03. Endometrial cancer

Abstract #147

PREOPERATIVE SENTINEL LYMPH NOLE LOCALISATION AND STAGING WITH SUPERPARAMAGNETIC IRON OXIDE-ENHANCED MRI IN PATIENTS WITH ENDOMETRIAL CANCER – A FEASIBILITY STUDY (POSEC PILOT)

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Introduction/Background In endometrial cancer (EC) lymph node staging is of importance for adjuvant treatment planning and prognosis. Preoperative radiology with computed tomography (CT) or conventional magnetic resonance imaging (MRI) are not sufficient for lymph node staging. Previous studies in malignant melanoma and breast cancer have shown improved detection of metastatic lymph nodes with superparamagnetic iron oxide-enhanced MRI (SPIO-MRI).

The objective of this study was to investigate if SPIO-MRI can localize the sentinel lymph nodes (SLN) compared with fluorescence detection using indocyanine green (ICG) in robotic surgery in EC. A secondary objective was to evaluate if SPIO-MRI can predict metastatic lymph nodes in EC.

Methodology Patients with EC of high-risk with no preoperative signs of extraterine disease, referred to a tertiary center for primary surgery, were enrolled. After a baseline pelvic MRI, SPIO (Magtrace), was injected in the cervix and pelvic SPIO-MRI was performed after 4-12 hours. Robotic surgery was performed with cervical injection of ICG for SLN mapping. Surgery included hysterectomy, bilateral salpingo-oophorectomy and bilateral SLN from iliac externa, obturator and/or common iliac and presacral area. The sites of the SLNs were systematically described in a protocol at surgery, by the radiologist reading the SPIO-MRI and at the histopathological analysis, which included ultrasectioning and immunohistochemistry of the SLN and detection of iron.

Results Nine patients were included. All SLNs (N=32) indicated by ICG and retrieved at surgery were preoperatively identified by SPIO-MRI. Histopathology revealed iron staining in all SLNs. Two SLNs contained macrometastases (>2mm), five SLNs had micrometastases (0.2-2mm) and two SLNs were found to have isolated tumour cells (ITC).

Conclusion This proof-of-concept study shows that SPIO-MRI may be feasible for preoperative localisation of SLNs in EC. Our findings need to be further explored in future studies with larger series.

Disclosures None

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IMPROVING ENDOMETRIAL CANCER ASSESSMENT BY COMBINING THE NEW TECHNIQUE OF GENOMIC PROFILING WITH SURGICAL EXTRA UTERINE DISEASE ASSESSMENT (EUGENIE). RESULTS OF THE FIRST 90 ENROLLED PATIENTS

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Introduction/Background The molecular classification of endometrial cancer (EC) has been shown to surpass histological subtyping and grading and more efficiently predict prognosis. However, molecular classification has not affected our surgical approach and only a few studies investigated the relationship between the four molecular subgroups and the tumor spread beyond the uterus. We aim to improve the current risk classification system by integrating the disease stage into the molecular classification.

Methodology EUGENIE is a prospective multicentre study aiming to include 1000 EC patients. Besides the standard surgical procedures, sentinel/lymphadenectomy, peritoneal biopsies, and omentectomy/omental biopsies will be performed in all the enrolled patients. EUGENIE is currently recruiting patients in UZ Leuven Belgium; Fondazione Policlinico Gemelli IRCCS, Italy, and University Medical Centre, Maribor, Slovenia.

Results At the data cut-off of 31/07/23, 170 patients have been enrolled but the histological and molecular data are available for 90 patients (table 1). Among them, 19 (21%) were advanced stages (2009 FIGO stage III or IV), where 11 EC cases were known as such before surgery. Instead, as a result of the EUGENIE procedures, 8 out of 79 (10%) apparent early stage cases were upstaged because of previously...