THE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY PRESENTS:

Research Day 2023

KEYNOTE SPEAKER

Dee E. Fenner, MD

Chair of the Department of Ob/Gyn

Bates Professor of Diseases of Women and Children at the University of Michigan

Monday, June 5, 2023
Physician's Conference Center
7:30 AM—1:30 PM

INOVA CME Continuing Medical Education

Program Schedule

Welcome
S. Abbas Shobeiri MD, MBA
7:30 AM—7:35 AM

Keynote
Dee E. Fenner, MD
"Predicting Pelvic Floor Disorders After Delivery"
7:35 AM—8:30 AM

Resident Research Presentations
8:30 AM—10:50 AM
10:50 AM—11:00 AM Break
11:00 AM—1:00 PM

Lunch
1:00-1:30pm

Awards, Closing Remarks
1:00-1:30pm

G. Larry Maxwell, MD
President

S. Abbas Shobeiri, MD
Director of Research
Division Chief of Gynecology

Samantha Buery-Joyner, MD
Residency Program Director

Neil Phippen, MD
Program Director
Gynecologic Oncology Fellowship

Rahel Ghenbot, MD, FACOG
Associate Director of Research / Urogynecology

Research Presentations

Each presentation is 8 minutes with 2 minutes for questions.

1	**Omotomiade (Tomi) Olopoenia, MD** 8:30am-08:40am	Understanding the impact of multi-morbidity in pregnancy: a nationwide representative analysis.
2	**Lillian Singer, MD** 8:40am-8:50am	Perfecting the immediate postpartum sterilization process.
3	**Sean Cronin, MD** 9:20am-9:30am	Are we unfairly undertreating older patients with high-risk endometrial cancer? Increased use of adjuvant radiation alone in older patients with high-risk endometrial cancer correlates with increased risk of death .
4	**Christopher Heuer, MD** 9:30am-9:40am	Vaginal Estradiol vs Oral Beta-3 Agonist for Treatment of Overactive Bladder Syndrome: A Single-Therapy, Double-Blind, Randomized Controlled Trial.
5	**Suzanne C Jokajtys, MD** 9:40-9:50am	Factors Contributing to Racial Disparity in Survival in All Endometrial Cancers with the Largest Disparity in Mixed Epithelial and Low-Grade Endometrioid Cancers.
6	**Ann Trikhacheva, MD** 9:50-10:00am	Shortcomings of resident education regarding interstitial cystitis/bladder pain syndrome.
7	**Meredith Hoover, MD** 10:00-10:10am	The Anatomy of Levator Ani Plication at the Time of Colpectomy. (video)
8	**Catherine Kim, DO** 10:10-10:20am	Racial Differences in Proteomic Alterations Among Black and White Patients with Adenomyosis: An Update.
9	**Riley Kraus, MD** 10:20-10:30am	Training and Implementation of the Jada System to Decrease Morbidity After Postpartum Hemorrhage.
10	**Briana Kyne, MD** 10:30-10:40am	An Evaluation of the Impact of a Gaming Intervention, SurrEndo 2.0, on Endometriosis Awareness in Adolescents.
11	**Alicia St. Thomas, MD** 10:40-10:50	Assessing and addressing OBGYN resident wellbeing at Inova Fairfax Hospital through a System of Wellness.

Research Presentations

Each presentation is 8 minutes with 2 minutes for questions.

	10:50-11:00am	***BREAK***
12	**Alex Snyder, MD** 11:00-11:10am	Cross sectional survey study of Ob/Gyn residents' graduated experience with robotic surgery .
13	**Shadain Akhavan, MD** 11:10-11:20am	The Risk of Developing Postpartum Diabetes Mellitus in Patients with Glucose Intolerance Diagnosis in Pregnancy: A Retrospective Cohort Study.
14	**Megan Deyarmond, MD** 11:20-11:30am	Reproductive health, rights and advocacy curriculum to enhance OBGYN' resident training in residencies that are not part of the Ryan Program.
15	**Sebastian Nasrallah, MD** 11:30-11:40am	Maternal administration of Oxygen to predict respiratory morbidities among growth restricted infants.
16	**Bianca Nguyen, MD** 11:40-11:50am	Cesarean Scar Pregnancy: Optimizing Treatment for this Rare Disease.
17	**Alexander Powell, MD** 11:50-12:00pm	Pregnancy outcomes in Pregnant Patients of Advanced Maternal Age vs. Adolescents Infected With SARS-CoV-2: Does maternal age matter?
18	**Ayan Ali, MD** 12:00-12:10pm	Pregnancy Outcomes in Food-Insecure, Overweight and Obese Hispanic Women: A Randomized Controlled Trial.
19	**Sofia Girald Berlingeri, MD** 12:10-12:20pm	Undiagnosed hypertension in the outpatient gynecologic setting: Can we do better?
20	**Madison Cauble, MD** 12:20-12:30pm	The Effectiveness of a Simulation-Based Menopause Education Program.

Research Presentations

Each presentation is 8 minutes with 2 minutes for questions.

1	**Mark Kassab, DO** 12:30am - 12:40am	Implementing Long-Acting Liposomal Bupivacaine (Exparel) into Women Service Line ERAS Protocol (QI).
2	**Mariana Madrazo, MD** 12:40am -12:50am	Use of Preoperative Vaginoscopy, Cloacagram, and Other Anatomic Factors to Predict the Need for Vaginal Replacement in Cloacal Repair.
3	**Olivia LeBeau,,MD** 12:50am – 1:00pm	Return Emergency Department Utilization for Gynecologic Complaints Within Thirty Days.

Title: Understanding the impact of multi-morbidity in pregnancy: a nationwide representative analysis

Authors: Omotomilade Olopoenia MD., Abisola Olopoenia PhD

Background:

The increase in prevalence of chronic conditions in US and worldwide has been well documented. Patients with multimorbidity typically require higher level of care and incur more significant health care costs when compared with patients with zero or one chronic condition. These findings are concerning for the health of the general population, but also for the pregnant population. Though many studies have sought to understand the burden of multimorbidity on the general population, there is still limited literature pertaining to the impact of multimorbidity on a pregnant or perinatal population. Further still, though some studies have demonstrated the impact single chronic conditions have on maternal morbidity, not enough research has been done regarding the burden of multimorbidity on this population. Most studies addressing multi-morbidity in pregnancy primarily observe the impact it has on maternal and fetal morbidity and mortality. Very limited research is available on the health care burden these conditions may pose during the perinatal course. Furthermore, no studies have explored the burden of medication use in the context of multi-morbidity in pregnancy. The goal of our study is to estimate the prevalence of multi-morbidity in pregnancy. We will also evaluate the association of multi morbidity with healthcare resource utilization and medication burden in pregnancy. Using the MEPS database will allow evaluation of a more nationally representative population than prior studies that have been conducted.

Methods:

We are utilizing a population-based survey data source that is comparable to the current US population. We are identifying all participants (18 years and older) who were pregnant and completed the Medical Expenditure Panel Survey Household Component (MEPS-HC) between the years of 2016-2020. Health conditions are being coded for using ICD codes. We are using a modified Hwang et al. classification method (previous validated) to measure multimorbidity. The primary outcomes of interest are healthcare resource utilization and medication burden.

Results: Pending

Conclusion:

We believe this study will contribute to scant existing literature regarding the impact of multimorbidity in pregnancy outside of well-established maternal and fetal morbidity and mortality. It is especially important to highlight this burden to allow increased emphasis on prenatal health care optimization and overall preventative care.

Perfecting the immediate postpartum sterilization process

Singer, Lillian[1], Murrin, Ellen[1], Mbaidjol-Kabra, Rolel
Obstetrics & Gynecology, Inova Fairfax Medical Center
[1]Co-first author

Background:
For Inova Cares Clinic for Women (ICCW) patients who undergo vaginal deliveries at Inova Fairfax Hospital (IFH) and seek permanent sterilization, the immediate postpartum period is the safest and most logistically pragmatic time for this procedure. Presently there are institutional barriers at IFH for qualified ICCW patients. We propose a workflow to optimize staff availability, reduce OR time, obviate the need for general anesthesia, and ensure this necessary service is provided during the same hospitalization as delivery. This workflow may be more advantageous than previous systems in which patients were scheduled for add-on surgery in the GYN OR on postpartum day one or two which often led to delays, patient dissatisfaction, and long NPO times as they waited for add-on time and risked canceled procedure. Though data is limited, a study of another Medicaid patient population at a major institution demonstrated a completion rate of desired postpartum sterilization (ppBTL) of 45%, and even higher among the insured population.

Design:
This is a retrospective single-center cohort chart review study with a documented contraceptive plan at time of admission of sterilization. Our workflow begins at patients' prenatal visits, when the Medicaid consent is reviewed and properly filled out by all stakeholders (physician, patient, and witness); the consent process is completed when the patient is re-consented on admission to the hospital and the iMED consent is signed in the EMR. Nursing staff lead the next phase of the protocol by calling anesthesia and the operating room charge nurse immediately after a patient has their vaginal delivery, to secure an operating room and adequate staffing. All stakeholders complete the protocol by transporting the patient to the OR within two hours of delivery (before transfer to the postpartum floor), performing the procedure, and transferring the patient to the postpartum unit after surgical recovery.

Results:
Our study examines our revised workflow for patients desiring sterilization who presented to IFH for delivery and underwent spontaneous vaginal delivery between 10/30/22 and 3/15/23. Exclusion criteria for those offered ppBTL included: age < 21, BMI > 40, prior abdominal or pelvic surgery, postpartum hemorrhage at time of delivery, preeclampsia requiring postpartum magnesium, chorioamnionitis or sepsis, any pre-existing medical condition that significantly increased the risk of surgery (ex. severe cardiac disease) which would preclude them from clearance by anesthesia for an elective procedure in the immediate postpartum period. There were a total of 45 women who qualified for ppBTL. Of those, 27 patients' procedures were not performed, while 18 were completed, with a failure rate of 60% in our workflow. We found that the leading cause of immediate postpartum sterilizations not being done was a lack of available anesthesia, OR, and attending staffing, attributable to 63% of procedures not done.

Conclusion & Future Directions:
There are still significant barriers to postpartum sterilization for this vulnerable uninsured and Medicaid patient population. Particularly, OR availability and staffing in this large volume hospital at this time frequently do not allow for elective postpartum sterilization. By using a workflow that prioritizes sterilization immediately after delivery, ICCW patients become more likely to receive the procedure, and the cost to the hospital is less. The goal of this project is to increase the current rate of procedure completion from 40% to 60% by the end of 2023, and demonstrate both the logistical and fiscal benefits of doing so for IFH.

Are we unfairly undertreating older patients with high-risk endometrial cancer? Increased use of adjuvant radiation alone in older patients with high-risk endometrial cancer correlates with increased risk of death

Sean Cronin, MD

Objective: Women with high-risk endometrial cancer (HR-EC) may receive adjuvant radiotherapy (RT), chemotherapy (CT), or chemoradiotherapy (CT+RT). The results of PORTEC-3 and GOG 258 trials suggest adjuvant RT alone is insufficient, however CT+RT is more toxic than RT or CT. This observational study of practice patterns and survival outcomes investigated age-dependent trends in adjuvant treatment utilization and adjusted risk of death in HR-EC.

Methods: Patients in the National Cancer Database were required to be surgically managed, have HR-EC diagnosed between 2004-2017 (defined as stage IB grade 3 or stage II-III any grade endometrioid carcinoma or with stage I-III serous/clear cell carcinoma), receive adjuvant with RT, CT or CT+RT. Age- dependent adjuvant treatment utilization patterns were evaluated in 5-year age increments using Chi- square test and logistic regression modeling relative to the <40 year-old age group. Adjusted hazard ratio (AHR) and 95% confidence interval (CI) for all-cause death were estimated relative to the <40 age group using multivariate Cox modeling adjusted for age, race/ethnicity, comorbidity score, neighborhood income, insurance, stage, histology, lymphovascular space invasion (LVSI), lymphadenectomy and adjuvant treatment. Cases missing survival data or clinical data other than race/ethnicity or LVSI were excluded.

Results: There were 27,900 eligible patients, including 1.5% <40, 2.3% 40-44, 4.3% 45-49, 8.7% 50-54, 15.5% 55-59, 19.6% 60-64, 19.2% 65-69, 13.6% 70-74, 8.8% 75-79 and 6.6% ≥80 years old. **Figure 1A** illustrates the incremental age-dependent proportion of HR-EC patients treated with adjuvant RT (gray), chemotherapy (blue) and CT+RT (red). The rate of CT-RT utilization started at 56.3% in HR-EC in the <40 year-old group, and dropped incrementally to 52% in the 65-69 year-old group, and then to 48%, 42% and 24% in the 70-74, 75-79 and ≥80 year-old groups, respectively (*P<0.0001*). Similarly, the use of adjuvant RT alone increased from 16.7% in the <40 year-old group to 48% in ≥80 year-old group.

However, across all ages the percentage of patients receiving CT alone remained relatively constant (**Figure 1A**). **Figure 1B** illustrates the incremental increase in the adjusted risk of death starting at for each 5-year increase in age relative to those diagnosed at <40 years old after correcting for demographic, medical, neighborhood, insurance, and surgicopathologic factors as well as adjuvant treatment. The adjusted risk of death was 2-times higher for the 70-74 year-old group, 3-times higher for the 76-79 year-old group, and ~4-times higher for the ≥80 year-old group relative the <40 year-old HR-EC patients (**Figure 1B**). The trends in AHR (**Figure 1B**) correlate well with the increased utilization of RT alone in those ≥70 years old (**Figure 1A**).

Conclusions: Increased use of adjuvant RT alone in patients ≥70 years old with HR-EC correlated with a 2- to 4-fold increased adjusted risk of death. Age alone should not be a reason to withhold adjuvant combination CT+RT that may confer improved survival in HR-EC.

Vaginal Estradiol vs Oral Beta-3 Agonist for Treatment of Overactive Bladder Syndrome: A Single-Therapy, Double-Blind, Randomized Controlled Trial

Christopher W. Heuer DO, Christine M. Vaccaro DO, Joy E. Wheat MD, Anna S. Trikhacheva MD, Jordan D. Gisseman MD, Sara J. Hamade MD, Cara Olsen MS DrPH, Scott P. Endicott MD, Katherine L. Dengler MD

Background/Objectives: Overactive Bladder Syndrome (OAB) is defined as urinary urgency, with or without urgency incontinence, and usually accompanied by frequency and nocturia. OAB affects over 45% of postmenopausal women over the age 65 within the United States. Multiple studies have shown that vaginal estrogen improves symptoms of urinary urgency and frequency in postmenopausal women. Limited data currently exist comparing beta-3 antagonists to vaginal estrogen use for overactive bladder syndrome as well as the combination of both.

This study aims to compare the efficacy of vaginal estradiol with that of oral mirabegron in the treatment of overactive bladder and incontinence in postmenopausal women and characterize outcomes in women undergoing combined therapy. The primary aim is to compare changes in the six-item OAB-q short form (SF) symptom bother scores from participants who receive either vaginal estradiol or Mirabegron after 12 weeks of treatment. Secondary aims include comparing health-related quality of life questionnaires pelvic organ prolapse/ urinary incontinence sexual questionnaires, patient global impression of severity and symptom improvement as well as a 24-hour bladder diary.

Methods: This is a single site, double-blinded, randomized controlled trial for 152 postmenopausal women with overactive bladder symptoms. The study was approved through Walter Reed National Military Medical Center's Institutional Review Board. Qualifying participants who desire enrollment are consented, blinded, and randomized between either 0.5 gm twice weekly 0.01% vaginal estradiol or 50mg oral Mirabegron daily over 12 weeks of treatment. Participants are blinded by either receiving a placebo cream and encapsulated Mirabegron or vaginal estrogen and an encapsulated placebo pills with identical weight/appearance. After 12 weeks of treatment, the patients complete their post -treatment surveys and bladder diary. Participants are then unblinded and treated with both medications simultaneously for another 12 weeks to compare with single therapy treatment.

Results: This clinical trial is currently undergoing patient recruitment. 10% of the desired 152 sample size is currently enrolled.

Conclusion: We hypothesize that there will be a statistical difference between the Mirabegron group by 10% (10 points) on the OAB-q SF symptom bother scores compared to the vaginal Estradiol group after 12 weeks.

Factors Contributing to Racial Disparity in Survival in All Endometrial Cancers with the Largest Disparity in Mixed Epithelial and Low-Grade Endometrioid Cancers

Suzanne Jokajtys MD[1,2], Chunqiao Tian PhD[1-3], Paulette Mhawech-Fauceglia MD[1,4], Neil Phippen MD[1,2], Calen Kucera MD, MPH[1,2], Stuart Winkler MD[1,2], Christopher Tarney MD[5], Cassandra Presti MD[6], John K Chan MD[7], Casey M. Cosgrove MD[8], Matthew A. Powell MD[9], Boris J. Winterhoff MD[10], Nathaniel L. Jones MD[11], Rodney P. Rocconi MD[11], John Farley MD[12], Craig D. Shriver MD[2,13], Michele Cote PhD[14], Timothy O'Connor PhD[15-16], Nicholas W. Bateman PhD[1-3], Thomas P. Conrads PhD[1,2,17], G. Larry Maxwell MD[1,2,5,17], Yovanni Casablanca MD[1,2], Kathleen M. Darcy PhD[1-3]

OBJECTIVE: The purpose of this study is to evaluate and rank histologic differences in survival in non-Hispanic blacks (NHBs) *vs.* non-Hispanic whites (NHWs) with endometrial cancer, including the common individual types and the mixed epithelial carcinomas with both type I and type II components, and investigate the factors contributing to the histology with the largest disparities.

METHODS: Surgically managed NHBs and NHWs diagnosed with low or high grade endometrioid endometrial cancer (LG-EEC or HG-EEC), mixed endometrial cancer (MEC), uterine clear cell cancer (UCC), serous cancer (USC), or carcinosarcoma (UCS) from 2004-2014 in the National Cancer Database were studied. Survival was estimated using the Kaplan-Meier method. Survival in MEC was evaluated before and after propensity score balancing of demographic factors, comorbidity score, median neighborhood-derived income, insurance status, stage, and adjuvant treatment with chemotherapy±radiation (CT±RT). Hazard ratio (HR) or adjusted HR (AHR) in NHBs vs. NHWs were estimated using Cox modeling.

RESULTS: This study included 19,003 NHBs and 162,832 NHWs spanning six histologies. NHBs with each histology had worse survival than NHWs (P<0.0001). The largest reduction in 5-year survival rates in NHBs *vs.* NHWs by histology was 16% in MEC (P<0.0001). The highest HR for death by histology in NHBs *vs.* NHWs was also in MEC (1.91) (P<0.0001). Investigating MEC only, NHBs were more likely than NHWs to have low neighborhood income, Medicaid or no insurance, stage III/IV disease at diagnosis, and adjuvant CT±RT. They were also found to have worse survival before and after propensity score balancing. The AHR for death in NHBs *vs.* NHWs with MEC dropped with each sequential adjustment of prognostic factors. The IC to ERR in NHBs vs. NHWs was 2.1% for comorbidity score, 11.9% for neighborhood income, 6.9% for insurance status, 34.4% for stage, 0.2% for treatment, and 44.5% remained unexplained.

CONCLUSIONS: NHBs had significantly worse survival than NHWs regardless of histology. The largest racial disparities in survival were in MEC with reduced 5-year survival and higher unadjusted and adjusted risk of death than NHWs. Stage and unexplained factors contributed to 34% and 45% of the survival disparity between NHBs and NHWs with MEC, respectively.

Shortcomings of resident education regarding interstitial cystitis/bladder pain syndrome

Anna Trikhacheva, MD, Maj, USAF, Eva Welch, MD MS, Maj, USAF

Introduction:
The RAND Interstitial Cystitis Epidemiology study reported approximately 6.5%, or 8 million women, across the United States fit diagnostic criteria for interstitial cystitis/bladder pain syndrome. Despite its growing prevalence and economic burden, estimated at $750 million in 2000, it remains underdiagnosed, undertreated, with its pathophysiology still largely unknown. A knowledge gap in resident education regarding diagnosis and treatment of interstitial cystitis/bladder pain syndrome may further contribute to this problem.

Methods:
This is a cross-sectional study with pre- and post- design. Gynecologic surgery-obstetrics and urology residents at Walter Reed National Military Medical Center were eligible to participate. Participants completed questionnaires assessing knowledge and comfort level in evaluating and treating interstitial cystitis/bladder pain syndrome. An educational PowerPoint-based presentation was given followed by repeat questionnaires.

Results:
15 participants completed the study. Wilcoxon signed rank test revealed that test scores across both specialties were significantly improved post-intervention (median 7) compared to pre-intervention (median 6, z=-2.09, p=.04, with large effect size r=.60). Wilcoxon signed rank test revealed that comfort scores across both specialties were significantly improved post-intervention (median 8) compared to pre-intervention (median 4, z=-2.83, p=.054, with large effect size r=.94).

Conclusion:
Despite interstitial cystitis/bladder pain syndrome being a familiar condition encountered in gynecologic surgery-obstetrics and urology, we demonstrate a knowledge gap in resident education with low comfort levels managing this patient population. A brief educational intervention significantly improved resident knowledge and comfort level. Incorporation of additional educational curricula within resident education is necessary to appropriately manage and optimize care for patients with interstitial cystitis/bladder pain syndrome.

The Anatomy of Levator Ani Plication at the Time of Colpectomy

Meredith V Hoover, MD; Anna Trikhacheva, MD; Sarah Hamade, MD, MSCI; S. Abbas Shobeiri, MD, MBA

Objectives:

The objective of this video is to review levator ani anatomy and demonstrate puboperinealis muscle plication for narrowing of the genital hiatus. Obliterative procedures have the highest success and satisfaction in repairing pelvic organ prolapse. As genital hiatus size moderately correlates with prolapse severity; levator myorrhaphy or levator ani plication has been advocated to be used in conjunction with colpectomy to narrow the introitus. The levator ani plication can be performed without discrimination of the specific subdivisions of the levator ani muscle group. We argue that a critical step in this process is identification and dissection of the puboperinealis muscle, as indiscriminate placement of the sutures in this area can lead to pudendal nerve entrapment and pain.

Methods:

In this video, we will review the anatomy of the subdivisionsof the levator ani muscles using diagrams and 3D ultrasound. We will then demonstrate the identification, dissection of the puboperinealis muscles at time of colpectomy. We also demonstrate our technique for plication of the puboperinealis muscles at time of levator myorraphy.

Clinical Relevance:

We believe that anatomical identification and plication of the puboperinealis muscles gives the same purpose of narrowing the genital hiatus as the traditional levator myorrhaphy approach with less risk of nerve entrapment and pain to the patient.

Racial Differences in Proteomic Alterations Among Black and White Patients with Adenomyosis: An Update

Catherine Kim MS/DO, Anh Quynh Nguyen MD, Saeid Movahedi -Lankarani MD, Thomas Conrads PhD, G. Larry Maxwell MD

Introduction:

Approximately 20-30% of patients undergoing hysterectomy are diagnosed with adenomyosis and symptoms include menorrhagia, chronic pelvic pain and dysmenorrhea. Recent data has highlighted that age adjusted incidence of adenomyosis at hysterectomy is higher for Black patients compared to White patients. Although previous molecular analyses of adenomyosis implicated epithelial to mesenchymal transformation and proangiogenic mechanisms, disease specific biomarkers have not been well characterized nor described in the context of racial disparities nor controlled for co-existent pathology or menstrual phase. Our primary goal was to perform comparative proteomic analysis of enriched epithelial and proximal stroma for adenomyosis lesions between Black and White women to explain racial disparities in incidence. Our exploratory aim was to compare epithelial components of adenomyosis and endometrioid endometrial cancer that would suggest a pre-cancerous risk for patients with adenomyosis.

Methods:

Candidate cases of patients undergoing hysterectomy at Inova Fairfax Hospital for adenomyosis from 6/1/2019 to 7/30/2020 were reviewed and demographic data inclusive of self-described race as well as the pathology report collected. Candidate cases from Black vs White patients were further stratified by menstrual phase (i.e. proliferative, secretory, or inactive) in creating matched pairs for comparative analyses. In addition, endometrioid endometrial cancer specimens from Black and White patients undergoing surgical staging at Wayne State University was used as comparison groups. After pathologic review and quality assurance, artificial intelligence supported Laser-MicroDissection was performed to harvest enriched epithelial portions of adenomyosis lesions as well as proximal stroma surrounding the infiltrating glandular lesions. Liquid Chromatography - Tandem Mass Spectrometry (LC/MS-MS) was used to quantitatively identify differentially expressed proteins in the adenomyosis microcompartments between Black and White patients matched by menstrual phase. Informatics analysis will be completed using multivariate modeling and pathway and network analyses.

Results:

In a review of 1014 candidate cases, we identified 134 Black patients and 588 White patients with adenomyosis. Eighty-nine black patients were diagnosed with adenomyosis per pathology report. Menstrual phases for the black patient arm were as followed, 51 patients were in the proliferative phase, 13 patients in the secretory phase, 22 in the inactive phase, 4 patients were unknown. Excluded inactive phase case cohort due to concern for confounding as patients are likely asymptomatic and adenomyosis is a coincidental finding. Expert pathologist reviewed blocks of each patient case set and categorized low, moderate, and high grades of adenomyosis. For the proliferative phase, 12 were low grade, 10 were moderate grade, and 6 were high grade. Of the secretory phase, 5 were low grade, 1 was moderate grade, and 1 was high grade.

Conclusion:

To our knowledge, our study is the first to utilize comparative proteomic analysis of adenomyotic tissue between black and white women, which will ultimately enhance our knowledge of the pathogenesis of adenomyosis and better develop diagnostic or therapeutic methodologies for high-risk women.

Training and Implementation of the Jada System to Decrease Morbidity After Postpartum Hemorrhage

Riley Kraus, MD, Emily Marko, MD

Background/Objective:
Postpartum hemorrhage is the leading cause of maternal and morbidity and mortality worldwide with approximately 80% hemorrhages suspected due to uterine atony. Instrumentation with intrauterine balloon tamponade has routinely been a part of the OBGYN armamentarium to control postpartum hemorrhage. Physiologically, the goal is to induce uterine contraction, which may be hindered by balloon tamponade, therefore promoting uterine contraction with a suction device has been suggested. The Jada System is the only FDA-approved suction device for uterine atony in the setting of postpartum hemorrhage that has been studied to be 94% effective with an average time to uterine collapse measured at 1 minute and average time to control of hemorrhage in 3 minutes. This product has been studied to remain in situ for >1 hour and up to 24 hours. Studies have shown median use time of 2-3 hours which could decrease complications of leaving instrumentation in place for a prolonged time period compared to intrauterine balloon tamponade.

Methods:
Six Jada devices were allocated for all OBGYN providers at a tertiary care center experiencing high delivery volumes and ample opportunities for postpartum hemorrhage. These providers were personally trained by Organon representatives for Jada use prior to study start. After use, a two-minute written survey was disseminated to providers involved to determine efficacy, time to hemorrhage control, other interventions necessary, and provider satisfaction.

Results:
Six Jada were used over the course of 3/5/23-3/15/23 by six separate physicians. Initial blood loss through EBL/QBL prior to insertion ranged from 500ml-1306ml with the Jada evacuating between 25ml-320ml blood. Four of the 6 experiences had control of bleeding in 5 minutes or less. At the conclusion of the survey, 80% of the providers gave the product a 5/5 rating, with the other 20% giving a 4/5. Time that the Jada remained in situ was not uniformly measured.

Conclusion:
The Jada System for uterine tamponade to control postpartum hemorrhage has a high level of satisfaction for first-time users. More opportunities for use are necessary to glean additional information in order to appropriately compare the Jada to the traditionally used intrauterine balloon tamponade method.

An Evaluation of the Impact of a Gaming Intervention, SurrEndo 2.0, on Endometriosis Awareness in Adolescents

Briana Kyne MD, Rachel Casey MD, Jhumka Gupta PhD, Julia Mandeville MPH

Background/Objective:
Dysmenorrhea, defined as painful menses, is reported by up to 60-70% of adolescent females. Endometriosis is the leading etiology of adolescent secondary dysmenorrhea. Normalization of dysmenorrhea, coupled with provider challenges in diagnosing the etiology of the pathology, often leads to delay in endometriosis recognition and intervention. Social stigma surrounding chronic pelvic pain serves as an additional barrier to seeking care. Our study aims to assess the impact of a public health-based gaming intervention, SurrEndo 2.0, on endometriosis awareness and treatment in adolescents. The over-arching goal of the study is to reduce the barrier faced by adolescent patients seeking to discuss and obtain care for chronic pelvic pain and endometriosis.

Methods:
The initial qualitative stage of the study will aim to evaluate the perception of pain related to adolescent endometriosis. This will be achieved by forming focus groups of adolescent females less than 21 years of age that are established patients of an outpatient adolescent gynecology practice. The patients' guardians will be invited to participate in the focus groups. The second phase of the study will consist of development of the game SurrEndo 2.0, incorporating the qualitative information obtained in the initial phase. The third phase will consist of distribution of the game. Adolescents presenting to care at the clinic will be universally screened for dysmenorrhea. Patients with positive screens will be provided with endometriosis counseling and referred to SurrEndo 2.0. Patients will then be screened after three months to assess their endometriosis knowledge and their use of management techniques as proposed by SurrEndo 2.0. The impact of the intervention will be further explored by assessing guardian knowledge of endometriosis and provider understanding of the breadth of impact of adolescent chronic pelvic pain.

Results: To be determined

Conclusion: To be determined

Assessing and addressing OBGYN resident wellbeing at Inova Fairfax Hospital through a System of Wellness.

Alicia St. Thomas, MD/MA, Abbas Shobeiri, MD/MPH, Samantha Buery-Joyner, MD

Background/ Objective:
Physician burnout is at an all-time high (47% in 2022 vs. 42% in 2021). Burnout rates in Obstetrics and Gynecology saw one of the greatest increases of all specialties, from 40% in 2020 to 53% in 2022. Physician burnout is associated with decreased productivity, worse patient outcomes, and higher rates of medical errors. While many organizations implement wellness interventions, these interventions often focus on increasing individual physician resiliency and fail to address the organizational factors that drive burnout. Through a partnership with the American Medical Association (AMA) and utilization of their Organizational Biopsy Tool ™, this project aims to identify primary drivers of burnout among Inova Fairfax OBGYN residents and implement a System of Wellness (SOW) program that reduces these drivers while also supporting individual wellness and fostering community.

Methods:
The Mini-ReZ—a validated organizational well-being assessment tool developed by the American Medical Association (AMA)—will be administered to current OBGYN residents and re-administered annually. This survey provides a comprehensive wellness assessment across four domains: organizational culture, practice efficiency, self-care, and retention. Wellness initiatives for the following year will be tailored to results of the Mini-ReZ. The AMA will provide survey data analytics and comparison data to other residency programs across the country. The SOW initiative will entail a multifaceted approach to addressing resident well-being, including improving systemic factors that drive burnout, interventions and activities to support residents on an individual and team level, and activities to foster community at work. Residents will have one hour of protected time per week during which the SOW curriculum will be implemented. Monthly quality improvement sessions will be integrated into the SOW curriculum to identify drivers of resident burnout and develop resident driven solutions to stressors. Wellness retreats and team building activities will be incorporated. Exercise sessions, dedicated mentorship time, pet therapy and art therapy are examples of activities that will be included to foster individual wellness.

Results: Pending

Conclusions: Pending

Cross sectional survey study of Ob/Gyn residents' graduated experience with robotic surgery .

Alexandra E Snyder MD, Lauren Farmer MD, Erin Caraher MD, Morgan Cheeks MD, Jasmine Correa MD, Natalia Parra MD, Julia Wainger MD, Ayesha I Yakubu MD, Samantha Buery-Joyner MD

Study Objective:
With increasing utilization of robotic surgery often in place of traditional laparoscopy, it is necessary to continuously evaluate resident surgical experience in the gynecology operating room. Recent studies have evaluated Ob/Gyn resident experience at time of graduation, but no specific surgical procedures were identified to differentiate the experiences of residents at each level. This study proposes to determine which factors are correlated with more hands-on robotic surgery experience and resident satisfaction.

Design:
An IRB-approved, 15-question survey was distributed electronically to eight Ob/Gyn residency programs. 98 responses were received for a rate of 44%. Linear regression and ANOVA statistical analysis were performed.

Results:
The majority of respondents were satisfied with their robotic surgery experience. All respondents reported experience with uterine manipulation or bedside assisting by PGY2. Earliest experience performing hysterectomy was most common in PGY2 or PGY3.

76% of PGY3 or PGY4 residents report operating on the console for some or all of the surgery with 69% having participated in greater than 20 robotic surgery cases. Respondents report robotic surgery experience with attending gynecologic oncologists (97%), MIGS (87%), Urogynecologists (56%) and generalists (38%), though only exposure to MIGS faculty is significantly associated with a high number of robotic surgery cases ($p=0.0221$).

Overall satisfaction with robotic surgery training increased significantly ($p<0.0001$) with higher level of participation, particularly operating at the console some or most of the surgery. Significantly higher overall satisfaction was also shown with more longitudinal experience with hysterectomy, myomectomy and salpingectomy/oophorectomy ($p<0.05$) but not with bedside assisting or vaginal cuff closure experience.

Factors most limiting to their time spent operating from the robotic console included time constraints, lack of first assists, case complexity, and attending comfort.

Conclusion:
Ob/Gyn resident satisfaction with training is significantly related to level and duration of hands-on participation. MIGS faculty contribute to more resident experience, and limiting factors include time constraints, case complexity and lack of first assists. These results can provide a framework for achieving resident autonomy in robotic surgery.

The Risk of Developing Postpartum Diabetes Mellitus in Patients with Glucose Intolerance Diagnosis in Pregnancy: A Retrospective Cohort Study

Shadain Akhavan, MD

Introduction:
Gestational diabetes mellitus (GDM) is a common pregnancy complication affecting up to 10% of all pregnancies. Women with GDM are at an increased risk of developing type 2 diabetes mellitus (T2DM) in the postpartum period. However, the risk of developing diabetes mellitus after delivery in pregnant patients with glucose intolerance, who do not meet the criteria for GDM, is unclear. We define glucose intolerance as one failed value of the 3-hour Glucose Tolerance Test after a failed initial Glucola test. This proposed retrospective cohort study aims to investigate the risk of postpartum diabetes mellitus in pregnant patients with glucose intolerance.

Methods:
We will conduct a retrospective analysis of electronic medical records of pregnant patients who received care at our clinic from 2010 to 2023. Patients with glucose intolerance during pregnancy will be identified based on their medical history, laboratory tests, and diagnostic codes. The outcome of interest will be the development of diabetes mellitus based on a failed 6-week postpartum 2-hour Glucose Tolerance Test after delivery. We will use relative risk to estimate the association between glucose intolerance during pregnancy and postpartum diabetes mellitus.

Expected outcomes:
This proposed study will provide important insights into the risk of postpartum diabetes mellitus in pregnant patients with glucose intolerance. The findings will inform clinical practice and help identify women who may benefit from closer monitoring and early interventions to prevent or delay the onset of T2DM. The study will also provide valuable information on the optimal screening and management strategies for this population.

Conclusion:
This proposed retrospective cohort study will contribute to the understanding of the risk of postpartum diabetes mellitus in pregnant patients with glucose intolerance. The results will have implications for clinical practice and may inform the development of guidelines for the management of glucose intolerance during pregnancy. We believe that this study is important and will provide valuable information to improve the care and outcomes of pregnant patients with glucose intolerance.

Reproductive health, rights and advocacy curriculum to enhance OBGYN' resident training in residencies that are not part of the Ryan Program

Megan Deyarmond, MD; Allison Schneider, MD;
Samantha Buery-Joyner , MD

Background:
Reproductive and sexual health encompass many topics, from family planning services to care of the LGBTQIA+ community. The Accreditation Council for Graduate Medical Education (ACGME) and Council on Resident Education in Obstetrics and Gynecology (CREOG) emphasize that trainees should be competent in providing comprehensive care to patients of varying sexual and gender identities, play a role as advocates for individual patients and on a larger scale, and be trained in the counseling for and provision of abortions. Training in Obstetrics and Gynecology exposes residents to these concepts and skills, but in the absence of a structured curriculum, the capacity for physicians to care and advocate for these vulnerable patient populations is diminished. With recent restrictions of reproductive rights and continued barriers to care for the LGBTQIA+ community, it is imperative to equip healthcare learners to be leaders in these fields.

Objective:
To assess the baseline knowledge, attitudes, and comfort level of resident physicians training at an institution without an established Ryan Program or reproductive health curriculum regarding topics and skills of family planning and care of the LGBTQIA+ community; to create a structured, integrated curriculum for reproductive health and advocacy; to assess the impact of this structured curriculum on resident knowledge, attitudes, and comfort level.

Methods:
All Inova Fairfax OBGyn residents (PGY1-4, N= 23) completed a de-identified survey assessing their baseline knowledge, attitudes, and comfort level with family planning and care of the LGBTQIA+ community during the beginning half of the 2022-2023 academic year. After this time, didactic sessions related two these topics were introduced into the formal curriculum, and the PGY2 residents spent one month at an independent family planning clinic and at the Inova Pride Clinic. Following the PGY2 rotation, another de-identified survey is provided assessing for changes in knowledge, attitudes, or comfort level. The entire residency program PGY1-4 will complete a follow up survey at the conclusion of this academic year.

Results: Pending

Conclusion: Pending

Maternal administration of Oxygen to predict respiratory morbidities among growth restricted infants

Sebastian Nasrallah, MD, Laura Sanapo, MD, MSHS, RDMS, Ashley Lucke, MD, Laura Hitchings, BScM, Joanna Marroquin, MS, RDMS, Reva Persaud, MD, Luis Gomez, MD, MScE

Objective:
Maternal hyperoxigenation (MH) decreases the fetal pulmonary vasoreactivity (PVR) and increases the pulmonary blood flow in normally grown fetuses. Considering that fetal growth restriction (FGR) negatively affects the pulmonary development and increases the risk for neonatal respiratory morbidities, we sought to evaluate the role of MH and PVR in identifying newborns at risk for respiratory morbidities among pregnancies complicated by FGR.

Study design:
Case Series where singleton pregnancies complicated by FGR underwent MH testing every two weeks, from enrollment to delivery. The pulsatility index (PI) of the middle branch of the pulmonary arteries (mPA) was obtained by ultrasound as a baseline, during hyperoxia, and after 15 minutes of maternal administration of 8 L/min of 100% oxygen through a non-rebreathing face mask. A reactive PVR test was defined as any decrease in mPA-PI during hyperoxia compared to baseline. Newborns were divided in two groups based on need for respiratory support at delivery and/or admission to the neonatal intensive care unit (NICU) due to respiratory morbidities (Group 1) or absence of need for respiratory support at birth (Group 2). Results of the last PVR test prior to delivery were compared with neonatal outcomes.

Results :
Among 13 subjects enrolled from July 2018 to July 2019, 10 participants were eligible for analysis (Group 1=5; Group 2=5) (Tables 1). Among Group 1, three fetuses had a non-reactive PVR test, while all fetuses in Group 2 had a reactive test. Sensitivity, specificity, positive (PPV) and negative predictive (NPV) values were respectively 60%, 100%, 100% and 71.4%.

Conclusions:
PVR tested by MH is a non-invasive test with 100% specificity and 100% PPV in prenatally identifying those newborns at highest risk for respiratory morbidities at birth, among pregnancies complicated by FGR. Our results need to be confirmed in a larger population.

Cesarean Scar Pregnancy: Optimizing Treatment for this Rare Disease

Bianca Nguyen MD, Masooma Raza MD, Sebastian Nasrallah MD , Luis M. Gomez MD, MScE , Francine McLeod MD

Background/Objective:
The incidence of cesarean scar pregnancy (CSP), a rare complication, has increased in correlation with escalating cesarean delivery rates. Our objective was to evaluate the effectiveness of different non-surgical treatment modalities for CSP at a single tertiary care institution and formulate an optimal treatment plan.

Methods:
We conducted a retrospective chart review of CSP cases at INOVA Fairfax Hospital diagnosed from 2012 to 2019. We abstracted demographic, medical, surgical and obstetric information from medical records. Beta human chorionic gonadotropin (BhCG) levels were trended to determine the rate of decline following treatment. Five non-surgical treatment modalities were identified: (i) intragestational sac methotrexate injection (IS-MTX) alone; (ii) intramuscular MTX alone (IM-MTX); (iii) simultaneous IM-MTX + IS-MTX; (iv) IM-MTX followed by adjuvant IS-MTX; and (v) IM-MTX followed by uterine artery embolization (UAE).

Results:
Among 647 ectopic pregnancies treated during the study period, 17 CSP (2.6%) were identified of which 10 cases met inclusion criteria and were included in our study. All treatment modalities differed in the rate of decline of BhCG levels (p=0.023). The fastest rate of decline was seen in three groups: simultaneous IM-MTX + IS-MTX, IS-MTX alone, and IM-MTX followed by UAE; these 3 treatment modalities were significantly superior to IM-MTX alone.

Conclusion:
Simultaneous IM-MTX + IS-MTX or followed by UAE and IS-MTX were superior treatment modalities for CSP. These treatment modalities appear as useful alternatives when surgical management of CSP is not available. IM-MTX alone did not yield adequate BhCG decline.

Pregnancy outcomes in Pregnant Patients of Advanced Maternal Age vs. Adolescents Infected With SARS-CoV-2: Does maternal age matter?

Alexander Powell MD, Anh Q. Nguyen MD, Ellen Murrin DO, Sebastian Nasrallah MD, Laura Hitchings B.Sc.M, Jenny Q. Wang MD, G. Larry Maxwell MD, and Luis M. Gomez M.D, M.Sc.E

Background/Objective:
Observational studies demonstrate that pregnancy in older individuals is associated with increased risks of adverse pregnancy and perinatal outcomes that differ from those found in younger pregnant populations, even in healthy individuals with no other comorbidities. In non-pregnant individuals, infected adults display more severe forms of SARS-CoV-2 infection compared to infected adolescents; however, little is known about the impact of COVID-19 on patients at both ends of the fertility spectrum: Therefore, we sought to evaluate and compare obstetric and perinatal outcomes of pregnant patients of advanced maternal age compared to those of pregnant adolescents infected with SARS-CoV-2.

Methods:
Retrospective cohort study of pregnant patients of advanced maternal age adolescent patients (40 years or older) and pregnant adolescents (14-19 years) who had a positive PCR test for SARS-CoV-2 during April 2020-December 2020 at Inova Health System hospitals. The primary outcome was a composite of preeclampsia, preterm delivery, cesarean delivery, fetal growth restriction, and stillbirth. Secondary outcomes included maternal and neonatal morbidity.

Results:
51 pregnant advanced maternal age were compared with 48 pregnant adolescent patients. Advanced maternal age patients were less likely to be Hispanic (66.6% vs. 91.7%, RR 0.72 (0.59-0.90)) and medically uninsured (12% vs 50%, RR 0.24 (0.11-0.53)). Advanced maternal age patients were more likely to be symptomatic (45.1% vs. 20.8%) when infected. The primary composite outcome was more prevalent in advanced maternal age patients vs. adolescent patients (74.5% vs. 41.67%, RR 1.79 [1.23 - 2.59]) with cesarean delivery being the main driving factor (47% vs. 25% RR 1.89 [1.08 - 3.33]). There was no statistically significant difference in neonatal morbidity and mortality.

Conclusions:
Pregnant patients of advanced maternal age ~~patients~~ infected with SARS-CoV-2 are more likely to have adverse obstetric outcomes compared to pregnant adolescents infected with SARS-CoV-2. Our findings need to be validated in other populations.

Pregnancy Outcomes in Food-Insecure, Overweight and Obese Hispanic Women: A Randomized Controlled Trial

Ayan Ali, MD; Jean Thermolice, MD (PI); Bianca Nguyen, MD; Katelin Alfaro Hudak, PhD

Background/Objectives:
In 2020, 64.6 % of Hispanic women giving birth in the United States were considered overweight or obese pre-pregnancy, i.e. body mass index of > 25 kg/m2. Food insecurity affected 15.6% of US Hispanic households in 2019. Overweight/obesity, food insecurity and nutrition have been associated with pregnancy outcomes, but their interactive effects on pregnancy outcomes have not been studied. We hypothesize that partnership with a community-based nutrition program for the management of weight gain in food-insecure, overweight and obese pregnant women would have a clinically significant impact on pregnancy outcomes.

Methods:
The study design is a randomized, controlled, unblinded trial. Subjects will be enrolled based on the following inclusion criteria: Women > 18 years, body mass index > 25 kg/m2, prenatal care initiation by 13 weeks and 6 days' gestation, non-anomalous singleton gestation/normal aneuploidy screening, planned delivery at Inova Fairfax Women's Hospital. The study will have two interventions arms: the experimental arm (lifestyle changes counseling plus provision of healthy groceries/foods) and the control arm (lifestyle changes counseling plus some food supply/referral to a food pantry).

The study will be performed at Inova Women's and Children's Hospital, Inova Cares Clinic for Women, and Capital Area Food Bank. We will compare excess gestational weight gain between two weight management interventions, using National Academy of Medicine (NAM) guidelines. Assuming an attrition rate of 20%, with a Type I (α) error of 5%, a Type II (β) error of 20%, and 2-sided testing, the sample size to detect an absolute risk difference in excess gestational weight of 20% would require 109 women per exposure group (total of 218 participants).

Univariate analyses will be conducted using chi-square techniques for frequency data, parametric or nonparametric two-sample techniques for continuous data, and correlation for association among variables. Multivariate analyses, including logistic and linear regression, will be employed to adjust for difference in excess gestational weight gain in the presence of other statistically significant predictors.

Results: N/A

Conclusion: N/A

Undiagnosed hypertension in the outpatient gynecologic setting: Can we do better?

Sofia Girald, MD; Jean W Thermolice, MD

Background:
Hypertension remains a major preventable risk factor for cardiovascular morbidity and mortality in the United States. The prevalence of hypertension among US adults 20 years and older during the period 2017-2020 was 46.7%, of which approximately 43% were females. Additionally, data shows that 38.0% of US adults with hypertension are unaware of the diagnosis. Furthermore, many women use their Obstetrics and Gynecology providers as their primary healthcare providers, putting Ob/Gyn providers at the front line in identifying, treating, or referring women with hypertension. This is paramount, as early detection can lead to preventive cardiovascular interventions with the goal of reducing CV morbidity and mortality.

Objectives:
Our goal is to assess the effectiveness of the 'BP Connect' protocol, in the ambulatory gynecologic setting within our health system. We hypothesize that the implementation of a modified BP connect protocol will aid in timely follow-up visits to primary care to address high blood pressure.

Methods:
This is a pre- and post-implementation cohort study. Women $\geq$ 18 years and $\leq$ 55 without a prior history of hypertension, attending benign gynecologic visits, with initial blood pressure readings of $\geq$ 130/80 will be eligible to participate. Nursing staff and medical assistants will undergo formal training on the recognition of and adverse effects associated with hypertension. Patients identified with HTN will be counseled and referred to in-network primary care providers for long-term management of hypertension. A 12-month post implementation cohort will be compared to a pre implementation cohort. The primary outcome is hypertension recognition with treatment initiation or referral to primary care within 4 weeks of confirmed diagnosis. Univariate analyses will be conducted using chi-square techniques for frequency data, parametric or nonparametric two -sample techniques for continuous data, and correlation for association among variables. Multivariate analyses, including logistic and linear regression, will be employed to adjust for differences between groups as appropriate. Kaplan-Meier test analysis will be used to compare time to follow-up between groups.

Results: Pending

Conclusion: Pending

The Effectiveness of a Simulation-Based Menopause Education Program

Madison Collazo, MD; Aaliyah Meade, BS; Emily Marko, MD; Amanda Slater, BS; Carolyn Davis, MD

Background/Objectives:
Menopause education is often neglected in resident curriculum. Despite lack of exposure, menopausal care is an important part of comprehensive care for aging patients. Many of these patients will continue to rely on their obstetrician-gynecologists to provide their perimenopausal care, while some will turn to their family medicine physicians or internists. A 2013 survey of OBGYN residents showed that only 20.8% reported formal menopause education as part of their residency curriculum. A survey of OBGYN, family medicine, and internal medicine residents in 2017 revealed that over 90% of participants felt it was important to be trained in managing menopause, but only 6.8% felt adequately prepared to do so. The aim of our study is to fill a gap in menopause education for residents training in these specialties through the use of standardized patient encounters.

Methods:
This study will be conducted in the Inova Center for Advanced Medical Simulation. Residents training in OBGYN, family medicine, and internal medicine are eligible. A didactic session on common menopausal concerns and management will be led by an experienced obstetrician-gynecologist followed by standardized patient encounters aimed at teaching core tenants of menopausal care, including hot flashes, dyspareunia, and low bone density. Pre- and post- differences in knowledge, confidence and performance assessments will be compared. Statistical methods will include a comparison of means using a paired t-test and chi-squared analysis with a p value of <0.05 considered significant. Competence and confidence levels will be correlated. Effectiveness of the curriculum in real life patient counseling will be analyzed in the follow-up survey with Likert scale means. Any open-ended responses will be analyzed qualitatively for themes.

Results: Pending

Conclusion: Pending

Implementing Long-Acting Liposomal Bupivacaine (Exparel) into Women Service Line ERAS Protocol (QI)

Mark Kassab, MD; S. Abbas Shobeiri, MD, MBA

Background:

Opioid consumption after major surgery remains a difficult to control aspect of post operative recovery for certain patients. A balance is often struck between attending to the patient's pain while attempting to use using opioids judiciously, often resulting in a compromise where pain persists, but there is less risk of habit forming once the patient leaves the hospital. Studies that have examined the use of a TAP block with bupivacaine hydrochloride for cesarian delivery and have suggested that this may not improve post-surgical analgesia or significantly reduced opioid consumption, possibly due to the short acting duration. However, the use Liposomal Bupivacaine (Exparel), a long acting formulation, when combined with other multimodal pain protocols such as intrathecal morphine has shown a reduction in opioid consumption in more than one study, including a large prospective multicenter, randomized, double-blind trial. Exparel will be incorporated into our larger ERAS protocol and has been approved for use. Surgeons will be able to complete a HealthStream module on its use once available. This tool is being added to our ERAS protocol in order to achieve opioid use reduction with non-inferior or potentially superior post-surgical analgesia.

Use of Preoperative Vaginoscopy, Cloacagram, and Other Anatomic Factors to Predict the Need for Vaginal Replacement in Cloacal Repair

Mariana Moncada-Madrazo, MD, MEd, Allison Mayhew, MD

Background/Objectives:
Cloacal anomalies are complex anorectal malformations and have a prevalence of 1 in 50,000 live births. Anatomically cloaca anomalies are characterized by a common channel involving the gastrointestinal, urinary, and reproductive tracts. Surgical reconstruction for individuals with cloaca anomaly is usually performed in infancy with the objective of creating three separate openings for the urinary, genital, and colorectal systems. Before corrective surgery is performed existing anatomy must be clearly defined. This is often done with the combination of 2D or 3D cloacagram and endoscopy (cysto-vaginoscopy). Vaginal assessment is part of the pre-operative planning. Inadequate vaginal length prevents a tension-free vaginoplasty, thus requiring augmentation of vaginal tissue and adding complexity to the surgery. Traditionally if a transposition graft is required bowel (ileum, colon, or rectum) has been used. Bowel neovaginas can be associated with introital stenosis as well as malodorous discharge, bleeding, and risk for malignancy. Given this, some have advocated for delayed vaginoplasty, particularly in patients where tension-free native vaginoplasty is not possible. To date, little data exists regarding prediction of tension free native vaginoplasty versus need for vaginal transposition graft in patients with cloaca. However, prediction of these needs could inform surgical decision-making.

Methods:
We plan to perform a retrospective chart review. All female assigned at birth patients who underwent primary cloaca repair surgery at Children's National Hospital between 2019-2023 will be included. Our data collection will consist of basic demographic information, standardized preoperative measurements: length of common channel, length of the urethra, genital anatomy (vaginal septum, number and patency of cervices, and length of the vagina(s)), position of the rectum, and relationship between structures, and Information regarding type of surgery: need for transposition graft for vaginal creation, and outcomes including vaginal length after procedure. Data will be analyzed utilizing descriptive statistics and linear and logistic regression will be used as appropriate to explore the relationship between variables and primary outcome.

Results: Pending

Conclusion: Pending

Return Emergency Department Utilization for Gynecologic Complaints Within Thirty Days

Olivia LeBeau MD; Alexandra Snyder MD; Yasaman Vahdat BS; Anna BuAbbud MD

BACKGROUND:
Gynecologic complaints are common reasons for presentation to the emergency department, especially among reproductive-age women. Many of the chief complaints include abdominal/pelvic pain, vaginal bleeding, and early pregnancy loss. Several multi-institutional studies of emergency department usage have shown a significant increase in visits for certain gynecologic complaints. Previous studies have reported postoperative ED visit rates between 4 and 12.7% for gynecologic surgeries, and rate of ED visits for leiomyomas and adnexal pathology have been increasing. Many of these recurrent and post-operative emergency room visits could be avoided, decreasing the utilization of the emergency room while maintaining patient safety. Despite multiple studies about distribution of emergency room diagnoses, trends and financial costs of emergency room usage, there is little evidence available about risk factors for return to ED visits among patients with gynecologic complaints. The purpose of our study will be to identify the most common reasons that patients return to the emergency room at Inova Fairfax Hospital within thirty days for a gynecologic complaint. We hypothesize that certain diagnoses will be associated with increased emergency department usage and repeat visits, and that certain factors may be modifiable to safely reduce ED visits. This data can help clinicians at Inova counsel patients, make decisions about whether admission is warranted, assist with choices about medical or surgical management, and lead to the creation of guidelines for referrals and follow-up plans based on the patient's presenting complaint. This will ultimately reduce the physical and financial burden of emergency room visits on patients as well as hospital resources and support appropriate and safe disposition at time of discharge.

METHODS:
We will conduct a retrospective chart review of ED visits for gynecologic complaints from 2020-2022. The study population will consist of women who presented to the Inova Fairfax ED on two separate occasions within a 30-day period with a gyn-based chief complaint. All information collected in our dataset will be de-identified; void of any patient identifiers. Date of emergency room visits will be obtained with initial data extraction but subsequent calculations will provide only the time interval between visits as a data point; specific dates will be deleted and will not be retained in the data set. The following variables will be collected for this database: Date of return to ED visit, date of prior hospital visit (s), diagnosis code for each visit, chief complaint in the ED, age, procedure codes including surgeries and imaging, disposition from emergency room, length of stay (hours/days). Statistical analysis will then be used to analyze trends in this data.

RESULTS: N/A

CONCLUSION: N/A

To our residents, congratulations on your research!

To our faculty and staff, thank you for your continued guidance and support!

Save the date:

2024 Research Day

June 4, 2023