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 6.15–12.85 mm) in women who were diagnosed with an endometrial malignancy (N=8) and 6.89 mm (95% CI 6.40–7.381 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

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 analysed for 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.
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

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 chemotherapy agent). Examples of staining of primordial follicles in (B) control group (non-expression), (C) carboptatin 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.

2022-RA-160-ESGO FERTILITY PRESERVATION IN PATIENTS WITH EARLY CERVICAL CANCER AFTER ORGAN-SPARING SURGERY: RETROSPECTIVE MONOCENTRIC STUDY

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Introduction/Background To assess the desire for motherhood, reproductive and obstetric outcomes in young patients with early cervical cancer treated with fertility-sparing surgery (FSS).

Methodology All women ≤ 45 years who underwent FSS for early cervical cancer (stages IA1-IB1) at NN Alexandrov National Cancer Centre of Belarus between January 2010 and December 2020 were retrospectively identified. Fertility-sparing options included cold knife conization (CKC) in 46 patients, CKC and pelvic lymph node dissection (PLND) – in 12, abdominal radical trachelectomy (ART) – in 46, and laparoscopic radical trachelectomy (LRT) – in 12. Data on reproductive intentions and fertility outcomes were reviewed from medical records and questionnaires.

Results A total of 116 patients were analyzed. Six patients after CKC lacked data on obstetric outcomes and 3 had amenorrhea after ART. Reproductive outcomes were studied in 107 patients. Follow-up time was a median of 50.8 months (range, 16.4–92.7). During follow-up 46 out of 107 (43.0%) patients attempted to conceive. All 14 pregnancies in 11 patients were achieved spontaneously, clinical pregnancy rate was 23.9% (11/46). While there were 2 first trimester spontaneous abortions, 2 pregnancies ended in the first trimester due to a missed abortion, and 1 ended an ectopic tubal pregnancy, and two pregnancies are ongoing. Seven of 14 pregnancies (50.0%) resulted in live births born at term. All deliveries (7) are noted in patients whom CKC or CKC and PLND were performed.

Conclusion Less than half (43.0%) of the cohort maintained reproductive intent after FSS. All conceptions were spontaneous, which reflects the need for widespread use of assisted reproductive technologies in this category of patients. In terms of reproductive outcomes, CKC had clear advantages of a less invasive surgical approach compared to ART and LRT.

2022-RA-185-ESGO RESULTS AFTER CONSERVATIVE SURGERY OF STAGE II/III SEROUS BORDERLINE OVARIAN TUMORS

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Introduction/Background The aim of this study was to assess the outcomes of a large series of patients treated conservatively for stage II or III serous borderline tumors of the ovary (SBOTs) with a long-term follow-up.

Methodology Patients with SBOTs and peritoneal implants, treated in or referred to our institution, were retrospectively reviewed. Outcomes of patients treated