatic brachytherapy with good response and salvage CRS-HIPEC.

Conclusion

Patients diagnosed with multiple primaries should be discussed in multidisciplinary team meetings. In the situation of advanced disease such as peritoneal carcinomatosis, a therapeutic strategy is difficult and mostly not based on evidence from the literature and clinical trials. As CRS and HIPEC improve survival in peritoneal carcinomatosis, it is a valid treatment for patients with multiple primaries.

sA156

B20

HIPEC IN YOUNG AND OLDER PATIENT IN MEXICO

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Objectives

Cytorreducitive surgery plus Hyperthermic Intraperitoneal Chemotherapy (HIPEC) is considered a complex procedure, surgically, the anesthetic care and the postoperative management in the ICU. Because of this often reserved for patients between 20 and 70 years old considering the inflammatory response that its expected. Training of the multidisciplinary team is a major impact on the postoperative course.

Methods

We present a 17 years old women ,ECOG 1, previously with diagnostic of ovarian cancer , referred to our center for carcinomatosis, after carefully evaluation we concluded a diagnostic of peritoneal mesothelioma , she underwent 3 cycles of pemtrexed and carboplatin pre op, after rigorous evaluation CRS HIPEC was performed on her, PCI of 23, peritonectomies, histerectomy and salpingooforcethomy cause of massive involvement in the pelvis, 2 intestinal resections and HIPEC with Mytomicin C 40 mgs 41.5 on the 7 hour procedure, 48 hrs in the ICU and a 20 day hospital length stay until discharged. The patient is alive ithout disease at 18 months surveillance.

The second case its an 83 year women , diagnostic of mucinous adenoacrcinoma of the appendix, a well differentiated tumor, clinical presentation with large abdominal mass and free fluid. ECOG 2. No pre op chemo. CRS HIPEC was performed , PCI 24 CC1 plus HIPEC with mytomicin C 30 mgs during 60 minutes, a diafragmathic injury occurred during the right quadrant peritonectomie, repaired, no chest tube needed. Evolution including 4 days in the ICU, 25 days hospital stay and after a pneumonic process, recovery and eight months follow up now shows with no evidence of disease.

Results

Both cases, pre reviewed by a multidisciplinary tea, were taken to the OR in the best possible condition, after big surgery and HIPEC, the anesthetic technique, the care at the ICU, close follow up and quick intervention to avoid major complications allow patients to be discharged of the hospital and by this point in time, disease free.

Conclusion

The procedure known as Cytorreduction and HIPEC, is a radical treatment for patients with carcinomatosis, as we report; can be done safely in younger and older patients, carefully selected, the setting of a third level hospital, communication between the members of the multidisciplinary team make possible to reestablish patients to a free of disease status. Teamwork.

*The poster will include the patient characteristics and details of the CRS as well as pictures of it.

Best from Mexico

B21

PROGNOSTIC IMPLICATIONS OF SMALL BOWEL INVOLVEMENT IN PATIENTS WITH PERITONEAL METASTASIS AFTER CYTOREDUCTIVE SURGERY AND HEATED INTRAPERITONEAL CHEMOTHERAPY

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Objectives

Small bowel involvement in patients with peritoneal metastasis is one of the main limitations for complete cytoreduction during cytroreucitve surgery (CRS). In this study we hypothesized that small bowel disease is a poor prognostic sign and hence a contraindication for cytoreductive surgery and heated intraperitoneal chemotherapy (CRS and HIPEC).

Methods

A retrospective analysis of 228 patients that underwent CRS and HIPEC. Small bowel disease was assessed by small bowel resection and mesentery stripping at the time of CRS. Statistical analyses were performed accordingly.

Results

Peritoneal cancer index (PCI) (PCI > 18, HR = 3.1, p < 0.001), R status (R1 HR = 2.9, R2 HR = 7.4, p < 0.001), primary diagnosis (colorectal: HR = 2.4, Ovarian: HR = 1.1, other: HR = 1.9, p < 0.001) and small bowel resection (HR = 1.7, p = 0.007) were significantly associated with overall survival (OS). Lysis of adhesions (HR = 1.3, p = 0.4), mesentery stripping (HR = 1.1, p = 0.62), and number of small bowel resections (more than one vs. equal or less than one HR = 1.1, p = 0.7) were not significantly associated with OS. In Multivariate regression model only PCI >18, (HR = 1.1, p = 1.1), p = 1.1, p =

Conclusion

In this selected group of patients, Small bowel resection and mesentery stripping as surrogates of small bowel disease did not have much effect on OS once adjusted for PCI score and resection status. Prospective studies are needed to better evaluate the hypothesis and address the best management of patients with peritoneal metastasis and small bowel involvement.

B22

THORACOABDOMINAL FISTULA: A LIFE-THREATENING COMPLICATION AFTER COMPLEX CRS & HIPEC

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Thoracoabdominal fistula is a severe complication that may appear after complex CRS & HIPEC. We present clinical features and successful treatment in two patients.

Methods

Case 1: A 53-year-old male presented gastric carcinoma and peritoneal carcinomatosis. CRS &HIPEC lasted 9 hours and required total gastrectomy, bilateral subphrenic peritonectomy, left parietal peritonectomy, omentectomy and pelvic peritonectomy. The PCI was 21.

Case 2: A 57-year-old male presented a pseudomyxoma peritonei. He underwent a 12-hour CRS&HIPEC with subtotal gastrectomy, total parietal peritonectomy, omentectomy, right and transverse colon resection and esplenectomy. The PCI was 24.

Results

Case 1: On 4th postoperative day (POD) he developed respiratory insufficiency and was intubated. 5th POD: it is evacuated by thoracentesis one liter of clear liquid. On 10th POD a gastrografin swallow did not show leak but when he started diet liquid came out by wound. He was reoperated on 16th day finding anastomotic leak at the esophagojejunal anastomosis and two holes in left diaphragm. Anastomotic leak was repaired and pleural drainage was left. A jejunostomy feeding tube was placed. Fistula healed with conservative measures. He left hospital on the 53rd day with oral feeding and good general condition. He died of abdominal relapse 36 months after CRS& HIPEC.

Case 2: On 10th POD he developed sudden dyspnea. Chest-x-ray showed left hidroneumotorax and mediastinal shift. When a chest tube was placed, dyspnea disappeared. CT showed left subfrenic abscess and possible anastomotic leak. He reoperated on the 12th day finding anastomotic leak at gastric stump and two holes in left diaphragm. Billroth II was converted in Roux-en-Y gastrojejunostomy. A jejunostomy and a new chest tube were placed. Fistula healed and he left hospital on the 44th day with oral feeding and good general condition. He remains well with no evidence of disease at 5 months.

Conclusion

A sudden development of a pleural effusion should make suspected anastomotic leak associated with thoracoabdominal fistula after CRS&HIPEC with digestive anastomosis and left subphrenic peritonectomy. Initial treatment are pleural drainage and ventilatory support. When respiratory status allowed reoperation is mandatory. In our experience it was not possible a proper repair of diaphragmatic disruption. But the repair of anastomotic leak, abdominal and thoracic drainage and enteral feeding managed to complete healing after several weeks.

B23

PREDICTIVE ROLE OF NEUTROPHIL TO LYMPHOCYTE RATIO ON SURVIVAL FOR PATIENTS WITH PERITONEAL CARCINOMATOSIS UNDERWENT CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY

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The serum neutrophil to lymphocyte ratio (NLR) has been considered a valuable predictor on survival in patients with variety of malignancies. However, it has not been clarified what the NLR influences precisely for peritoneal carcinomatosis (PC) after cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC). This study aimed to investigate the prognostic value of NLR for patients with PC underwent CRS-HIPEC procedure.

Methods

We retrospectively reviewed 129 patients who had been performed CRS-HIPEC for intra-abdominal malignancy associated PC. The optimal cuff-off value of NLR was determined as 3.45 by using Receiver Operating Characteristic (ROC) curve analysis. The impact of NLR on survival was elucidated not only by comparing pre-operative low (NLR \leq 3.45, n = 86) and high (NLR > 3.45, n = 43) groups but also the alteration change between pre-operative and post-operative NLR change, as low-low (n = 60), low-high (n = 26), high-low (n = 15) and high-high (n = 28) group.

Results

There were numerous factors correlating with a higher NLR level, included older age, poor performance status, without pre-operative systemic chemotherapy, cancer types, higher PCI score, higher PSDSS score, incomplete cytoreduction, and poor survival. The area under curve was 0.829~(95%~Cl:0.746-0.913) by using NLR to predict overall survival on ROC analysis. Multivariate analysis demonstrated high preoperative NLR (P < 0.001, HR = 443.35, 95%~Cl = 20.04-9810.18) as the strongest independent survival risk and other risks included male gender, incomplete cytoreduction and presence of major post-operation complication. The 3-, 6- and 12-month over survival rates were 97.6%, 93.6% and 93.6% in the low NLR group, and 77.6%, 48.6% and 44.2% in the high NLR group, respectively (P < 0.001). In regard to NLR alteration, a significantly superior survival was noted in group low-low. A decline in NLR tendency (group high-low) after surgery demonstrated a better outcome than remaining high level (group high-high) demonstrated a poor outcome (log-rank test, high-low vs high-high, P = 0.038).

Conclusion

In conclusion, high preoperative NLR was not only the indicative survival risk, but also connected with several poor prognostic factors including older age, poor performance status, cancer types other than ovarian origin, and incomplete cytoreduction. In addition, the change of NLR also predicted the outcome of patients with PC after CRS-HIPEC.

B24

MULTIDISCIPLINARY APPROACH ON CYTOREDUCTIVE SURGERY WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY FOR PERITONEAL CARCINOMATOSIS: PRELIMINARY 3 YEARS RESULTS AT A SINGLE INSTITUTION

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Cytoreductive surgery (CRS) with peritonectomy procedures and hyperthermic intraperitoneal chemotherapy (HIPEC) represents a radical therapeutic approach to achieve curative goal in treatment of intra-abdominal malignancy with peritoneal carcinomatosis (PC). CRS/HIPEC is a complicated procedure that requires multi-disciplinary teamwork (MDT). Herein, we report our preliminary treatment outcomes during the tree year-period at Chang Gung Memorial Hospital Likou Medical Center.

Methods

A series of 132 consecutive patients who were diagnosed with synchronous or recurrent peritoneal carcinomatosis from gastrointestinal or gynecologic cancer between Jan 2014 and Dec 2017 were included in this observational study. The HIPEC therapy was performed by using the closed method with a PerformerTM HT (RanD Biotech, Medolla, Italy).

Results

There were 35 male and 97 female patients with the mean age 53.6 years-old (range from 27 to 80 years-old). Sixty patients were diagnosed as ovarian cancer, 25 as colorectal cancer, 11 appendix cancer, 12 gastric cancer and so on. The median PCI score was 16 (ranged from 0 to 36). The CRS was initiated by GS team in 61 patients, GYN team in 56 patients and PRS team in 16 patients. There were 99 patients (75.0%) need MDT cooperation and 117 (88.6%) patients need multivisceral resection. The 100 (75.8%) patients achieved complete cytoreduction. The MDT operation were associated with higher PCI score, more organ resected, longer operation time, more blood loss, but more completeness of cytoreduction. The rate of operative complication was high (47%) but only 6 patients (4.5%) died in hospitalization. The mean overall survival (OS) was 29.8 months (95% confidence interval [CI] 25.9–33.6). The 1-year and 3-year survival were 74.4% and 49.6%, respectively. Patients with older age, longer operative time, with GI tract anastomosis and compleness of cytoreducation were associated with post-operative complication. Patients with older age, poor ECOG status and incomplete cytoreducation were associated with poor survival.

Conclusion

Our experience suggests that the CRS/HIPEC performed by MDT cooperation may result in a high complete cytoreduction rate, low hospital mortality rate, and improved the patient survival in treatment of peritoneal carcinomatosis.

B25

PROVIDING STANDARD OF CARE TO PATIENTS WITH PERITONEAL SURFACE MALIGNANCIES IN A DEVELOPING COUNTRY: OUR JOURNEY IN PAKISTAN

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Advancements in the field of peritoneal surface oncology have resulted in improved outcomes for patients with peritoneal surface malignancies (PSM). There is a steep learning curve for new centres to achieve such improved outcomes. We explore our journey of setting up a PSM service in a developing country.

Methods

A group of clinicians interested in the management of PSM got together to initiate a PSM service in 2016. These individuals from different institutions contributed referrals and worked together to streamline management of patients with PSM. The challenges identified and the solutions sought in the resource limited setting of urban Karachi are discussed.

Results

The surgical oncologists of the service took the lead role and sought training in peritoneal surface oncology through ESSO courses and the ESSO/PSOGI peritoneal surface oncology training program. The clinical assessment of all new referrals was standardized by cross-sectional imaging and staging laparoscopy. Quality of life evaluation at baseline was also initiated. All cases are discussed in the peritoneal MDT which is a virtual activity and allows individuals from different institutions, including colleagues and mentors from outside country to contribute to patient care in real time and assist in decision making and case-selection for aggressive surgical interventions. The preoperative preparation, intra-operative and postoperative management of the patients were standardized according to a pathway.

Since Sep 2016, the service has received 50 referrals for PSM, of which 11 had colorectal ca, 8 had appendiceal ca/pseudomyxoma, 8 had upper GI cancer, 14 had gynecological malignancies, 7 had peritoneal mesotheliomas and 1 had primary peritoneal cancer. After discussion in peritoneal MDT, 10 patients underwent cytoreductive surgery of which 8 received HIPEC.

Conclusion

Obtaining training and judicious case selection with help from colleagues in Pakistan and experts abroad, we have initiated the journey of setting up a PSM service in a developing country catering a population with limited resources. The hallmarks of our efforts include a virtual MDT, quality of life assessment at baseline and subsequent intervals, as well as standardized patient care pathways to streamline patient management. Introduction of PIPAC will allow more options of palliation for patients not suitable for curative surgery. In efforts to record care for patients with PSM, we are working hard to establish a PSM registry in Pakistan.