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II.e) Peritoneal metastases from ovarian carcinoma

E01
PROGNOSTIC FACTORS FOR EARLY RECURRENCES FOLLOWING CYTOREDUCTIVE SURGERY (CRS) AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC) FOR PRIMARY OVARIAN PERITONEAL METASTASES

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Objectives

CRS and HIPEC is one of the treatment strategies that is being employed for ovarian patients with peritoneal metastases (PM). However, despite careful patient selection and complete macroscopic resection, early recurrences (ER) still occur. This study aims to identify risk factors for ER in these patients.

Methods

Patients with ovarian PM treated with CRS and HIPEC between January 2001 and June 2016 at the National Cancer Centre Singapore were analysed. Comparison between patients who developed ER (<12 months) and those with late recurrence (>12 months) or no recurrence was performed using univariate and multivariate analyses.

Results

Overall, 19 out of 69 patients (16%) who developed ER. The median disease free interval (DFI) of patients with ER was 8 months and in patients with no ER was 21 months. Univariate analysis identified having at least one tumour marker elevated preoperatively, having an elevated CA-125 level, presence of disease in the left flank and an increased hospitalisation, to be significant prognostic factors for ER. There were no significant factors for ER on multivariate analysis.

Conclusion

Early recurrence is an important consequence in patients with PM of ovarian primary. By identifying factors associated with ER, patients at risk may benefit from an alternative treatment strategy and follow up.

E02
A PROTOCOLISED APPROACH TO PREVENTING NEPHROTOXICITY IN HIPEC WITH CISPLATIN

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Objectives

Cytoreductive surgery and hyperthermic intra-peritoneal chemotherapy (CRS-HIPEC) with cisplatin prolongs survival in patients with metastatic peritoneal disease from ovarian cancer. However, high - grade (according

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to the NCI-CTCAE criteria) acute kidney injury (AKI) occurred at a rate of 10.6% in our patient population. We propose a series of renal protective measures to eliminate high grade AKI in patients who receive HIPEC with cisplatin.

Methods

In this prospective study, we instituted a protocol of renal protective measures and evaluated its effectiveness in preventing post-operative AKI. The 4 main pillars included:

1. Adopting renal-adjusted dosing guidelines using pre-operative creatinine clearance for the dosing of intra-operative intraperitoneal cisplatin.2. Aggressive intra- and post-operative hydration with balanced crystalloids, aiming for a minimum of 2 ml/kg/hour of urine output.3. Decreasing of HIPEC temperature to 39 degrees celsius.4. Simultaneous intravenous infusion of sodium thiosulfate (STS), starting during initiation of HIPEC with a loading dose of 7.5 gm/m2 for 20 minutes, followed by a 12 hour maintenance dose of 15.3 gm/m2.

Results

This protocol was administered to 23 consecutive patients undergoing HIPEC with cisplatin. All had normal renal function pre-operatively. Post-HIPEC, none of our patients developed high-grade AKI. 4 patients (17%) developed grade 1 AKI and the rest (19) retained normal renal function during their hospitalization. The creatinine levels of all patients returned to baseline at time of discharge, and remained normal on subsequent outpatient visits.

Conclusion

This initial small phase 1 cohort study shows that a multi-pronged approach using tailored cisplatin doses, lowered temperature, aggressive peri-operative hydration, and renal neutralization of cisplatin with sodium thiosulfate, is a useful protocol that can potentially significantly reduce the incidence of post-HIPEC AKI.

E03

CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN THE MANAGEMENT OF EPITHELIAL OVARIAN CANCER IN MEXICO. REPORT ON THE FIRST TEN YEARS OF EXPERIENCE

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Objectives

Surgical morbidity and mortality, and, disease-free survival and overall survival were the primary endpoints of the study.

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Methods

We conducted a retrospective analysis of prospectively collected data from four different centers in Mexico performing CRS and HIPEC.

Results

A total of 48 patients were identified between October of 2007 and October of 2017. Mean age was 51 years. All patients were discussed at a multidisciplinary tumor board. Eighty-five percent of the patients received neo-adjuvant chemotherapy. Seventy-nine percent had previous surgeries. Mean peritoneal cancer index (PCI) was 8 (1–36). Forty patients (83%) underwent a complete cytoreduction (CC0) and an optimal cytoreduction (residual tumor less than 1 cm) was achieved in 8 patients (16%). Mean surgical time was 7 hours. Mean intraoperative blood loss was 1,387 cc. Twenty-five percent required an intestinal anastomosis. Operative mortality was 2%. Grade 3 and 4 morbidities were 18% and 14% respectively. The most common reason for re-operation was intraperitoneal bleeding in 3 of 7 cases. Mean Intensive Care Unit (ICU) stay was 3.2 days and average length of hospital stay was 10 days. At a mean follow up of 61 months, disease-free survival was 67 months and overall survival was 72 months. Median survival of platinum resistant patients was 50 months and no patient with a PCI > 10, survived more than 40 months.

Conclusion

Analysis of these data demonstrates that with multidisciplinary collaboration and proper patient selection, the introduction of new technologies is feasible and safe, representing an important first step to improve the care of all ovarian cancer patients in Mexico.

E04

EVALUATION OF THE PERITONEAL SURFACE DISEASE SEVERITY SCORE (PSDSS) IN OVARIAN CANCER PATIENTS UNDERGOING CYTOREDUCTIVE SURGERY AND HIPEC: TWO PATHOGENETIC TYPES BASED STUDY

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Objectives

Clinical experience suggests that cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) play an important role in the management of ovarian cancer. In order to improve patient selection, the peritoneal surface disease severity score (PSDSS) was previously introduced for use in colorectal cancer patients. However, almost no data exist regarding the utility of the PSDSS index in ovarian cancer patients.

Methods

A retrospective study of the effectiveness of CRS and HIPEC was carried out in 59 patients with ovarian cancer. The PSDSS was based on three criteria: symptoms, extent of peritoneal dissemination, and primary

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tumor structure as assessed by histology and biomarker expression (two pathogenetic types of ovarian cancer based on the expression of mutant p53 protein).

Results

In the process of ovarian cancer two types pathogenetic classification using immunohistochemistry a statistically significant survival difference was observed using univariate analysis. The average PSDSS index was 7.76 ± 4.57 points (range: 2 to 17 points). The overall survival time for patients with ovarian cancer in PSDSS Stage I was 48 ± 25.3 months. For PSDSS Stage II, the survival time was 26.5 ± 4.7 months. For PSDSS Stage III, it was 15.5 ± 4 months, and for PSDSS Stage IV, it was 6 ± 4.3 months ($p < 0.05$). The median disease-free survival rate of PSDSS Stage I ovarian cancer patients was 31 ± 6 months. For PSDSS Stage II ovarian cancer patients, it was 16 ± 2.6 months. For PSDSS Stage III, it was 11 ± 2.3 months, and for PSDSS Stage IV it was 4 ± 0.7 months ($p < 0.05$). A multivariate analysis showed that the PSDSS stage was the only independent survival predictor.

Conclusion

These data demonstrate that a PSDSS based on two pathogenetic types may be useful for predicting survival outcomes in ovarian cancer patients treated with CRS/HIPEC.

E05

A COMPARATIVE ANALYSIS OF CLINICAL OUTCOMES AFTER INTERVAL AND SECONDARY CYTOREDUCTIVE SURGERY (CRS) AND HYPERTHERMICINTRAPERITONEAL CHEMOTHERAPY (HIPEC) IN LOCALLY ADVANCED OVARIAN CANCERS

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Objectives

Introduction: Despite the best available standard treatment of locally advanced and recurrent carcinoma ovary, the prognosis has been dismal before the introduction of Cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) in peritoneal carcinomatosis (PC).

Aim: To compare the outcomes of treatment after interval CRS and HIPEC and secondary CRS and HIPEC.

Methods

Materials and Methods: Data was collected from prospectively maintained computerised database for patients of advanced carcinoma ovary who underwent optimal CRS+HIPEC procedure from July 2014 to December 2017.

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Results

Results: The study population comprises of a total of 51 cases divided in two groups: Group A, 23 cases (45%) who underwent interval CRS and Group B, 28 cases (55%) who underwent secondary CRS. The median age in groups A & B respectively were 54 yrs (25–65 yrs) and 57 yrs (38–64 yrs). A PCI > 15 was found in 19 cases (82%) vs 22 cases (78%) in groups A & B respectively. Complete Cytoreductive score in groups A vs B were: CC Score = 0 (21 vs 25) and CC = 1 (2 vs 3). Postoperative complications as per claviendindo grade I/II/IIIa in group A 11 cases (47%) and group B 16 cases (57%). Most common cause of readmission was sub-acute intestinal obstruction in both the groups which were managed conservatively. Final histopathology showed serous carcinoma15 cases (65%) in group A vs 18 cases (64%) in group B. In group A vs B, local recurrences (4 cases vs 7 cases), Distant recurrences (2 cases vs 6 cases), median time to recurrence (178 days vs 183 days) were noted. Median follow up was 234 days (64–1080 days) in group A and 237 days (79–1052 days) in group B. Median Disease Free Survival (DFS) was of 16.2 months (9–21 months) vs 15.5 months (12–19 months) respectively in groups A vs B.

Conclusion

Conclusion: Though the standard recommendation is CRS/HIPEC in carcinoma ovary after recurrence but our cohort of patients after interval CRS/HIPEC showed the same PFS and DFS benefit without significant differences in terms of complications in both the groups. Hence CRS/HIPEC is a reasonable option in both interval and secondary settings.

E06

CYTOREDUCTIVE SURGERY COMBINED WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC) FOR MANAGING PRIMARY HIGH-GRADE TUBO-OVARIAN SEROUS CARCINOMA IN PATIENTS WITH DIFFUSE PERITONEAL METASTASES: A SERIES OF 81 CASES FROM A TERTIARY CENTER EXPERIENCED IN TREATING PERITONEAL SURFACE MALIGNANCIES

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Objectives

Peritonectomy plus hyperthermic intraperitoneal chemotherapy (HIPEC) is a promising option for treating peritoneal metastases from ovarian cancer. To reduce bias in current reports including II histotypes, we analyzed how this procedure influenced outcomes in patients with locally advanced primary HGSC treated in a high-volume tertiary referral center for managing peritoneal surface malignancies.

Methods

In a retrospective analysis we included a series of 81 consecutive patients with peritoneal metastases from HGSC and treated with primary debulking surgery (PDS) or interval debulking surgery (IDS) after neoadjuvant chemotherapy (NACT)+HIPEC between November 2000 and December 2016. Univariate and multivariate analyses were run to analyze overall and progression-free survival (OS and PFS) and morbidity.

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Results

5-year OS and PFS rates in the entire cohort were 57.1% and 43.2%. Even if patients who underwent PDS had slightly though not significantly better outcomes than those in the IDS group (OS: 69.8% vs 51.1% - p = ns; PFS: 52.6% vs 38.6% - p = ns), subgroup analyses showed that patients who had responded (partially or completely) to NACT had the best survival rates (OS and PFS). Major complications including mortality (3.7%), arose in 14.7% of the cases. Multivariate analysis identified as the only significant prognostic factor for OS in both groups the completeness of cytoreduction score.

Conclusion

In patients with HGSC and peritoneal malignancies and in primary settings, peritonectomy plus HIPEC allow significant long-term survival with acceptable morbidity and mortality. Despite its retrospective design and small sample size, our study suggesting that NACT responders have the longest survival in HGSC primary settings, implies that the current strategy reserving NACT to patients with more advanced disease or unfit for primary up-front surgery needs to be reappraised, at least in this specific histotype.

E07

UPDATED PRELIMINARY RESULTS OF A PHASE II RANDOMIZED CLINICAL TRIAL - CRS/HIPEC AS INITIAL TREATMENT OF OVARIAN, FALLOPIAN TUBE, AND PRIMARY PERITONEAL CANCER

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Objectives

Approximately 70% of ovarian cancer patients present in advanced stages and the majority eventually recur, resulting in 5-year overall survival of 17–39% with standard of care treatment. A phase II randomized clinical trial was designed to evaluate CRS/HIPEC as initial treatment for newly diagnosed, untreated advanced (stages III/IV) ovarian, primary peritoneal, and fallopian tube cancers.

Methods

Patients were prospectively randomized into one of two study arms. The intervention arm underwent CRS/HIPEC (carboplatin 800 mg/m2) with adjuvant IV chemotherapy (carboplatin/paclitaxel × 6 cycles). The control arm underwent CRS alone, with standard of care adjuvant chemotherapy (IV paclitaxel / IP cisplatin / IP paclitaxel × 6 cycles). Complications and toxicity were assessed as primary outcomes. Secondary endpoints were chemotherapy completion rates, disease-free survival (DFS), overall survival (OS), and health-related quality of life.

Results

Between 2014 and 2018, 10 patients in the CRS/HIPEC arm and 9 in the control arm were analyzed. Optimal cytoreduction (CC-0 or CC-1) was achieved in 100% of patients. Perioperative mortality was 0%. Grade III/IV surgical complications occurred in 30% of patients in the CRS/HIPEC arm and 0% in the control arm (p = 0.22). Chemotherapy toxicity occurred in 44% of CRS/HIPEC patients and 75% of control patients (p = 0.33). DFS at 44 months was 51% for CRS/HIPEC and 27% for control (p = 0.73). OS was 90% for CRS/HIPEC and 80% for control (p = 0.94).

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Conclusion

Preliminary results show no statistically significant differences between the study arms in terms of complications, chemotherapy toxicity, quality of life, or survival. There is a trend towards longer survival with CRS/HIPEC. Collaboration between surgical and gynecologic oncologists is important to achieve optimal cytoreduction in every patient. Enrollment of more patients and longer follow-up is needed to derive appropriate conclusions.

E08

EARLY EXPERIENCE IN THE USE OF CRS AND HIPEC IN PATIENTS WITH OVARIAN CANCER

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Objectives

Ovarian cancer is the most common cause of gynecological malignancy mortality in the western world. The mainstay of the treatment plan includes cytoreductive surgery and systemic chemotherapy. Hyperthermic intraperitoneal chemotherapy is a method of localoregional treatment that has recently been applied to selected patients. The present study presents the initial experience of our department in the treatment of ovarian cancer patients by applying cytoreductive surgery in combination with hyperthermic intraperitoneal chemotherapy (HIPEC).

Methods

From 2009 to 2017, 16 patients with an average age of 59.5 years (37–78 years) underwent cytoreductive surgery and hyperthermic intraperitoneal chemotherapy for ovarian cancer. In 7 cases, interval cytoreductive surgery was performed, and in 9 cases it was performed for recurrence of malignancy. Outcomes were evaluated by recording the complications and mortality of the method, as well as disease-free survival and overall survival of patients.

Results

The mean intraoperative PCI score was 18 (2–29). The mean operation time was 327 minutes (180–490). Optimal cytoreduction (CC-0/1) was achieved in all cases. The mean postoperative ICU stay was 1,8 days, and the mean postoperative hospital stay was 22 days (9–43). Severe (Grade III/IV) complications were documented in 4 patients (26%), and two patients underwent a reoperation for intra-abdominal bleeding and intra-abdominal collection, respectively. There was no mortality associated with the operation, and there was one case of delayed readmission within 90 days. The mean disease – free survival was 19,9 months and the mean overall survival 51,5 months.

Conclusion

The implementation of CRS and HIPEC for peritoneal carcinomatosis is safe, in a certified center for the treatment of peritoneal surface malignancy. Our results indicate a benefit in terms of disease - free and overall survival of patients undergoing CRS and HIPEC, however the small sample and small number of events inhibits a statistical analysis that would provide safe results.

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E09
OUR INITIAL EXPERIENCE OF CRS & HIPEC IN PERITONEAL METASTASIS FROM CARCINOMA OVARY AND REVIEW OF POSTOPERATIVE OUTCOMES

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Objectives

The aim of study is to present our initial experience of Peritoneal carcinomatosis in carcinoma ovary managed by CRS and HIPEC and also review the post-operative morbidity in our series in the light of current literature.

Methods

Data of 30 ovarian cancer patients with peritoneal metastasis who were treated in Gleneagles Global Health City, Chennai, Southern India were retrospectively reviewed .Perioperative complications were classified according to Clavien-Dindo classification, and HIPEC-related side effects were identified using National Cancer Institute Common Terminology Criteria for Adverse Events (CTCAE).

Results

Totally 30 patients was operated, 26 had recurrent disease (87%) and 4 had primary disease (13%).Our mean PCI is 12.4 & our mean operative time was 600 min. Total Peritonectomy was performed in 8 patients & Involved field Peritonectomy (IFP) performed in 22 patients.97% of patients achieved a completeness of cytoreduction score (CC) of 0.Diaphragmatic Resection was done in 5 patients. Bowel Resection was done in 11 patients (37%) with stoma rate was 13%. We used semi open method HIPEC in 26 & closed in 4 patients. Mean ICU Stay was 2.5 days & Mean Hospital stay around 12.4 days. Post op Intervention needed in 5 patients and re exploration was done only in 2 patients. Our 30 days Post op mortality rate was nil. On median follow up of 18 months, 2 patients had recurrence (6%), one in peritoneum and another one in extra abdominal site.

According to Clavien-Dindo grading,15 patients (50%) had grade 1, 10 patients (34%) had grade 2, only 5 patients (17%) had significant grade 3 complications, in which 3 patients (10%) had grade 3 A and 2 patients (6%) had grade 3B. According to CTACE toxicity, 10(34%) had grade0 ,13(43%) had Grade1 , 5 (17%) had grade2 & grade3 noted in 2 patients(6%). **Significant surgical complications were observed only in 5 patients (16%) & significant drug related toxicity observed in 2 patients (6%).**

Conclusion

The early results of our series are **consistent with the literature with minimal perioperative morbidity.** These results are **very encouraging and have been recently popularized in our country especially in southern part of India**. **Careful perioperative evaluation**, **proper patient selection, multidisciplinary approach & patients with complete Cytoreduction** are essential for success in curative treatment of peritoneal metastasis.

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E10
THE ROLE OF SMALL BOWEL PCI (SB-PCI) IN PATIENTS WITH PERITONEAL METASTASIS FROM OVARIAN CANCER: A NEW PROGNOSTIC FACTOR?

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Objectives

Cytoreductive surgery and HIPEC has been proposed as a treatment of choice for patients with peritoneal metastasis from recurrent ovarian cancer and recently proven too for newly diagnosed advanced-stage ovarian cancer. Preoperative and intraoperative evaluation for patient selection includes the Peritoneal Cancer Index (PCI). We evaluate in our study the role of the small bowel's involvement as a prognostic factor, by evaluating and correlating the small bowel PCI (sb-PCI) - PCI regions 9 to 12 - to overall survival.

Methods

A retrospective data was maintained, from 2008 to 2017, for patients that were treated with cytoreductive surgery and HIPEC for peritoneal carcinomatosis from ovarian cancer in our center. Patient demographics and operative characteristics were recorded for all women. The sb-PCI score was noted for all patients and was divided into 3 groups: [0–4], [5–8] and [9–12].

Results

The analysis included 130 patients with a median age of 54.5 years. 85% (110/130) of patients were treated for recurrent ovarian cancer and just 15% for newly diagnosed advanced-stage, after neo-adjuvant chemotherapy. The median intraoperative PCI score was 15.5, whereas the median sb-PCI was 5. Complete cytoreduction (cc-0) was achieved in 66% of patients, cc-1 and cc-2 completeness in 22% and 12% respectively. Complications were classified with the Clavien-Dindo classification, grade III/IV complications occurred in 31% of patients and 90-day mortality was 4% (5 patients). Median overall survival was 35 months. In a univariate analysis, sb-PCI proved to be significantly correlated ($p < 0.001$, HR: 1.23) with overall survival. When patients were divided in 3 groups according to their sb-PCI, [0–4], [5–8] and [9–12], median survival was calculated 46 m, 28 m and 18 m respectively and showed a statistical significance when the Kaplan-Meier survival plot was generated.

Conclusion

We examined the role of sb-PCI in patients with peritoneal metastasis from ovarian cancer and showed its correlation with overall survival. The role of sb-PCI should be further investigated in future studies, but should be taken into consideration when needed, for appropriate patient selection.

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E11
CISPLATIN PLUS DOXORUBICIN OR PACLITAXEL IN HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC) FOR STAGE IIIC OR IV EPITHELIAL OVARIAN CANCER

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Objectives

There are a wide variety of drugs used in HIPEC for ovarian cancer, being difficult to compare results among different studies. Our aim is to analyze the survival results in women operated on for advanced ovarian cancer with two different HIPEC-regimens.

Methods

A prospective cohort of patients with stage IIIC or IV epithelial ovarian cancer operated on with cytoreductive surgery and HIPEC, from October-2008 to February-2016, was retrospectively analyzed. The two drugs used, Cisplatin/Doxorubicin (Group A) and Paclitaxel (Group B), were compared.

Results

Forty-one patients were treated with cytoreductive surgery and HIPEC; 19 patients (46%) were in Group A and 22 (54%) were in Group B. The extent of peritoneal disease was comparable between groups (PCI of 10 in Group A versus PCI of 12.5 in Group B). There were no differences in morbidity between groups, with a severe morbidity (Clavien-Dindo III or IV) of 36.8% versus 27.3%, respectively. There was no postoperative mortality. Median follow-up was 39 months. Median overall survival was 79 months. Overall survival at 3-years in Group A was 66% versus 82.9% in Group B ($p = 0.248$). Incomplete cytoreduction (macroscopic residual tumor after surgery) was identified as the only independent factor that influenced overall survival (HR: 12.30, 95%CI 1.28–118.33, $p = 0.03$). The cytostatic used in HIPEC had no influence in overall survival.

Conclusion

There were no differences in several morbidity and overall survival between the two HIPEC-regimens.

E12
RELAPSED OVARIAN CANCER: THE R-R DILEMMA (RESIDUAL OR RECURRENT DISEASE)

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Objectives

Epithelial ovarian cancer (EOC) is the second most common genital malignancy after uterine cancer in women and accounts for the majority of deaths from gynaecological malignancies in the western countries.

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Significant advances have been made the last decade in the treatment of ovarian cancer. Extensive cytoreductive procedures followed by intraperitoneal chemotherapy (HIPEC) have proven to be safe and effective in the management of the disease and have added an additional choice of treatment in the standard care of this fatal cancer. However, almost 70% of ovarian cancer patients relapse after primary cytoreductive surgery (CRS) and standard first-line chemotherapy. The aim of our study is to correlate the kind of relapse, residual or recurrent disease, with patient's survival.

Methods

We retrospectively studied 200 patients with EOC from our database. They were all operated by the same group of surgeons in three different hospitals from 2005 to 2017. All of them were diagnosed with relapsed ovarian cancer. Residual disease was detected in 140 patients, recurrent disease in 50 patients and 10 of them were presented with splanchnic metastasis. Patients of both categories (recurrent and residual disease) were divided in two groups: the first group received CRS and HIPEC followed by systemic chemotherapy, while the second group received CRS and systemic chemotherapy. Patients with splanchnic metastasis were treated with systemic chemotherapy.

Results

Median survival for patients in the residual disease group, was 38 months for those treated with CRS+HIPEC+ systemic chemotherapy while median survival for those patients treated with CRS and systemic chemotherapy was 23,8 months. Patients presented with recurrent disease, had median survival rates of 26 and 16 months respectively.

Conclusion

Preliminary data of our retrospective study shows a superior survival benefit of HIPEC in those patients presented with residual disease. Of course prospective studies are necessary in order to empower our results.

E13

THE ROLE OF REPEATED CYTOREDUCTIVE SURGERY PLUS HIPEC IN PERITONEAL CARCINOMATOSIS RECURRENCE: A RETROSPECTIVE ANALYSIS

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Objectives

The exact pathways and predisposing factors of recurrence in patients with peritoneal carcinomatosis (PC) who have undergone cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) as primary treatment remain elusive. Repeat CRS (rCRS) and HIPEC have been proposed as an efficient approach for the management of recurrent PC. The objective of our study was to evaluate the safety and effectiveness of repeat CRS and HIPEC in recurrent PC.

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Methods

A retrospective analysis of a prospectively maintained database of 430 patients with peritoneal carcinomatosis was performed. Patients who were diagnosed with recurrent PC and received rCRS plus HIPEC during the study period 2005–2018 were included in our study. Tumor location, time to recurrence, peritoneal cancer index (PCI) and completeness of cytoreduction (CC) of 1st and 2nd procedure as well as survival rates, were reviewed and analyzed.

Results

A total of 44 patients (10,23%) with a mean age of 51 (SD 9,66) underwent rCRS plus HIPEC. Among them, 16 were male and 28 were female with a median interval among the first and second procedure of 18 months (range, 6–44 months). In 19 patients ovarian cancer was the primary diagnosis, 11 had colon cancer, 1 gastric cancer, while 9 suffered from pseudomyxoma, 3 from mesothelioma and 1 from sarcoma. During the 1st procedure the median PCI of the included patients was 20 (range, 7–35) while during the 2nd procedure, the median PCI was 11 (range, 8–14). Concerning CC after 1st and 2nd procedure, in 50% and in 70.5% of patients, respectively CC0 was achieved whereas CC1 was achieved in 43.2% and in 27.3%, respectively. Median overall survival of patients was 35 months (range 12–128). Nine patients (20.5%) presented postoperative complications. Moreover, severe complications (Clavien-Dindo III-IV) occurred in 4 patients. During the follow up period 22 (50%) patients died whereas the remaining 22 (50%) were alive.

Conclusion

Repeated HIPEC is a feasible procedure and could benefit selected patients with recurrent PC. Due to its close association with significant morbidity and mortality rates, strict patient selection is mandatory based patient performance status, characteristics of the primary tumor, primary CC and extension of the disease.

E14

CYTOREDUCTIVE SURGERY WITH ADJUVANT SYSTEMIC THERAPY FOLLOWED BY INTERVAL CONSOLIDATION HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY: A NOVEL PARADIGM FOR OVARIAN CANCER

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Objectives

Standard treatments for advanced stage ovarian cancer usually involve a combination of systemic therapy and cytoreductive surgery (CRS). Recent data have demonstrated that the addition of hyperthermic intraperitoneal chemotherapy (HIPEC) to CRS results in prolonged progression-free survival (PFS) and overall survival (OS). We present our experience with Stage III ovarian cancer patients who have undergone CRS, followed by systemic therapy and then interval consolidation HIPEC.

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Methods

This is a retrospective study of 27 patients at a single institution (Sharp Memorial Hospital) who underwent complete CRS (CC-0/CC-1) by a single surgeon (RB) for Stage III gynecologic malignancies between 2001–2018. Twenty-one patients underwent HIPEC: 9 were done for recurrent disease after initial CRS and adjuvant chemotherapy at an outlying facility, while 12 were done in a 2-staged fashion as interval consolidation HIPEC with CRS, following initial CRS and adjuvant chemotherapy. Six patients were candidates for interval consolidation HIPEC but declined. Median PFS and OS were calculated by the Kaplan-Meier method and compared with the log rank test.

Results

Mean age was 63.3 years. Histopathology was poorly differentiated in 70.3% with the following subtypes: 20 epithelial ovarian, 3 fallopian tube, and 4 primary peritoneal carcinoma. Median PCI score was 21. Mean operative time was 9.7 hours with mean EBL 1490 mL. CC-0 was obtained in 96% of patients. Severe morbidity rate (Clavien-Dindo III/IV) was 44.4%, and 60-day mortality was 0%. Median follow-up was 4.2 years. Median PFS and OS for the 21 patients undergoing HIPEC were 3.9 and 8.7 years; PFS and OS for those who declined HIPEC were 1.6 and 3.9 years ($p = 0.143$ and $p = 0.044$ for PFS and OS, respectively, vs those undergoing HIPEC). Median PFS and OS for the recurrent disease HIPEC group were 2.2 and 8.7 years. Median PFS and OS for the consolidation HIPEC group were 5.1 and 9.7 years ($p = 0.126$ for PFS and OS, vs the other groups).

Conclusion

Patients with advanced stage ovarian cancer clearly derive benefit from multimodal therapy. Though a limited sample size, our patient outcomes suggest that maximal oncologic benefit may be achieved from initial complete CRS followed by adjuvant chemotherapy and interval consolidation HIPEC. This management schema was associated with acceptable morbidity and no mortality. Our results also suggest HIPEC with complete CRS may be beneficial in the recurrent setting.

E15

HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN STAGE IIIC AND IV CLINICAL STAGE OVARIAN CARCINOMA DURING INTERVAL LAPAROTOMY. PHASE II STUDY. INTERIM ANALYSIS OF MORBILITY AND PERIOPERATIVE MORTALITYY

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Objectives

Primary: 1)To evaluate the morbidity and mortality associated with the use of HIPEC during interval laparotomy for ovarian carcinoma. 2)To assess the impact on the quality of life (QoL) of patients undergoing HIPEC during interval laparotomy for ovarian carcinoma.

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Methods

Patients (n = 100) with locally advanced ovarian carcinoma who have received induction chemotherapy will be recruited because they are considered non-candidates for surgical treatment at the beginning and with at least a partial response that allows them to be eligible for interval laparotomy. The patients who in the interval surgery achieved a debulking considered as optimal (residual disease less than 2.5 mm) are randomized to two Treatment arms:1) 50 patients will be assigned to interval laparotomy and will complete 3 more cycles of intravenous chemotherapy (standard of treatment and it is our control group). 2)50 patients will be assigned to interval laparotomy+HIPEC and then complete 3 cycles of intravenous chemotherapy (experimental). For more information: Clinical Trials NCT03275194.

Results

The intermin analysis (20 patients) of mortality and morbility is presented. The randomized patients had no statistically significant differences in their baseline characteristics. The rate of carcinomatosis has been similar between the groups, however in the control group, debulking has been achieved despite carcinomatosis indexes of 21 points. The alterations of the hematological parameters, the albumin and the electrolyte imbalance have been similar between the groups. Nausea and vomiting were the most common toxicity effects, occurring in 60% of the patients and in 11% it was grade 3.Regarding surgical complications, only 11% presented a grade II (Clavien-Dindo) in the HIPEC group and 15% in the control. We only had a hospital readmission in less than 30 days after surgery in the HIPEC group. Our mortality is 0%. At the time of the congress (PSOGI 2018), initial data about the QoL analysis (basal features) will be presented. Also, we discuss the problematic about conforming a good multidisciplinary HIPEC group.

Conclusion

Morbility and mortality of cytorreductive surgery+HIPEC for ovarian cancer is good and is comparable to cytorreductive surgery alone. The HIPEC procedure during the intervale laparotomy has been feasible with low rate of complications and toxicity.

E16

MORBIDITY AFTER CYTOREDUCTIVE SURGERY COMBINED WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC) USED IN TREATMENT OF OVARIAN, TUBAL AND PRIMARY PERITONEAL CANCER

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Objectives

Cytoreductive surgery (CRS) is increasingly used in treatment of ovarian, tubal and primary peritoneal cancer (OC). Hyperthermic intraperitoneal chemotherapy (HIPEC) consists of intra-operative perfusion of the abdominal cavity with a heated solution with a cytotoxic agent aiming to prevent disease recurrence.

Study aims were to evaluate morbidity and mortality of CRS combined with HIPEC in OC patients.

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Methods

In a pilot study performed at Department of Gynaecology and Obstetrics, Aarhus University Hospital, Denmark, 25 patients were treated with CRS+HIPEC using carboplatin 800 mg/m^2 for 90 minutes.

Inclusion criteria: Patients with primary OC FIGO stages III-IV subjected to up-front or interval CRS, age 18–75 years, American Society of Anaesthesiologists (ASA) scores I-II and complete cytoreduction (i.e. no visible tumour nodules in the abdominal cavity after the surgical procedure). For stage IV, only patients with resectable disease and patients with complete remission of extra-abdominal metastasis after neoadjuvant chemotherapy.

Study endpoints: 30-day mortality and adverse events as assessed by Common Terminology Criteria for Adverse Events (CTCAE). Severe and life-threatening (grade III/IV) complications are reported.

Results

Median (range) age was 58 (39–73) years. Fourteen patients had up-front CRS and 11 patients had interval CRS. Median Peritoneal Cancer Index was 11 (5–32).

No deaths occurred within 30 days. Reoperation was necessary in two patients (8.0%): a stoma revision 27 days post-surgery and intraabdominal hemorrhage after removal of drainage tube three days post-surgery. Eleven patients experienced at least one grade III complication (44.0%), and the most frequent was fever/infection with unknown origin (n = 3,12%), transient neutropenia (n = 3,12.0%) and peritonitis/intraabdominal abscess (n = 3,12%). There were no grade IV complications.

Conclusion

CRS+HIPEC with carboplatin 800 mg/m^2 used for selected patients with advanced stage OC is feasible with an acceptable morbidity in present pilot study.

E17

LONG TERM RESULTS OF CYTOREDUCTIVE SURGERY AND HIPEC IN HIGH GRADE "OVARIAN CANCER". A SINGLE-CENTER RETROSPECTIVE STUDY

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Objectives

The recently published Dutch phase 3 prospective randomized trial confirms the improvement of recurrence-free survival and overall survival (OS) due to the addition of hyperthermic intraperitoneal chemotherapy (HIPEC) to interval cytoreductive surgery (CRS) in patients with stage III epithelial ovarian cancer (OC) after neoadjuvant chemotherapy (NC). We therefore aimed to assess the influence of upfront (without NC) versus interval (with NC) CRS/HIPEC on cancer specific outcomes. In addition, we analyzed the effect of CRS/HIPEC in patients with recurrent disease when referred to our tertiary center hospital.

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Methods

In a single-center retrospective cohort analysis, including all patients undergoing CRS/HIPEC under direct guidance of F. Kober, patients were divided into “interval surgery group” (at least 3 NC cycles Carboplatin/Paclitaxel), “upfront surgery group” and “recurrent group”. According to our internal, within decades-established protocol, HIPEC was conducted after CRS. In the interval/upfront group standard adjuvant chemotherapy completed the protocol. Long-term follow-up included clinical exams, tumor markers and PET/CT scans. Kaplan Meier curves and Mantel-Cox Log Rank test were used to test for differences on OS. Uni- and multivariate analyses were performed with Cox Regression analysis.

Results

In our database we found 172 patients (1992–2018) stage FIGO III/IV (mainly IIIC and IVA) subsuming OC, fallopian tube cancer and primary peritoneal cancer. Due to missing data over the decades and exclusion of 21 patients with palliative HIPEC for malignant ascites management we extracted a total number (n) of 142 patients for statistical analysis (upfront/interval surgery n = 73 vs. recurrent n = 69). In these two groups we observed a significant difference in OS (median OS upfront/interval surgery 52 vs. recurrent 25 months, p = 0,001). A subgroup analysis was performed for patients with upfront and interval CRS/HIPEC (upfront n = 32 vs. interval n = 39). In these two subgroups we did not observe a significant difference in OS (median OS upfront 52 vs. interval 45 months, p = 0,354).

Conclusion

With a median OS of 45 months in the interval CRS/HIPEC group with NC we can confirm the recently published Dutch data. Furthermore, we point out that there is no impaired prognosis in the interval compared to the upfront surgery group in our patient database.

E18

SPLENECTOMY DURING CYTOREDUCTIVE SURGERY FOR OVARIAN CANCER

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Objectives

Splenic metastasis from ovarian cancer is unusual. It is well demonstrated that splenectomy alone, places the patient at significantly higher risk of overwhelming infection, compared to the normal population. In our retrospective analysis we sought to examine how splenectomy as part of cytoreductive surgery and HIPEC in ovarian cancer influences the postoperative course and affects survival.

Methods

We reviewed the cases of relapsed ovarian cancer from 2005 to 2016 and found 40 cases who had a splenectomy as a part of their cytoreductive surgery, and they were compared to 110 who did not undergo splenectomy.

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Results

In the splenectomy group the mean age was 64 (44–83) years. A total of CC_0/CC_1 (84%) was achieved. The median overall survival for patients with splenectomy was 28 months versus to the no-splenectomy group that was 40 months.

Conclusion

The addition of splenectomy to cytoreductive surgery and HIPEC was feasible and safe. It appears though to have shortened survival that is seems to be unrelated to postoperative outcome. Probably indicates more aggressive disease.

E19

CRS WITH HIPEC IN STAGE IIIC EPITHELIAL OVARIAN CANCER WITH COMPARISON OF ONCOLOGICAL OUTCOME ONLY WITH CRS + INTRAVENOUS CHEMOTHERAPY & CRS PLUS NORMOTHERMIC PORT BASED INTRA-PERITONEAL CHEMOTHERAPY

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Objectives

Current standard of treatment of patients with stage IIIc epithelial ovarian cancer (EOC) consists of cytoreduction and intravenous (IV) chemotherapy. Intraperitoneal (IP) chemotherapy is considered superior to standard IV chemotherapy. Recent randomised study has shown benefit of cytoreductive surgery (CRS)+intra-operative hyperthermic intra-peritoneal chemotherapy (HIPEC). Our study aims to compare the oncological outcome (DFS & OS) of extensive CRS+HIPEC in advanced ovarian malignancy with CRS & IV chemotherapy & CRS+IP chemotherapy.

Methods

Patients diagnosed of stage IIIc EOC underwent extensive CRS+HIPEC. All data prospectively entered in the HIPEC registry was analysed. CRS+IV or CRS+IP was done during the same period for other patients diagnosed of stage IIIC EOC. Only the oncological outcome of CRS & IV group, CRS+IP group was compared with the CRS & HIPEC group.

Results

Out of 110, upfront (19%), interval (50%) and secondary cytoreduction (31%) plus HIPEC was done in all patients. Mean PCI was 14.1, 9.6 & 13.0 in the three groups respectively. Average surgery duration was 9.41 to 9.87 hours. Multi-visceral resection, diaphragmatic resection & bowel resection was required in 12.7%, 50% & 41.8% respectively. Overall G3–G5 morbidity was seen in 40%, with major being surgical 30%, pulmonary 16.3%, electrolyte 16.3% & haematological 12.7%. Mean ICU & hospital stay across all groups was 1.5 & 12 days respectively. Overall 30 day mortality was 4.5%. Time to adjuvant chemotherapy was 42.85, 41.74, 46.8 days in the upfront, interval and the recurrent settings. With a median follow up of 46 months DFS was 26, 33 & 16 months and OS was 40, 43, & 30 months in upfront, interval and the recurrent settings respectively. In Comparison CRS with IV group had a DFS & OS of 28 & 42 months

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whereas CRS with IP group had a DFS & OS of 38 & 55 months respectively. Most of the recurrences in CRS & IV group was in peritoneum whereas the other two groups had more recurrence in nodes & liver.

Conclusion

Our study shows that CRS only arm had inferior outcome. CRS+IP & CRS+HIPEC group both had lesser peritoneal recurrences and better DFS than CRS+IV chemotherapy. CRS+IP group had lesser morbidity when compared to HIPEC group. The role of hyperthermia for intraperitoneal chemotherapy needs to be evaluated vis-à-vis normothermic port based IP chemotherapy with a well designed multi-institutional randomised study.

E20

PREDICTION MODEL FOR SUBOPTIMAL CYTOREDUCTION DURING INTERVAL CYTOREDUCTIVE SURGERY IN PATIENTS WITH PERITONEAL CARCINOMATOSIS FROM OVARIAN CANCER TREATED BY NEOADJUVANT CHEMOTHERAPY

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Objectives

The aim of this study was to evaluate clinicopathologic factors for prediction of gross residual disease after interval debulking surgery in advanced ovarian cancer patients treated with neoadjuvant chemotherapy.

Methods

We retrospectively reviewed clinicopathologic data of 83 patients with ovarian cancer who were treated with neoadjuvant chemotherapy followed by interval debulking surgery (NAC-IDS) between March of 2006 and March of 2018. Clinicopathologic characteristics, reduction rates of serum CA-125 after each NAC and seven preoperative abdominal-pelvic computed tomography (CT) findings - related to disease severity were evaluated.

Results

Of the 83 patients, 67 (80.7%) patients showed partial response (PR), 12 (14.4%) patients were stable disease (SD) and 4 (4.8%) patients appeared progressive disease in CT scan performed after the last cycle of NAC. All the patients received 3 cycles of NAC and interval debulking surgery. After IDS, no gross residual disease (NGR) was found in 58 (69.8%) patients and 25 patients had gross residual disease; 19 patients had gross residual disease <1 cm and 6 patients had residual disease ≥1 cm. In univariate analysis, body mass index (BMI) ($p = 0.008$), the reduction rates of serum CA-125 after 2nd NAC ($p = 0.007$) and initial CT findings of small bowel mesentery lesions ($p = 0.001$), extensive carcinomatosis ($p = 0.021$) and massive ascites ($p = 0.050$) were related to gross residual disease. Multivariate analysis identified that BMI, the reduction rate of serum CA-125 after 2nd NAC and small bowel mesentery lesion on initial CT were significantly associated with the gross residual disease after IDS ($p = 0.010$, 0.016, 0.001, respectively). The optimal cut-off value predicting gross residual disease were less than 50% of CA-125 reduction rate after 2nd NAC and low BMI less than 23 kg/m2. The combined receiver operating characteristic curve analysis of these factors showed good performance to predict gross residual disease after IDS (combined area under ROC curve = 0.816, 95% CI, 0.713–0.920).

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Conclusion

With preoperative CT finding of small bowel mesentery involvement, less than 50% reduction of initial CA-125 after 2nd NAC and low BMI (<23 kg/m2) might be an early indicator for predicting gross residual disease after IDS in advanced ovarian cancer patients. These results might be helpful in treatment planning and patients counseling.

E21

EXTENT OF PERITONEAL DISEASE IN LOWER ABDOMEN AND IT'S RELATION TO NODAL DISEASE IN STAGE 3C EPITHELIAL OVARIAN CANCER

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Objectives

To explore the correlation between the extent of peritoneal disease in lower abdomen & rectal involvement with lymph nodal metastases (LNM) in stage 3C epithelial ovarian cancer (EOC)

Methods

All stage III C EOC undergoing CRS & systematic nodal dissection, with/without HIPEC, between 2011–2016, included in the study.

The LS3 score: each lower segment (region 5,6,7) was assessed for lesion size score (LS). Presence of LS3 was given 1 point & anything less was given score 0. Scores of all 3 regions were added to generate a score which we called LS3 SCORE.

Rectal involvement score: progressive involvement of rectum from serosa to mucosa were assigned numerical values. Serosa = 1, muscularis = 2, submucosa = 3, mucosa = 4.

This was done to test the hypothesis that the increased burden in the pelvis increases LNM.

LNM was evaluated in terms of overall nodal positivity(ONP), number of stations(NOS) involved

Results

There were 117 patients who underwent CRS+nodal clearance±HIPEC for EOC .Complete details were available in 91 patients, which were analysed. The mean PCI was14.6 &44 patients had positive LS3score (n = 12,8,24 respectively in LS3 score 1,2&3), 47 had rectal involvement (n = 44,28,6,5,8 respectively for rectal involvement score 0,1,2,3,4)

Overall nodal positivity(ONP): number of prior chemotherapy cycles, rectal involvement score, PCI, presence of LS3 and LS3 SCORE in region 5,6,7 correlated significantly with ONP(p = 0.017, 0.01,0.042,0.002,0.000 respectively). LS3 and total LS3 SCORE of region 5,6,7, PCI > 15 & rectal involvement score positively affected ONP (p = 0.002, 0.001, 0.038, 0.000 respectively).On multivariate analysis number of cycles & Rectal involvement score were the significant factors (p = 0.027,0.033)

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Number of stations (NOS) involved: prior chemotherapy, number of cylces, total PCI, presence of LS3 and total LS3 SCORE of areas 5,6,7 & PCI correlated significantly with NOS involved (p = 0.035, 0.020, 0.045, 0.013, 0.003, 0.000 respectively). Total NOS involved significantly increased with increasing number & lines of chemotherapy, rectal involvement score, PCI > 15, presence of LS3 and total LS3 score of areas 5,6,7 (p = 0.020,0.022,0.001,0.018,0.039,0.018 respectively). On multivariate analysis presence of LS3 and total LS3 score of areas 5,6,7 were the significant factors (p = 0.046,0.005)

Conclusion

The disease burden in regions 5,6,7 & depth of rectal infiltration significantly affect LNM both in terms of overall positivity and number of stations involved in EOC.

E22

SURGICAL MANAGEMENT OF MALIGNANT BOWEL OBSTRUCTION IN EPITHELIAL OVARIAN CANCER RECURRENT PERITONEAL CARCINOMATOSIS: A PREOPERATIVE ASSESSMENT PROPOSAL

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Objectives

The aim of this study is to assess the outcome of surgical management of malignant bowel obstruction (MBO) in patients with epithelial ovarian cancer (EOC) recurrent peritoneal carcinomatosis (PC) and review our practice in order to propose evidence-based management for an adequate selection of patients who would benefit from palliative surgery.

Methods

We retrospectively reviewed clinical, laboratory, and instrumental data of patients undergoing palliative surgery for MBO by recurrent peritoneal EOC referred between January 2011 and December 2017. All patients underwent to clinical and radiological preoperative workup in order to select those suitable for palliative surgery, after failure of conservative management. Primary endpoints were successful palliation following surgery, defined as resumption of adequate oral intake, and morbidity and mortality rates. Preoperative laboratory parameters, histopathological findings, and surgical ones were correlated with the resumption of oral intake by univariate and multivariate analysis.

Results

A total of 182 patients with MBO from EOC recurrent PC were admitted. Forty-eight patients (26.4%) underwent surgery for MBO of which 38 (79%) received ostomy as palliative procedure and the remaining 10 (21%) received only exploratory laparotomy. Twenty-eight patients received ileostomy or colostomy while 10 a jejunostomy or a gastrostomy. Severe adverse events occurred in 6 patients (12.5%) and 4 (8.3%) required surgical intervention. Three patients (6.2%) died within 30 days. Oral adequate intake following surgery was achieved in 34 cases (70%), obtained in a median period of 5.8 days (range 1–16). In

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multivariate analysis, preoperative serum albumin above 3 g/dl (RR 0.50; p = 0.002) and stoma creation were the only independent factors of adequate resumption of oral feeding.

Conclusion

In this setting, a rigorous selection of patients is mandatory and requires a multimodal approach based both on clinical and radiological specific assessments. Clinical evaluation should rely on the presence of soft quadrants on palpation, nutritional status or albumin level while the radiological one should focus on the presence of multiple intestinal stenoses, stenosis of the jejunum, retraction of the root of the mesentery and massive intestinal carcinomatosis. In appropriately selected patients, palliation can be achieved in most cases, with an acceptable rate of adverse events. This preoperative assessment should be evaluated in a prospective context.

E23

OUTCOMES OF STAGE III AND IV OVARIAN CANCERS AFTER TREATMENT WITH NEO-ADJUVANT CHEMOTHERAPY FOLLOWED BY CYTOREDUCTIVE SURGERY WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY

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Objectives

Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (CRS/HIPEC) after neoadjuvant chemotherapy (NACT) have shown promising outcomes as initial treatment for stage III ovarian cancer; however, it is not known whether stage IV patients will benefit from this treatment. We evaluate the use of NACT and CRS/HIPEC in newly diagnosed stage III and IV ovarian cancer.

Methods

Patients who were not candidates for initial debulking surgery received NACT (carboplatin/paclitaxel) before CRS/HIPEC with carboplatin. Clinical response and perioperative factors were prospectively assessed. Overall survival (OS) and progression-free survival (PFS) were analyzed using Kaplan-Meier method.

Results

Twenty-two patients (mean 64 ± 9 [42–75] years) with preoperative ECOG ≤2 were included. FIGO stage III (S3) and IV (S4) was seen in 14 and 8 patients, respectively. Malignant pleural effusion was present in 63% of S4 patients pre-NACT. Median NACT cycles were 3 (3–6) and 4 (3–4) in S3 and S4, respectively. Median Ca-125 fell from 993 to 21 U/mL post-NACT. Improvement of ascites and pleural effusions was seen in all patients. Omental caking decreased in 92% and 83% of S3 and S4 patients, respectively. Mean PCI was 20 ± 8 in S3 and 20 ± 11 in S4 with 100% complete cytoreduction (≤0.25 cm). Median organ resections were 7 in S3/S4 and median peritonectomies were 3 and 4, respectively. Grade III/IV surgical complications occurred in 7% and 0% of S3 and S4, with no hospital mortality. Post CRS/HIPEC, median CA-125 was 22 (3–80) and 12 (7–75) U/mL in S3 and S4, respectively. Median time to adjuvant chemotherapy was 55 (35–74) and 96 (43–118) days, respectively (p = 0.031). Median follow-up was 12 (0.6–35) months. OS at 1 and 2 years was 92% and 69% in S3 and 100% and 75% in S4 patients (p = 0.19). PFS at 1 year was 46% with median PFS of 11.7 months in S3 patients while S4 PFS at 1 and 2 years was 71% and 36% with median

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PFS of 18 months (p = 0.06). Recurrence in the peritoneal cavity, extraperitoneal cavity, and both cavities occurred 43%, 0%, and 7% in S3 and 25%, 13%, and 13% in S4, respectively.

Conclusion

Stage IV patients treated with NACT and CRS/HIPEC have similar complete cytoreduction rates and demonstrate promising clinical outcomes compared to stage III patients. The use of NACT with CRS/HIPEC should be considered as a treatment option for stage IV ovarian cancer.

E24

VALIDATION OF A PERITONEAL SURFACE DISEASE SEVERITY SCORE IN STAGE IIIC-IV OVARIAN CANCER TREATED WITH CYTOREDUCTION AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY

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Objectives

The aim of the present study is to evaluate and validate the PSDSS score in patients with stage IIIC–IV epithelial ovarian cancer (EOC) who are treated with a first cytoreduction with peritonectomy procedures and HIPEC, and to discuss the usefulness and applicability of this approach in decision making in clinical practice.

Methods

We analyzed a consecutive series of patients with stage IIIC–IV epithelial ovarian cancer treated by cytoreductive surgery and HIPEC between January 2012 and December 2016.

Results

A total of 115 consecutive patients diagnosed of stage IIIC–IV EOC were included. After the multivariate analyses, the impossibility of performing a complete cytoreduction (CC-score = 1, HR: 4.56, p = 0.012), the PSDSSov (III–IV, HR: 3.59, p = 0.024), a high (>20) PCI (HR: 3.16, p = 0.032), and the histological type of the tumor (G3, HR: 2.28, 95% CI: 1.14–8.14, p = 0.033) were factors that were independently related with lower DFS. Other variables included in PSDSSov such as pathological lymphadenopathy and the clinical symptoms were not independently related to lower DFS in our series.

Conclusion

PSDSSov is a useful tool in the prognostic stratification of patients with advanced ovarian cancer with peritoneal dissemination (IIIB/IIIC).

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E25
CAN THE NEGATIVE PROGNOSTIC IMPACT OF A POOR/ MODERATE RESPONSE TO NEOADJUVANT CHEMOTHERAPY BE OFFSET BY A COMPLETE INTERVAL CYTOREDUCTIVE SURGERY IN PATIENTS WITH ADVANCED EPITHELIAL OVARIAN, FALLOPIAN TUBE AND PRIMARY PERITONEAL CANCER? - A RETROSPECTIVE STUDY BY INDEPSO

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Objectives

To study of patterns of response of neoadjuvant chemotherapy (NACT) in patients undergoing interval cytoreductive surgery (CRS) with/without intraperitoneal chemotherapy (IPC) for advanced (stage IIIC and IVA) serous epithelial ovarian, fallopian tube and primary peritoneal cancer.

To determine the clinical impact of the chemotherapy response grade (CRG)

Methods

Analysis of data (prospective and retrospective) collected from members of the Indian Network for DEvelopment of Peritoneal Surface Oncology (INDEPSO) was performed and included patients undergoing both total and selective peritonectomy. All patients underwent a systematic retroperitoneal lymphadenectomy till the level of the renal veins. The pathological response was graded based on the score developed by Bohm et al. A chemotherapy response grade (CRG) 1 was allotted to patients with no or minimal tumor response, CRG 2 for appreciable tumor response amid viable tumor that is readily identifiable and CRG 3 for complete or near-complete response with no or minimal residual tumor. The impact of CRG on survival was evaluated.

Results

79 women treated from January 2013 to December 2017 at 5 Indian centers were included. The median PCI was 10[range 0–36]; a CC-0/1 resection was obtained in 78/79. 22 patients had CRG 1, 41 CRG 2 and 16 CRG 3. A pathological complete response (pCR) was seen in 2 (2.5%) patients; 3 others had microscopic residual disease only in the ovaries. Residual disease was present in lymph nodes in 0% with CRG 3, 31.7% with CRG 2 and 54.5% with CRG 1. The median disease free survival (DFS) was 37 months and median overall survival (OS) not reached. The CRG did not influence the DFS ($p = 0.80$) or OS ($p = 0.41$) significantly. The pathological PCI was more than the surgical PCI in 15.1%. In 12.6% tumor was present in regions with a clinical complete response (PCI score 0) and in10.1% there was disease in the peritoneum when the omentum showed a pCR.

Conclusion

A pCR was seen in 2.5% only. The survival in CRG 1 and 2(poor and moderate responders) was similar to that in CRG 3 and could be explained by a CC-0/1 resection in 56/57 patients, demonstrating the benefit of a complete cytoreduction.

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The chemotherapy response was unevenly distributed- residual viable tumor was present in normal-looking areas of peritoneum thus providing a strong rationale for more extensive surgery in such cases. The high incidence of positive regional nodes in CRG 1 and 2 provides a rationale for systemic lymphadenectomy in these patients.

E26

A COMPARATIVE ANALYSIS OF CLINICAL OUTCOMES OF PATIENTS WITH ADVANCED SEROUS EPITHELIAL OVARIAN, FALLOPIAN TUBE AND PRIMARY PERITONEAL CANCER FOLLOWING PRIMARY VERSUS INTERVAL CYTOREDUCTIVE SURGERY AND HIPEC- A STUDY BY INDEPSO

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Objectives

To compare clinical outcomes in patients with advanced (stage IIIC and IVA) serous epithelial ovarian, fallopian tube and primary peritoneal cancer undergoing cytoreductive surgery and HIPEC at two different time points-upfront (primary surgery) and after neoadjuvant chemotherapy (interval surgery) for unresectable disease.

Methods

The data was collected from of a prospectively maintained database of the Indian Network of Development for peritoneal surface malignancies (INDEPSO). The cohort included all patients undergoing CRS with HIPEC treated during the given time period by the same surgeons. Patients with non-serous histologies (mucinous, endometroid and clear cell) were excluded in this study. Interval surgery was generally performed after 3–4 cycles of chemotherapy. A systematic retroperitoneal lymphadenectomy till the level of the renal veins was performed in all patients. Patient and disease characteristics, perioperative and survival outcomes between the two groups was compared.

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Results

54 patients treated from Jan 2013 to Dec 3017 were included in the study of which 18 had primary surgery with HIPEC and 36 had interval surgery with HIPEC. The median PCI was 11 for interval surgery and 6.5 for primary surgery (p = 0.07). Incidence of positive lymph nodes was higher in patients undergoing interval surgery (36.1%) as compared to primary surgery (5.5%) (p = 0.014). All patients had a complete cytoreduction (CC0/1).The median hospital stay was longer in the interval surgery group (p-0.02). The 90-day morbidity was similar in the 2 groups, primary (0%) vs interval (5.5%)(p = 0.44).At a median follow up of 18 months, the 3-year overall survival (OS) was 93.8% in the primary and 84% in the interval group (p = 0.71). The median OS was not reached in both groups. The median disease free survival (DFS) was 37 months in the interval group and not reached in the primary surgery group. The 3-year DFS was not significantly different between the two groups (61% for primary and 56% for interval surgery; p = 0.59).

Conclusion

Patients undergoing interval CRS and HIPEC can achieve a survival similar to those undergoing primary surgery in patients who achieve a complete cytoreduction. The use of NACT in patients with unresectable disease or those at risk of morbidity may not lead to an inferior survival if a complete cytoreduction can be obtained. The use of neoadjuvant chemotherapy should not be for reducing the radicality of the surgery but the morbidity and for downstaging unresectable disease.

E27
HEATED INTRA-OPERATIVE VERSUS NORMOTHERMIC POST-OPERATIVE INTRAPERITONEAL CHEMOTHERAPY FOR RECURRENT EPITHELIAL OVARIAN CARCINOMA

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Objectives

Cytoreductive surgery (CRS) and post-operative intravenous and normothermic intraperitoneal (IV/IP) chemotherapy improves survival for select patients with recurrent epithelial ovarian cancer (EOC). The role of intra-operative heated intraperitoneal chemotherapy (HIPEC) for those patients remains controversial. We evaluated our institutional outcomes of HIPEC compared to IV/IP for recurrent EOC.

Methods

Patients who underwent CRS and IV/IP and/or HIPEC for recurrent EOC were selected from our institutional IV/IP ovarian cancer database and Phase I HIPEC clinical trial for analysis. HIPEC was cisplatin 75 mg/m2 at 42°C for 60 minutes.

Results

25 patients underwent CRS and IV/IP (n = 15, 60%), HIPEC (n = 4, 16%), or both (n = 6, 24%). 4 patients had stage II disease (16%), 14 stage III (56%), 7 stage IV (28%). All stage IV patients were treated with HIPEC±IV/IP (p = <0.001). 19 of 25 tumors (76%) were high-grade. All patients achieved optimal cytoreduction. Normothermic IP chemotherapy was platinum-based in 18 of 21 patients (86%); 14 (67%) received all planned infusions, 3 (14%) missed >1 cycle. 4 patients did not undergo IP port placement due to refusal (n = 3) or technical inability (n = 1). 4 patients (16%) had platinum-resistant disease. Median

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recurrence-free survival (RFS) was 19 months (interquartile range [IQR] 8–29.5); median overall survival (OS) was 44.8 months (IQR 29.6–66.6). 21 patients (84%) had re-recurrent disease at last follow-up. Only platinum resistance was associated with RFS (mean 7.1 vs. 25.1 months, p = 0.0003). Alone or in combination, HIPEC was associated with worse OS (mean 28.5 vs. 66.6 months, p = 0.0005), while IV/IP was associated with improved OS (mean 56.9 vs. 22.3 months, p = 0.0002). Cox proportional hazards model of OS using stage, grade, IP chemo, and platinum response found HIPEC alone was associated with 24.2-times higher risk of mortality compared to IV/IP alone (95% CI 2.6–216.8, p = 0.0060); HIPEC+IV/IP was associated with 7.0-times higher risk (95% CI 1.3–32.5, p = 0.025).

Conclusion

Optimal CRS with IP chemotherapy is associated with durable overall survival in recurrent EOC. However, patients frequently experience disease recurrence and require further surgical and/or medical therapy. In this small series, HIPEC was independently associated with decreased survival compared to IV/IP, but may have been more a result of treating stage IV disease. Prospective studies of HIPEC in addition to IV/IP are needed to better define its role in recurrent ovarian cancer.

E28
RECURRENT OVARIAN CANCER TREATED WITH RADICAL CYTORREDUCTIVE SURGERY (CRS) AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC): 122 CONSECUTIVE PACIENTS. CATALONIAN PERITONEAL CARCINOMATOSIS PROGRAM (SPAIN)

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Objectives

The conventional treatment of recurrent ovarian cancer consists in systemic chemotherapy +/- surgery, with a mean overall survival of 12–24 months.

The use of CRS+HIPEC in these patients achieves, in platinum sensitive tumors, 30–60% months overall survival rates, with mortality around 0–10%.

We present clinical and survival results of recurrent ovarian cancer treated with CRS+HIPEC in the Catalonian Peritoneal Carcinomatosis Program.

Methods

Between September'06 and March'18, 878 patients have been treated with CRS+HIPEC in our group, being done a total of 1000 procedures. Of these, 122 patients with recurrent ovarian/Falopian tube cancer and primary peritoneal serous tumors, performing 140 procedures.

Mean age: 54.8 ± 11 years. Ascites: 16%. PCI: 11/39. Visceral involvement: 55.3%. Completeness of cytorreduction: CC0 95%. HIPEC (coliseum): CDDP+ Doxorrubicin at 42.5ºC.

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Results

Mean follow up: 34.4 months. Global III-IV morbidity: 15.6%. Readmission after hospital discharge: 6.6%. No anastomotic leaks. Mortality: 0%. Median ICU stay: 2 days. Mean hospital stay: 12.9 days.

Overall survival at 12 months: 92%. Mean overall survival: 57.8 months. Median: 45.9 months.

Conclusion

CRS+HIPEC as indication in ovarian carcinoma is currently under evaluation. Although there is scientific data of the clinical benefits as part of the primary treatment approach to ovarian carcinomatosis, it is not generally accepted. Most groups agree in using it for the platinum sensitive recurrent ovarian carcinoma. Surgery is the keystone of this treatment and impacts, as an independent factor, in the short and long term results. Proper training of the surgical team is essential when implementing this type of treatment. It is advisable, as recommended from independent health agencies, to centralize care in specialized centers that can guarantee the standard level of quality, minimizing risk and cost.

E29
CYTOREDUCTIVE SURGERY AND HIPEC AS 1ST LINE TREATMENT OF OVARIAN CANCER IN STAGES IIIC / IV

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Objectives

To present the results in our experience in the treatment of stage IIIC and IV ovarian cancer by Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy.

Methods

We analyze the data of our prospective database from January 2011 to December 2017.

Results

Of the 146 procedures of CCR and HIPEC performed in our center, 34 correspond to patients with first diagnosis of stage IIIC and IV of ovarian cancer. In our protocol, when there is suspicion from the CT-scan of stage IIIC ovarian cancer, an exploratory laparoscopy is performed with a biopsy and evaluation of the PCI. In those cases of elevated PCI, when there is extensive intestinal involvement, the patient is referred to neoadjuvant chemotherapy with a new laparoscopy at the end of the third cycle. Within our series, 24 received between three and four cycles of neoadjuvant chemotherapy, followed by cytoreductive surgery and HIPEC. In 10 patients, who had low PCI at diagnosis, cytoreductive surgery and HIPEC were performed up-front. The average age was 57 years. Optimal cytoreduction(CC0/CC1) was achieved in all cases (CC0 in 93%). The PCI mean was 17, ranging from 4 to 28. An average of 4 peritonectomy procedures were performed per patient, with more than 80% of posterior pelvic exenteration. A stoma was performed in 3 cases. The average stay was 13 days. The mortality of our series is 0%, with an overall morbidity of 38%. The percentage of major complications (grades III and IV of the Clavien classification) was 21%. Although the average follow-up of most of our patients is short, three of them have reached three years of disease free survival.

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Conclusion

Although classical recommendations of HIPEC limits his use to the treatment of recurrent ovarian cancer, recent evidence has appeared that recommend this procedure in ovarian cancer at the initial diagnosis. It is clear that more randomized studies comparing this technique with usual practice would be necessary. In our center we have established a consensus protocol that has allowed us to include the HIPEC in the treatment chart of these patients, and we believe that it is a field that deserves discussion.

E30
EVALUATION OF PERITONEAL SURFACE DISEASE SEVERITY SCORE (PSDSS) ADAPTED IN PATIENTS WITH RECURRENT PLATINUM-SENSITIVE OVARIAN CANCER. A NEW SELECTION TOOL

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Objectives

The PSDSS prognostic score has shown its usefulness as a prognostic factor in patients with colorectal peritoneal carcinomatosis. The aim of our work is to evaluate the usefulness of the PSDSS and its combination with the AGO score and the TIAN Model for a better selection of patients with platino-sensitive recurrences of ovarian cancer for surgery.

Methods

A total of 64 patients were included with the diagnosis of platinum-sensitive recurrence of ovarian cancer between January 2008 and May 2016. Retrospectively, we recalculated the PSDSS score for each patient, performing a univariate and multivariate analysis of the factors related to the disease-free interval in this group of patients, including the PSDSS. In addition, the results were combined with the AGO score and the Tian model to enhance a more appropriate selection tool in this group of patients.

Results

In the series presented, the median disease-free survival was 30% at 5 years. The rates of disease-free survival in patients with PSDSS I-II vs III-IV were 40% and 17%, respectively ($p < 0.001$). There were no differences in survival between the patients according to the AGO score. The most favorable combination of scores was the result of the union of the PSDSS score with the TIAN Model. In patients with low risk Tian Model and PSDSS Score I-II, disease-free survival was 57% at 5 years.

Conclusion

The PSDSS alone or in combination with other prognostic models in recurrent ovarian cancer, can stratify subgroups with a special good prognosis.

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E31
RESPIRATORY COMPLICATIONS AFTER CYTOREDUCTION AND INTRAOPERATIVE HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN OVARIAN CANCER PERITONEAL CARCINOMATOSIS

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Objectives

The incidence of respiratory complications and their risk factors after debulking and Hyperthermic Intraperitoneal Chemotherapy (HIPEC) in patients with peritoneal disease in ovarian cancer is not well established. The aim of the present work is to analyze the type of respiratory complications and the factors associated with their appearance.

Methods

A total of 203 patients with a diagnosis of primary or recurrent ovarian cancer were included between January 2008 and September 2016. Severe respiratory complications (grade III–IV) were recorded according to the classification of the NCI- CTC version 3.0, performing a univariate and multivariate analysis of the factors associated with its appearance.

Results

Seven patients (3.5%) presented respiratory complications grade III–IV in the postoperative period. Pleural effusion was the most frequent complication, and it was necessary to place a pleural drainage tube (4 of the 7 complications). The performance of diaphragmatic peritonectomy was the only factor that showed a statistically significant association with the appearance of respiratory complications in the multivariate analysis (O.R.:15, 95% CI: 1.397–161.045, $p = 0.024$). When analyzing specifically the surgery on the diaphragm, performed in 56 patients (28%), we can observe that despite not increasing the percentage of diaphragmatic surgeries over the years, all respiratory complications, except for one patient, occurred in the first half of the series.

Conclusion

The performance of complex cytoreduction procedures in the diaphragm is associated with the appearance of respiratory complications, especially the pleural effusion. As it happens in our study, the realization of this type of procedures in experienced centers with a high volume of patients allows the adjustment of postoperative complications based on the adequate realization of a learning curve.

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E32
QUALITY OF LIFE AFTER A FIRST CYTOREDUCTION WITH OR WITHOUT HIPEC IN OVARIAN CANCER IIIC-IV. PRELIMINARY RESULTS OF THE PROSPECTIVE AND RANDOMIZED CLINICAL TRIAL

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Objectives

The aim of the work is to analyze the initial results regarding the opinion of patients about the treatment received in the prospective randomized clinical trial NCT-02328716 that studies the impact of HIPEC after complete cytoreduction in peritoneal carcinomatosis of ovarian, tubal and primary peritoneal origin.

Methods

From March 2012 to April 2017, 57 patients were evaluated, of which nine of them were excluded. They were single-blind randomized in two groups: with and without HIPEC. The masking was maintained until one year after surgery, and at that time they were asked what treatment they thought they had received and the reasons for that perception.

Results

Of the 48 patients included in the study, the opinion of 23 of them was analyzed (7 without HIPEC and 16 with HIPEC). In three patients (13%) the masking was lost in recovery room because someone revealed the treatment received. A statistically significant association was found regarding the perception of having received intraperitoneal chemotherapy with the justification "to present a good state of health". It should be noted that of the 4 patients who presented symptoms similar to those seen with neoadjuvant therapy, only 2 received intraperitoneal chemotherapy.

Conclusion

Patients have a positive perception about HIPEC, since the feeling of good health is associated with the belief of having received it. The presence of the same symptoms as those seen with neoadjuvant chemotherapy are not justified by the administration of HIPEC.

E33
CYTOREDUCTIVE SURGERY COMBINED WITH HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY AS A NEW THERAPEUTIC STRATEGY FOR MALIGNANT OVARIAN TERATOMA WITH PERITONEAL DISSEMINATION

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Objectives

The prognosis of malignant ovarian teratoma with peritoneal carcinomatosis (PC) is poor. This disease is associated with a high recurrence rate even after aggressive debulking surgery and adjuvant chemotherapy. In the present paper, we describe our experience of managing malignant ovarian teratoma with PC by using cytoreductive surgery combined with hyperthermic intraperitoneal chemotherapy (CRS-HIPEC).

Methods

This study was conducted using a prospectively maintained database of patients receiving CRS-HIPEC for peritoneal surface malignancy. The data of 10 female patients having malignant ovarian teratoma with PC between June 2007 and June 2017 were collected and reviewed retrospectively. CRS-HIPEC was performed according to the standard protocol of our institution. Patient characteristics, pathological reports, tumor markers, perioperative operative parameters, postoperative events, and disease status during the follow-up period were recorded.

Results

The mean age of these 10 patients was 45.0 years (range: 20–69 y). The primary ovarian neoplasms were pure mature cystic teratoma (n = 6), mixed germ cell tumor with mature cystic teratoma and yolk sac tumor (YST) (n = 1), pure immature teratoma (n = 1), immature teratoma with growing teratoma syndrome (GTS) (n = 1), and immature teratoma mixed YST with GTS (n = 1). The mean levels of tumor markers, including carcinoembryonic antigen, cancer antigen 19-9 (CA19-9), and CA125, were markedly elevated. According to the Clavien–Dindo classification system, grade 2 morbidity was detected in 3 patients. The recurrence rate was 10% (1 in 10 patients). The median and mean disease-free survival (DFS) after CRS-HIPEC were 22.3 and 36.2 months, respectively, and the 5-year DFS rates in the HIPEC and standard groups were 88% and 40%, respectively.

Conclusion

CRS-HIPEC is a safe therapeutic option for reducing the recurrence rate in selected patients with PC originating from malignant ovarian teratoma.

E34

OUTCOMES OF CYTOREDUCTIVE SURGERY (CRS) AND HIPEC IN PATIENTS WITH PERITONEAL RECURRENCE FROM EPITHELIAL OVARIAN CANCER- A STUDY BY INDEPSO

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Objectives

To evaluate the treatment outcomes and factors affecting the outcomes in recurrent ovarian cancer treated with cytoreductive surgery (CRS) with or without HIPEC.

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Methods

Analysis of data (prospective and retrospective) collected from the members of Indian Network for DEvelopment of Peritoenal Surface Oncology (INDEPSO) was performed. Patients undergoing CRS with/without HIPEC for peritoneal recurrence from epithelial ovarian cancer were included. Patients with mucinous tumors and other rare histologies were excluded.

Results

61 patients were included in the study. The median age was 50(range 29–70). 52 patients underwent surgery for the first recurrence, 6 for the second and 3 for the third or greater recurrence. 60/61 patients had platinum sensitive disease (recurrence >6 months after completion of first /previous line of therapy). The median time to recurrence was 15 months (range 1–84 months). The median PCI was 7 (range 1–26). A CC-0 resection was obtained in 46 patients, CC-1 in 12 and CC-2/3 in 3.

HIPEC was performed in 55 patients (a cisplatin based regimen was used in 48 patients). No bowel anastomosis was done in 63% patients (n = 36) and 32% patients had one bowel anastomosis (n = 18). HIPEC did not increase the grade 3–4 morbidity in these patients as compared to those having CRS alone.

30-day grade 3–4 morbidity was seen in 17% and 90-day grade 3–4 morbidity in 23.7%. There was no perioperative mortality. All patients received perioperative systemic chemotherapy. At a median follow up of 12 months (range 0–71), the median disease free survival (DFS) was 22 months (95% CI 9.6–34.3months)and the median OS was 71 months.

There was no single prognostic factor that had a significant impact on DFS. Patients with a PCI of 11–20 had a DFS (p = 0.664) and OS (p = 0.597) similar to patients with a PCI <10.

However, patients with PCI >20 had a significantly inferior OS on both univariate (p = 0.002) and multivariate analysis (p = 0.012, CI: 0.004–0.499).

Conclusion

Selected patients with platinum sensitive recurrent ovarian cancer can experience a prolonged survival. For patients with extensive disease (PCI > 10) a prolonged survival may be obtained in patients whom a complete cytoreduction is possible. The 90-day major morbidity was acceptable and was not increased in patients undergoing HIPEC. A longer follow-up is needed to determine other prognostic factors that influence survival outcomes.

E35

PALLIATIVE HIPEC IN PLATINUM-RESISTANT ADVANCED OVARIAN CANCER (FIRST EXPERIENCE)

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Objectives

Advanced ovarian cancer is a disease that is difficult for systemic treatment. Unrespectable peritoneal lesions lead to ascites, which is very resistant to IV chemotherapy. HIPEC for CC-2 cytoreduction level is known to be useless, but in some cases of large and recurrent ascites it may improve quality of life.

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Methods

Our experience of HIPEC in ovarian cancer is 44 patients since 2012. In 4 platinum-resistant cases with large ascites, we couldn't achieve optimal completeness of cytoreduction. HIPEC was performed to control ascites and improve quality of life. To perform HIPEC we put in abdominal cavity 3 inflow and 3 outflow catheters, then closed the abdominal wall. We used RAND HT performer and 7 litres of saline solution with 200 mg Paclitaxel. The time of perfusion was 90 minutes and perfusion flow was 1 liter per minute. After surgery we performed taxan-based IV chemotherapy from 2 to 6 cycles.

Results

There was no mortality in this series of cases. Pattern of post-op morbidity included 3 cases of temporary nephrotoxity (I-II grade) and 4 cases of 1–2 day vomiting.

Pre-op level of CA-125 had been extremely high (1500–4500 U/ml), but it has significantly dropped in 1–2 months postoperatively. This effect started early and continued longer then in patients without palliative HIPEC. Time to develop clinically significant ascites was much longer in series with palliative HIPEC than in series without HIPEC (7.5 and 4 months respectively). There were no cases of ileus in palliative HIPEC series.

Conclusion

Patients with ovarian cancer and ascites, resistant to pre-op IV chemotherapy (especially in platinum-resistant cases), using of palliative HIPEC may improve quality of life and give a prolongation of this effect.

E36

OXALIPLATIN-BASED HYPERTHERMIC INTRA-PERITONEAL CHEMOTHERAPY FOR PERITONEAL RECURRENCE OF OVARIAN CANCER: EFFICIENT ON SURVIVAL BUT ASSOCIATE WITH HIGH HAEMORRHAGIC COMPLICATION

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Objectives

The treatment of peritoneal carcinomatosis (PC) recurrence of ovarian cancer with cytoreductive surgery (CRS) and Hyperthermic Intraperitoneal chemotherapy (HIPEC) is well established. The type of drug used during HIPEC is still debated, with haemorrhagic complications that have been reported when using oxaliplatin; as reported to explain closure of a prospective randomized study. The aim of our study was to analyse early and long term outcome associated with oxaliplatin-base HIPEC in our population.

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Methods

Between 2008 and 20016, 41 patients with peritoneal recurrences of ovarian carcinoma treated first with Carbo-Platin and Taxol with stable disease were treated with CRS+HIPEC. Bidirectional chemotherapy is used with 5FU intravenously and Oxaliplatin intraperitoneal regimen at 460 mg/m2 for a total of 30 minutes at a temperature of 42 to 43°C was used for HIPEC bath. Demographic variable, characteristics of surgery, post-operative complication and hospital length of stay (LOS) were analyzed as well as long term outcomes including overall (OS) and disease free (DFS) survival.

Results

The study population was 54 years old patients, with preoperative platin-based chemotherapy in 76% of the population and complete resection of PC in 98%. Mean PCI was 5 (2 to 10) with at least one anastomosis performed in 27% of the cases including protective stoma in 91%. Postoperative mortality rate was null. Major morbidity occurred in 25% of the population, including 90% of haemorrhagic complication (HC), representing 22% of the total population. All patients with HC were reoperated, with multiple surgeries in 55%. Mean time of hospitalization in intensive care unit was 4 days (2 to 6.2) with prolonged LOS when HC occurred. Median DFS and OS for the entire cohort were 14 and 44 months, respectively.

Conclusion

CRS and HIPEC is an effective treatment of peritoneal recurrence of ovarian cancer, allowing a prolonged overall survival. Oxaliplatin-based HIPEC seems to be responsible of severe haemorrhagic complications that should made reconsider its utilisation in daily practice.