Abstracts

**Checkpoint Inhibition in Ovarian Cancer Works – A Case Report of Complete Response to Immune Checkpoint Inhibition in a Platinum Resistant Primary Ovarian Cancer Patient With Lynch Syndrome**


Introduction/Background Lynch syndrome is a secondary cause for hereditary ovarian cancer after BRCA mutation. Germline mutations in the DNA-mismatch repair genes cause tumorigenesis and a high immunogenicity. Recent studies showed a promising use of immunotherapy in MMR deficient (MMRd) tumors. We present a case of a patient with LS associated OC and a high immunogenicity. Recent studies showed a pelvic tumor mass and a highly elevated cancer antigen 125. After debulking surgery, histopathological findings showed a high grade serous OC with a mutation in the MSH2 and MSH6-genes. Only 5 weeks after operation with no residual tumor mass a quick and significant intraabdominal progression of the disease was diagnosed. Adjuvant therapy with carboplatin and paclitaxel in a weekly course did not lead to sustainable response. An anti-PD-L1 antibody therapy with pembrolizumab was initiated. After only 2 courses of therapy the laboratory results and clinical status of the patient improved tremendously. Shortly after a complete response was detected and until today for 28 cycles immune checkpoint inhibition therapy is ongoing. The patient remains tumor free for 21 months now.

Conclusion Recent studies suggest a promising effect of checkpoint inhibition within MMRd tumors. OC on the other hand does not seem to show an overall good response to immunotherapy. The significance of germline compared to somatic mutations has not yet been investigated in prior studies sufficiently. To our knowledge, this is the first case with complete response to checkpoint inhibition in OC associated with LS. Comprehensive testing for germline mutations should be established. Regarding Lynch syndrome associated ovarian cancer, immune checkpoint inhibition is an efficient therapy in tumors nonresponsive to standard therapy.

**Role of PET-CT and CeCT in Calculating Preoperative PCI in Patients with Epithelial Ovarian Cancer**

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Introduction/Background The objectives are to compare the efficacy between preoperative PET/CT and CeCT findings according with the surgical findings in patients that underwent surgery for epithelial ovarian cancer treatment and to evaluate the correlation between preoperative PCI calculated in both PET/CT and CeCT with surgery.

Methodology Retrospective unicentric observational study reviewing data of 30 patients diagnosed with epithelial ovarian cancer (primary or recurrence) and operated between July 2018-February 2021 in Clínica Universidad de Navarra. Every patient underwent PET/CT and CeCT. PET/CT was independently evaluated by a nuclear medicine doctor (PET-CT) and CeCT by an expert radiologist in gynecologic malignancies. PCI in surgery was calculated by two different gynecologic oncologists. If there was any discordance between them, a media between both scores was applied. Medical history and demographic data, preoperative FIGO stage, PET/CT findings, CT findings final pathology diagnosis, type of surgery and perioperative details were reviewed. Intraclass correlation coefficient was calculated to compare the PCI obtained preoperatively in PET/CT and CeCT to the PCI obtained in the final surgery.

Results The interclass correlation coefficient in the global cohort of patients compared to the PCI calculated intraoperatively was 0.867 for CeCT and 0.807 for PET-CT. Regarding the prediction of complete cytoreduction, the area under the curve in the CeCT was 0.659 and 0.690 in the PET-CT.

Conclusion Despite the small sample size, this initial study highlights that CeCT is more effective in calculating PCI preoperatively, however, PET-CT is better in predicting complete cytoreduction. Further validation in larger series is needed.