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Background: TCGA data using expensive multi-modality diagnostic platforms have shown that 50% epithelial ovarian cancers (EOCs) are estimated to be homologous recombination (HR) deficient (HRD). We developed a functional assay for HR using gamma H2AX-Rad51 immunofluorescence.^[1]

Methods: Primary cultures were developed in 50 consecutive EOCs from ascitic fluid and HR assay was performed.

Results: 50% patients were HRD based on the functional assay and show improved ex-vivo chemosensitivity to PARP inhibitor (PARPi) (PPV = 92%, NPV = 100%). HRD patients showed improved platinum sensitivity (53.8% vs 16.7%), survival (12 month OS - 41.7% vs. 11.5%) and optimal cytoreduction (80% vs. 62%) rates compared to HR competent (HRC) tumours which are less responsive and represent an unmet clinical need.

Conclusions: Personalised surgical and chemotherapeutic strategies may be developed for HR stratified EOCs. Primary surgery may be the preferred approach in HRC due to poor chemoresponse; surgical expertise/environment should be optimised to ensure optimal surgical outcome. Intra-operative hyperthermic treatment and selective HR inhibitors may improve subsequent chemoresponse in HRC and are currently being investigated.

Reference

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Ovary: Oral Abstract

Diagnostic accuracy of intraoperative frozen section in ovarian neoplasms: Experience in a tertiary oncology centre

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Aims and Objectives: This study is done to assess the accuracy of intraoperative frozen section in the diagnosis of various categories of ovarian neoplasm conducted in RGCI.

Materials and Methods: Intraoperative frozen sections for suspected ovarian neoplasm that underwent surgery as primary line of therapy at this institution were analyzed retrospectively from Jan. 2014 - Dec. 2015. The results of frozen section were compared with the final histopathologic diagnosis on paraffin sections and the overall accuracy, sensitivity, specificity, positive and negative predictive values were determined.

Results: The study included 159 cases and the mean age of patients was 44.72 ± 14.28 years (Range 19-75 years). The mean size of tumor was 12.5 ± 5.9 cm. Sensitivity of frozen section for benign, borderline and malignant tumors was 98.53%, 73.33% and 94.74% respectively. And the related specificities were 95.60%, 96.53% and 100% respectively. There were 150 concordant cases and 9 discordant cases. Overall diagnostic accuracy of frozen section was 94.33%.

Conclusion: Intraoperative frozen section diagnosis appears to be an accurate and comparable technique for the histopathology diagnosis of ovarian tumours. It is a valuable tool to guide the surgical management of these patients.

Key words: Frozen section; ovarian neoplasm

Ovary: Oral Abstract

Modified posterior pelvic exenteration and rectosigmoid anastomosis for advance epithelial ovarian cancer: A safe cytoreductive procedure

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Introduction: Surgery plays an important role in the management of advanced stage ovarian cancer and is complex involving surgical procedures including peritonectomy, splenectomy, diaphragmatic stripping, retroperitoneal lymph node dissection and bowel resection including resection of recto-sigmoid.

Objective: To assess the safety and efficacy of the patients undergoing modified posterior pelvic exenteration and rectosigmoid anastomosis achieving in optimal cytoreduction.

Methods: Between June 2011 and June 2014 a total of 100 patients underwent surgical cytoreduction for advanced epithelial ovarian cancer of which 20 patients had undergone modified posterior pelvic exenteration with rectosigmoid anastomosis. The present study includes a retrospective analysis of these 20 patients. Rectosigmoid anastomosis was done using circular stapler in these patients. All patients had a PS score of 1 or 2.

Results: The median age of patients was 50 years. The optimal status of no macroscopic residual disease was achieved in all patients. Modified posterior pelvic exenteration with rectosigmoid anastomosis was carried out to achieve optimal status of surgical cytoreduction in 20 patients out of which fifteen patients had primary surgical cytoreduction, three patients had interval surgical cytoreduction surgery after receiving three cycles of neoadjuvant chemotherapy with paclitaxel & carboplatin while two patients had this procedure as a part of secondary surgical cytoreduction. The most common histology was papillary serous carcinoma. Average blood loss was 500 ml. Mean operative time was 6 hours. There were no intra operative complications. Bowel movements returned to normal in 3 to 5 days. The median length of hospital stay was 7 days. The median time to start post-operative chemotherapy was 32 days. There was no major morbidity and mortality.

Conclusion: Modified posterior pelvic exenteration with rectosigmoid anastomosis should be performed when indicated as a part of cytoreduction. In our experience this is a safe and effective procedure to achieve optimal status in advanced ovarian cancer.

Ovary: Oral Abstract

Evaluation of ovarian reserve in women undergoing ovarian cystectomy by laparoscopy and laparotomy

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Ovarian cysts are one of the commonest problems encountered in the gynecological field. Majority of these cysts are functional i.e., disappear spontaneously, while few need cystectomy. Ovarian cystectomy is done by laparotomy and laparoscopic technique. The method to achieve haemostasis in the ovarian bed after cyst removal varies with the type of technique. Electrocoagulation is used to achieve haemostasis in laparoscopic cystectomy while the bleeding vessels are sutured for haemostasis in cystectomy by laparotomy. Both the modalities of management varies in terms of compromise of ovarian reserve. The study was carried out to evaluate the surgical impact of benign ovarian masses on ovarian reserve as measured by serum levels of antimullerian hormone. In this prospective study on 30 women of reproductive age group with benign ovarian masses, 15 women were enrolled for laparoscopic ovarian cystectomy and another 15 women were enrolled for cystectomy by laparotomy and ovarian reserve was measured by levels of serum AMH preoperatively, postoperative one week and postoperative 3 months using standard ELISA assay kit. The preoperative, postoperative one week and postoperative 3 months levels of mean AMH were 4.74 ± 1.86 ng/ml, 2.92 ± 1.45 ng/ml and 2.64 ± 0.96 ng/ml respectively, in women undergoing laparoscopic cystectomy and 3.98 ± 1.35 ng/ml, 2.48 ± 0.64 ng/ml and 2.11 ± 0.63 ng/ml respectively in women undergoing ovarian cystectomy by laparotomy. So there was decline of mean AMH levels in postoperative one week and postoperative 3 months samples in both of the groups of enrolled women. However, this decline varied with the type of cyst removed and is insignificantly greater in laparoscopy group, wherein electrocoagulation may cause extensive and sustained damage to ovarian tissue.

Ovary: Oral Abstract

Multiple recurrence of granulosa cell tumor of the ovary: A case report and literature review

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