Results: 36 patients fit the inclusion criteria. Gross ascites wasthe clinical parameter found to be associated with suboptimal debulking. CT scan had low sensitivity (35-53%) in diagnosing small bowel mesenteric and porta hepatis disease and high sensitivity in diagnosing diffuse peritoneal thickening, omental disease, diaphragmatic and nodal disease. On univariate analysis diffuse peritoneal thickening and small bowel serosa and mesenteric disease were significantly consistent with sub optimal debulking.
Conclusion: Finding out disease at the sites which are associated with suboptimal debulking (diffuse peritoneal thickening, smallbowel mesenteric and serosal disease) pre operatively or at the beginning of surgery can predict optimal debulking and can help avoid un necessary surgery.

Ovary: Oral Abstract

Evaluation of different methods to assess homologous recombination status and sensitivity to PARP inhibitors in ovarian cancer

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Methods: Matched samples of ascites and tumor tissue were taken from patients undergoing surgery for epithelial ovarian cancer. Tumor samples were formalin fixed and paraffin embedded (FFPE); ascites samples were used to generate primary cultures (PC). HR status was determined in PCs as previously described.[1] IC_{50} for the PARP inhibitor Rucaparib was estimated using SRB assays. DNA was extracted from the FFPE tissue. The following techniques were evaluated in PCs or paired FFPE samples: DR-GFP reporter assay, PARP activity assay, BRCA1 expression on immunohistochemistry, BRCA1 methylation status and BRCA1/2 mutation analysis. A next generation sequencing based assay was used to detect mutations and other genomic alterations in a large panel of cancer-associated genes, including *BRCA1/2*.
Results: Paired samples were collected from 64 patients and characterized for HR function. 47/64 (76%) were high grade serous. 44% (28/64)) were HR defective (HRD) by Rad51 assay and correlated with Rucaparib sensitivity (PPV-92%, NPV-100%). Molecular analysis revealed that all mutations and other genomic alterations detected in ascites derived PCs were also found in matched FFPE tumor tissues. All tumors with serous histology contained *p53* mutations, whilst the remaining tumors without *p53* mutations were non-serous in histology. DR-GFP assay was unreliable in PC due to poor transfection. In a subset of 50 cancers there was reduced BRCA1 expression in the HRD vs. HRC tumours (34.8% vs. 22.7%, ns) whilst in a further subset of 30 cases there was no difference in endogenous or stimulated PARP activity between HRD and HRC tumours. Deleterious *BRCA2* mutations were identified in 7 tumors, 6 of which were HRD. Only 1 deleterious *BRCA1* mutation was detected but methylation of *BRCA1* was identified in 13 of 64 (20%) tumors, 7 of which were HRD. Mutation of *BRCA2* was mutually exclusive to methylation of BRCA1. HRD vs. HRC tumours showed BRCA1 methylation (25% vs. 17%) and BRCA1/2 mutation (21% vs. 0.3%). 14/28 (50%) HR defective tumors do not have *BRCA1/2* mutations or *BRCA1* methylation, suggesting other mechanisms can also result in a HR defective phenotype.28/64 (43%) of samples demonstrated the HR defective phenotype. In all cases HR status correlated with sensitivity to Rucaparib.
Conclusion: As expected, deleterious *BRCA2* mutations conferred a HRD phenotype in cells but methylation of *BRCA1* was not universally associated with HRD. This may be as a result of only partial silencing of the gene by methylation and further work is required to identify thresholds of methylation which may predict HR status. The use of *BRCA1/2* mutation testing alone is unlikely to identify the majority of HR defective ovarian tumors. Assessment of functional status of HRD is the preferred option and further technologies should be developed to simplify the Rad51 assay.

Ovary: Oral Abstract

Evaluation of supragastric lesser sac using a laparoscope during cytoreductive surgery in epithelial ovarian carcinoma: A site for occult metastasis

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Background: The supragastric lesser sac (SGLS) is a site of metastasis from epithelial ovarian cancer (EOC). Since this region is difficult to access and represents a confluence of critical structures, it may be a barrier to complete cytoreductive surgery (CRS).
Methods: The SGLS was explored in consecutive patients undergoing CRS with EOC. After a xipho-pubic laparotomy incision, the SGLS was examined; visualisation and treatment was aided by using a laparoscope. Resectable disease was cleared using the following methods alone or in combination: direct tumor excision, argon beam coagulation, plasma jet or electrocautery.
Results: 30 patients were evaluated between November 2013 and August 2014 in NGOC, Gateshead. SGLSM was present in 21/30 (70%) of EOCs, 19/25 (76%) high grade serous disease, 21/26 (81%) stage ≥3 disease, 18/20 (90%) with PCI score ≥15, 12/15 (80%) with ascites ≥500 ml, 13/18 (72%) at primary surgery and 8/10 (80%) at interval surgery. Sites included: lesser omentum (11), caudate lobe (10), groove of ligamentum venosum (6), floor (20), upper recess (7), subpyloric space (6), FOW (13), coeliac axis (5), porta hepatis (6), anterior surface of pancreas (2) retro-pancreatic (2). Size of metastases: <2.5mm = 3, <1 cm = 8, ≥1 cm = 7. Pre-operative CT scan identified 4/22 (18%) cases. In 18/21 patients SGLSM was completely resected or ablated; there were no complications. End Result: Optimal 27/30 (90%) including no visible disease = 18, <2.5 mm = 5; 17/21 (81%) cases would have been ≥2.5 mm residual disease if SGLS was not evaluated/treated. In a further cohort of 30 patients evaluated at Tata Medical Center, Kolkata, SGLSM was present in 18 (60%) of patients. CC1 resection was obtained in >90% cases.
Conclusion: EOC frequently metastasizes to the SGLS and is often resectable. Lack of meticulous examination may result in incomplete resection; evaluation should be performed at least in stage ≥3 disease when the surgical intent is total clearance of disease.

Ovary: Oral Abstract

Implementing quality indicators for cytoreductive surgery in ovarian cancer: Experience from a tertiary referral center in Eastern India

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Background: Debate continues whether primary surgery or neo-adjuvant chemotherapy (NACT) or primary debulking surgery (PDS) should be offered in advanced epithelial ovarian cancer as frontline therapy. Since 2015, there has been a paradigm shift at Tata Medical center, whereas increasing number of patients are being offered PDS and a quality improvement programme was initiated. Recently, ESGO in October 2015 has published a document indicating 10 quality indicators for cytoreductive surgery in advanced ovarian cancer surgery.
Aim: We compared our performance against all 10 quality indicators.
Results: Primary cytoreduction rate has increased from 20% in 2012 to >70% at the end of 2015. Optimal cytoreduction rates were obtained in 90% cases and recently complete (CCO/CC1) cytoreduction rates are being achieved in >80% cases. All 10 quality indicators were achieved successfully including prospective documentation of morbidity and surgical findings in all cases. Morbidity figures are showing a downwards trend after the initial learning curve.
Conclusions: Implementation of a quality improvement programme is the key to overcome the barriers of implementing a cytoreductive program in advanced ovarian cancer. However, standards similar to developed countries can be achieved through a dedicated team effort.

Ovary: Oral Abstract

Clinico-pathological correlation of homologous recombination status in epithelial ovarian cancer: Surgeon's perspective

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