respectively. Age ≥43 years, obese class II and higher, medical comorbidities, American Society of Anesthesiologists (ASA) class greater than 2, tobacco use, longer operative time (>85 min) and laparoscopic approach significantly elevated the risk of hysterectomy. When adjusting for body mass index, race, ASA class, elective vs emergency case, surgical approach, operative time, preoperative transfusion, preoperative hematocrit, and high fibroid burden, increased odds of unplanned hysterectomy was noted for white race, longer operative time, patients with class III obesity, laparoscopic approach and low fibroid burden (defined as <250 g or <5 fibroids). Women after unplanned hysterectomy had longer median length of hospital stay (2.0 vs 1.0 day), longer median operative time (161 vs 126 minutes), increased blood transfusions (14.5 vs 9.0%), higher wound complications (1.5 vs 0.5%) and return to surgery (2 vs 0.7%) compared to women who did not have an unplanned hysterectomy ($p< 0.05$). The risk of a major complication within 30 days of myomectomy was increased for patients who underwent unplanned hysterectomy after adjusting for relevant confounders (adjusted OR 2.3, 95% CI 1.7-3.0).

CONCLUSIONS: Risk of unplanned hysterectomy during a scheduled myomectomy is higher than previously quoted in the literature. Counseling patients about this risk is important especially for those desiring fertility. Patient age, race, medical comorbidities, obesity and laparoscopic approach were found to significantly increase the risk of hysterectomy. Identification of patients with these risk factors and expertise in laparoscopic surgery can aid in patient counselling and help reduce the unexpectedly high rates of hysterectomy at planned myomectomy.

IMPACT STATEMENT: Risk of unplanned hysterectomy at myomectomy is 3% and is associated with a two-fold increase in major complications within 30-days of surgery. Judicious preoperative screening of women at high risk for hysterectomy and expertise in laparoscopic surgery could reduce these perioperative complications of myomectomy.

SUPPORT: None

O-206 10:56 AM Wednesday, October 18, 2023

INCIDENCE AND MANAGEMENT OF RECURRENT IMPLANTATION FAILURE FOR UTERUS TRANSPLANTATION RECIPIENTS IN THE UNITED STATES.

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OBJECTIVE: The objective of this study was to assess the incidence of recurrent implantation failure (RIF) following uterus transplantation (UTx) and to review the interventions leading to successful live birth in those with RIF.

MATERIALS AND METHODS: Data was collected from three UTx centers in the US with institutional review board approval. RIF was defined using the 2022 Lugano Workshop consensus: ≥3 failed euploid transfer or ≥4 untested embryos in patients <35 years old, with biochemical pregnancies included in implantation failures [1]. When comparing groups (RIF versus non-RIF), Wilcoxon rank sum was used for continuous variables and Fischer exact test was used for categorical variables.

RESULTS: Of the 25 technically successful transplants who underwent embryo transfer, 6 patients met criteria for RIF (24%). Of these, half utilized deceased donors and half utilized living donors. Four of the 6 patients subsequently went on to have a live birth (67%), with an average of 4 transfers needed before successful pregnancy. The remaining 2 patients are continuing to attempt pregnancy. Of these two, one (16.7%) has a uterus from a nulliparous donor, which was unique in the entire cohort of 25 transplants.

There was not a statistically significant difference in the average age at egg retrieval, dose/duration of immunosuppression, cold ischemia time, warm ischemia time, embryo grade, endometrial thickness at time of transfer in patients with RIF versus those without.Of RIF patients with subsequent live birth, 25% underwent operative hysteroscopy, 25% received empiric anticoagulation (lovenox and aspirin), 25% increased steroids, 50% received empiric immune therapies (IVIG or intralipid infusion), and 25% used a natural FET cycle (versus 75% programmed).

CONCLUSIONS: UTx recipients who experience RIF have a high likelihood of subsequent live birth. The causes and treatment of RIF in this population warrants further study and may provide insights into RIF for the general population.

IMPACT STATEMENT: To our knowledge, this is the first multi-institutional report of RIF cases in UTx. RIF is a challenging clinical problem but existing empiric treatment strategies may assist in achieving live birth in these patients.

SUPPORT: No financial support to report.

REFERENCE:

Pirtea P, Cedars MI, Devine K, Ata B, Franasiak J, Racowsky C, Toner J, Scott RT, de Ziegler D, Barnhart KT. Recurrent implantation failure: reality or a statistical mirage?: Consensus statement from the July 1, 2022 Lugano Workshop on recurrent implantation failure. Fertil Steril. 2023 Feb 22:S0015-0282(23)00142-5.

O-207 11:07 AM Wednesday, October 18, 2023

HYSTEROSCOPIC FINDINGS IN PATIENTS WITH INFERTILITY AND ABNORMAL UTERINE BLEEDING: UNVEILING THE PREVALENCE OF SUBTLE UTERINE LESIONS.

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OBJECTIVE: The aim of this study was to determine hysteroscopic findings and the prevalence of both major and subtle uterine lesions in infertility patients who presented with and without abnormal uterine bleeding (AUB).

MATERIALS AND METHODS: This retrospective study evaluated 1879 consecutive hysteroscopies in patients presenting to the office for infertility with (n=154) and without AUB (n=1725). Structural changes in the normal intrauterine anatomy on hysteroscopy were considered as major lesions. Lesions were classified as subtle when abnormalities were noted to be changes in appearance without gross deformation of normal intrauterine anatomy. In these subtle anatomical changes where the hysteroscopic image differs from those with normal appearance, the pathological significance is not always proven The study was approved by the Institutional Review Board of Neolife: Reproductive Medicine and Surgery. Data was presented in mean percentages, and frequencies, regression analyses were performed when appropriate. A p value of < 0.5 was considered significant.

RESULTS: The study included women with infertility and/or AUB undergoing hysteroscopy. Increasing age was associated with a higher probability of abnormal findings (OR: 1.072, $p< .0001$). Among patients presenting with infertility alone, 50% had major lesions including, synechiae (23%), endometrial polyps (22%), and isthmocele (12%). Subtle lesions accounted for 23% of abnormal findings with a thickened endometrium (27%) and strawberry pattern (22%) seen most frequently. In patients with infertility and AUB, 80% had abnormal findings with, most commonly, endometrial polyps (41%), endocervical polyps (12%), and submucous uterine myomas (9%).Subtle lesions accounted for 17% of abnormal findings in this group with a strawberry pattern (35%), focal or diffuse micropolyps (23%), and endometrial cysts (19%). There was a significant difference in the proportion of abnormal findings between the infertility group and the group with infertility and AUB ($p< .00001$).

CONCLUSIONS: Hysteroscopy is an essential tool for diagnosing both major and subtle intrauterine pathologies, especially in infertile women. Our findings suggest that the prevalence of abnormal findings is higher than previously anticipated, particularly when subtle lesions are considered, and AUB is a concomitant symptom. While the diagnosis and treatment of major intrauterine lesions are clearly important, the relevance of subtle lesions remains controversial. However, our data suggests that subtle lesions are present in a significant proportion of infertile patients and are associated with adenomyosis and chronic endometritis, both of which have potential implications for reproductive outcomes.

IMPACT STATEMENT: This study highlights the need of a systematic, standardized, and universal method for identifying lesions and reporting them to decrease inter-observer variability and potentially increase the quality of evidence. Further research is needed to shed more light on the potential impact of subtle intrauterine abnormalities in fertility outcomes in patients undergoing assisted reproductive technologies.

SUPPORT: This study was funded by Neolife: reproductive medicine and surgery. Grants from the National Researcher Incentive Program (PRONII)

of the National Council for Research and Technology (CONACYT) awarded to DDM (level I) and CRM (level II).

O-208 11:18 AM Wednesday, October 18, 2023

COMPARISON OF PROPOFOL-FENTANYL AND MIDAZOLAM-REMIFENTANIL COMBINATIONS IN OOCYTE PICK-UP PROCEDURE.

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OBJECTIVE: The appropriate drug combination and optimal doses have not yet been fully determined for oocyte pick up(OPU). The aim of the study was to investigate the effects of propofol-fentanyl(PF) and midazolam-remifentanil(MR) combinations on hemodynamic and respiratory functions, sedation and amnesia levels, patient comfort, and recovery during monitored anesthesia care.

MATERIALS AND METHODS: In this RCT, 60 women aged between 20-45, in the group of *American Society of Anesthesiologist classification (ASA) I* defining normal healthy patients underwent OPU. Psychomotor performance was evaluated during the preoperative visit using Trieger Dot test(TDT), Digit Symbol Substitution test(DSST), P-Deletion test(PDT) and Perceptual Speed test(PST). After intraoperative monitoring, randomization was performed into two groups. In PF group, patients were administered 1 $\mu g.kg^{-1}$ Fentanyl, 1 $mg.kg^{-1}$ Propofol bolus and continued with 4 $mg.kg^{-1}min^{-1}$ Propofol infusion. In MR group, 0.05 $mg.kg^{-1}$ Midazolam and 1 $\mu g.kg^{-1}$ Remifentanil were administered bolus in 30 seconds, and 0.1 $\mu g.kg^{-1}min^{-1}$ infusion was applied. At the beginning of procedure, and at 3^{rd}, 6^{th}, 9^{th} and 12^{th} minutes as well as at the end of the procedure, and vital findings were recorded.

Observer's Assessment of Alertness/Sedation(OAA/S) scale was recorded every five minutes during the procedure. After recording the time to open eyes and orientation in response to verbal stimulation, the patients were followed up and psychomotor tests were repeated at 5, 15, and 30 minutes. Patient comfort was evaluated via visual analogue scale(VAS).

RESULTS: 60 participants with mean age 30.9±5.4 years underwent OPU, and were monitored, then their recovery and VAS scores were analyzed. A significant difference was found between OAA/S scores at 5, 10, and 15 minutes in the intergroup comparison ($p<0.05$). In PF group, a significant difference was found between the values at 10 and 15 minutes compared to 5 minutes ($p<0.05$). In the MR group, no statistically significant difference was found between the values at 5, 10, and 15 minutes. The blink and orientation duration were found to be significantly longer in PF group compared to the MR.($p<0.05$). When TDT and DSST scores were analyzed, there were no significant difference between the groups regarding the scores, however intergroup analysis could suggest that in both groups 5th minute score is significantly higher in TDT comparing the 15^{th} and 20^{th} minute scores. DSST is significantly lower in both groups in the 5^{th} minute analysis comparing to the 15^{th} and 20^{th}. There was more sufficient amnesia in PF group than MR. Moreover, it was statistically significant that there were patients in PF in dominance reporting VAS score is 5/5 compared to MR. However there were no significance between two groups reporting VAS score 4 or higher out of 5.

CONCLUSIONS: Both drug combinations can be safely used during OPU. Hemodynamic stability has been achieved with both drug combinations.

IMPACT STATEMENT: Although MR provides rapid recovery and sufficient analgesia, it may be insufficient to achieve the desired level of sedation for procedures where patient anxiety is high. In such cases, the combination of PF may be preferred.

SUPPORT: N/A

REFERENCES:

1. Casati A, et al. Anesthesia for ultrasound guided oocyte retrieval: Midazolam/remifentanil versus propofol /fentanyl regimens. Eur JAnaesthesiol 1999;16: 773-778

2. Kwan I, et al. Conscious sedation and analgesia for oocyte retrievals during in vitro fertilisation procedures: a Chochrane review. Hum Reprod 2006;21:1672–1679

O-209 11:29 AM Wednesday, October 18, 2023

LONG-TERM RISK OF REINTERVENTION AFTER UTERINE PRESERVING SURGICAL FIBROID TREATMENTS AND VARIATION BY SOCIODEMOGRAPHIC FACTORS.

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OBJECTIVE: Uterine fibroids are estimated to cost $4-9 billion annually to treat. However, most studies of reintervention risk after uterine-preserving surgical treatment (UPT) have been short in duration or used claims data, providing limited evidence to guide initial surgical treatment decisions. We compared long-term risk of reintervention across four UPTs and assessed effect modification by sociodemographic factors in a large, diverse cohort from an integrated healthcare-delivery system.

MATERIALS AND METHODS: We studied 10,670 patients aged 18-50 (20% Asian, 21% Black, 21% Hispanic, 32% White, 5% other/multiracial) who had a first UPT (laparoscopic or abdominal myomectomy, hysteroscopic resection, endometrial ablation [EA], uterine artery embolization [UAE]) after fibroid diagnosis in the 2009-2021 electronic health records of Kaiser Permanente Northern California (KPNC). Patients maintained KPNC membership for at least 1 year after the index UPT and were followed until reintervention (second UPT or hysterectomy) or censoring (at age 50, disenrollment, or study end). We used a Kaplan-Meier estimator to calculate cumulative incidence of reintervention, and used Cox regression models (calculating hazard ratios (HR) and 95% confidence intervals (CI)) to compare rates of reintervention across four UPTs adjusting for age, parity, race/ethnicity, body mass index (BMI), neighborhood deprivation index (NDI) and year. We assessed effect modification by age, parity, race/ethnicity, BMI, and NDI quartile to evaluate the extent to which rates in the full population applied to subgroups.

RESULTS: Median follow-up was 3.8 years (interquartile range: 1.8, 7.5). Index UPTs were 13% (1352) hysteroscopic resections, 16% (1748) UAEs, 21% (2215) EAs, and 50% (5355) myomectomies; 20% of patients were younger than 36, 43% were nulliparous, and 33% had BMI <25 kg/m^2 at index UPT. Accounting for censoring, one-year reintervention risk was 5% for myomectomy, 8% for UAE, 13% for EA, and 17% for hysteroscopic resection, which increased to 22%, 26%, 36%, and 37% by 7 years; 63% of reinterventions were hysterectomies. Within each UPT, there was no evidence that reintervention risk varied by race/ethnicity, BMI, or NDI. However, rates of reintervention after UAE, EA, and hysteroscopic resection varied by age: in fully adjusted models, women aged 18-35 at the index procedure had 2.51 (95% CI: 1.65, 3.81), 2.17 (95% CI: 1.48, 3.18), and 1.40 times (95% CI: 0.97, 2.00) greater rates of reintervention, respectively, than women aged 46-50 at index UPT. Reintervention rates for myomectomy and hysteroscopic resection varied by parity: compared to nulliparas, reintervention rates among multiparas were 41% greater after hysteroscopic resection (95% CI: 1.09, 1.83) and 20% greater after myomectomy (95% CI: 1.01, 1.41).

CONCLUSIONS: Long-term reintervention risks forUAE, EA, and hysteroscopic resection are greater than for myomectomy. Within each UPT, risk of reintervention may vary by patient age or parity, but not race/ethnicity, BMI, or NDI.

IMPACT STATEMENT: Lack of variation in reintervention risk by race/ethnicity, BMI, and NDI may be reassuring to patients and clinicians considering initial treatments.

SUPPORT: SDM is supported by NICHD/ORWH BIRCWH K12-HD052163.

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