Introduction/Background Following its introduction in the 1960s, the use of Hormonal Replacement Therapy (HRT) to treat postmenopausal symptoms has increased from 30% to 50%. However, this has resulted in an increased utilisation of services for the investigation of women with increased endometrial thickness (ET) subsequent to HRT.

Methodology This was a retrospective case-control study carried out in a tertiary institute in the UK. Data of 452 women referred to the hysteroscopy clinic for postmenopausal bleeding was collected over a 2-year period. The women were divided into 2 cohorts – group 1 on HRT (N= 206) and group 2- not on HRT (N= 246).

Results The mean age and BMI was 57 years and 27.54 kg/m² in group 1 and 61.54 years and 29.51 kg/m² in group 2. Analysis of group 1 revealed that the mean ET was 9.5 mm (95% CI 6.152–12.85 mm) in women who were diagnosed with an endometrial malignancy (N=8) and 6.89 mm (95% CI 6.404–7.381 mm) in women with benign endometrial histology (N=148). This difference was statistically significant (t-test; p=0.0201). However, further evaluation using a ROC curve, an ET of 9.5 mm leads to a sensitivity of only 50% to cancer (specificity = 85.8%) while the current cut off, 4 mm, detected nearly all cancers. This result was further corroborated by a ROC analysis of the non-HRT group which demonstrated similar results.

Conclusion Increasing HRT utilisation will lead to a rise in the number of women with benign endometrial thickening. This may lead to a rise in unnecessary referrals. Our initial work has not demonstrated that increasing the ET cut off is useful in this group, however a downside of our work is the small number of patients with cancer in the HRT group. Thus larger robust studies would be useful to evaluate if this hypothesis has clinical merit.

Fertility/Pregnancy

2022-RA-154-ESGO EFFECTS OF CHEMOTHERAPY ON OVARIES OF PREGNANT MICE: A PILOT STUDY

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Introduction/Background It is unknown if future fertility is compromised by the administration of chemotherapy during pregnancy. The aim of this study was to identify if chemotherapy affects the maternal ovaries during pregnancy, whether these effects depend on type of chemotherapy and duration of exposure, and if pregnancy protects against chemotherapy-induced gonadotoxicity.

Methodology Pregnant 8-week-old female BL6 mice (N=115) were exposed to 6 different single chemotherapeutic agents (carboplatin, cisplatin, paclitaxel, epirubicin, doxorubicin or cyclophosphamide) or saline at gestational day (GD) 13.5. The mice were sacrificed at GD 15.5 or GD 18.5. Ovaries were assessed by histopathology and immunohistochemistry. Follicle count was determined per follicle stage and per treatment modality.

Results Maternal ovarian damage was demonstrated by the presence of apoptosis and necrosis in preantral follicles (figure 1). The extent of this damage depends on type of chemotherapy and duration of exposure (2 or 5 days). After short exposure, 81% of ovaries showed histopathologic signs of damage compared to 36% after long exposure, which might suggest a transient effect. Loss of primordial follicles (PMFs) was observed after both short and long exposure, with a reduction of more than 70%. Evidence of DNA damage, as demonstrated by phospho-H2AX expression, was present in 23% (range 0–89%) of PMFs exposed to chemotherapy, but only in the short exposure group (figure 2). Overall, the least damage was seen after administration of paclitaxel.

SLN MAPPING IN HIGH RISK ENDOMETRIAL CANCER: RELEVANCE OF SURGICAL ALGORITHM

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Introduction By the recent inclusion of sentinel lymph node (SLN) technique in lymph node staging of high-risk subtypes of early-stage endometrial cancer, a cleaned-up technique of sentinel node is needed. One of the most relevant prospective studies about validation of the sentinel lymph node technique in high-risk endometrial cancer, SENTOR trial by Cusimano et al. describes an overall detection rate of 97.4% with the use of ICG.2. Inspection of main lymphatic pathways of drainage.3. Opening retroperitoneal spaces with a meticulous SLN dissection.4. Identification of echelon lymph nodes.5. Safe extraction of sentinel lymph nodes.

Conclusions With the inclusion of SLN biopsy like an alternative of systematic lymph node dissection in high-risk endometrial cancer, a systematic surgical technique is important in order to achieve the best accuracy of the technique. Moreover, the best detection rates are achieved in experienced hands with the use of ICG and careful inspection of retroperitoneal spaces (including presacral space).

Results Surgical technique video of bilateral pelvic sentinel node biopsy in high-risk endometrial cancer is presented. The aim of this video is to highlight the importance of step-by-step (five steps) technique in order to achieve and accurate technique improving bilateral detection rate and decreasing false negative rate in these cases.1. Cervical injection technique of ICG.2. Inspection of main lymphatic pathways of drain- age.3. Opening retroperitoneal spaces with a meticulous SLN dissection.4. Identification of echelon lymph nodes.5. Safe extraction of sentinel lymph nodes.

Abstracts

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Abstract 2022-RA-154-ESGO Figure 1 Histopathologic findings in ovaries of pregnant mice exposed to chemotherapy. (A) Short exposure experiment (sacrifice at GD 15.5). (B) Long exposure experiment (sacrifice at GD 18.5). (C) Overview of normal ovary containing preantral (p: primary, s: secondary), antral (an: antal, an*: antral preovulatory), and atretic (ar) follicles, and corpora lutea (c). (D) Normal preantral follicle. (E) Apoptosis in preantral follicles, arrows indicate apoptotic cells. (F) IHC of Caspase-3 in preantral follicle, arrows indicate positively stained granulosa cells. (G) Necrosis of granulosa cells of the follicle, star indicates area of necrotic cells. Scale bars: C=100 μm, D-F=10 μm, G=20 μm

Conclusion Despite physiological ovarian function suppression during gestation, chemotherapy-induced damage of the ovaries occurs in pregnant mouse models, potentially affecting future fertility.

Abstract 2022-RA-154-ESGO Figure 2 Phospho-H2AX Immunohistochemistry of primordial follicles in pregnant mice of short exposure experiment. (A) Expression versus non-expression of phospho-H2AX in primordial follicles per treatment modality (n = 6 mice in control group and n = 3 mice per chemotherapeutic agent). Examples of staining of primordial follicles in (B) control group (non-expression), (C) carboplatin group (expression), and (D) cyclophosphamide high dose group (expression). Arrows indicate primordial follicles. Scale bar: B-D = 10 μm

Conclusion Despite physiological ovarian function suppression during gestation, chemotherapy-induced damage of the ovaries occurs in pregnant mouse models, potentially affecting future fertility.