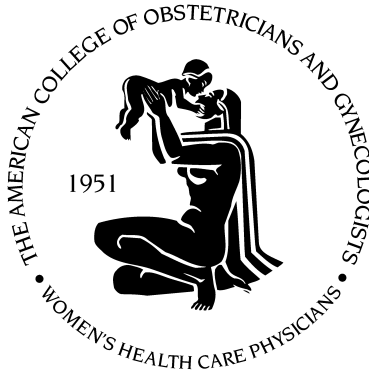


# Annual Junior Fellow Research Day



Michigan Section  
American College of Obstetricians & Gynecologists



*May 25, 2011*

James B. Henry Center  
Michigan State University  
East Lansing, Michigan

# Annual Junior Fellow Research Day

## *Michigan Section*

American College of Obstetricians and Gynecologists

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### JUDGES

Gregory Christman, MD  
Associate Professor  
Reproductive Endocrinology & Infertility  
University of Michigan  
Ann Arbor, MI

Michael Hertz, MD, MPH  
Clinical Associate Professor  
Dept. of Obstetrics & Gynecology  
Wayne State University  
School of Medicine

Cristian Meghea, PhD  
Assistant Professor  
Obstetrics, Gynecology &  
Reproductive Biology  
Michigan State University

Ann Mongoven, PhD  
Assistant Professor  
Center for Ethics & Humanities in  
the Life Sciences  
Michigan State University

Gonzalo Rodriguez, MD  
Professor  
Obstetrics, Gynecology &  
Reproductive Biology  
Michigan State University

Laura Zuidema, MD  
Medical Director  
Maternal Fetal Medicine  
Spectrum Health  
Associate Director  
Dept. of Obstetrics, Gynecology &  
Reproductive Biology  
Michigan State University

Carlos Rios-Bedoya, ScD  
Assistant Professor  
Dept. of Family Medicine  
Michigan State University

George W. Smith, PhD  
Professor  
Dept. of Animal Science  
Michigan State University

**A special “thank you” is extended to the following individuals  
for their generous support and  
participation as abstract reviewers:**

**Ronald Cyr, MD**

Associate Professor  
Dept. of Obstetrics, Gynecology & Reproductive Biology  
Michigan State University

**Barbara Luke, ScD**

Professor  
Dept. of Obstetrics, Gynecology & Reproductive Biology  
Michigan State University

**Mohamad Mahmoud, MD**

Assistant Professor  
Dept. of Obstetrics, Gynecology & Reproductive Biology  
Michigan State University

**Denny Martin, DO**

Assistant Professor  
Dept. of Obstetrics, Gynecology & Reproductive Biology  
Michigan State University

**Joel Maurer, MD**

Assistant Professor  
Assistant Dean for Admissions  
College of Human Medicine  
Dept. of Obstetrics, Gynecology & Reproductive Biology  
Michigan State University

**Brian Mavis, PhD**

Director, Medical Education, Research & Development  
College of Human Medicine  
Michigan State University

**John Risinger, PhD**

Director, Division of Reproductive Biology  
Van Andel Institute  
Michigan State University

**George Smith, PhD**

Professor  
Animal Science Department  
Michigan State University

## 3rd Annual MSACOG Junior Fellow Service Project

Please continue our tradition of community service at this year's Junior Fellow Research Day! This year we are asking for **donations to support the S.A.Y. Detroit Clinic**. The S.A.Y. (Super All Year Detroit) Clinic is a Children's and Women's free clinic serving the uninsured and underinsured.

The clinic is currently in need of the following supplies: OTC pain meds, OTC yeast infection treatments, pregnancy tests, birth control pills, condoms, endometrial biopsy pipels, suture (any), skin prep solutions, office instruments (speculums, needle drivers, hemostats, tenaculums) We ask all Junior Fellows and Fellows attending the **ACOG Jr. Fellow Research Day on May 25, 2011** to contribute any of the above supplies or a monetary donation to purchase supplies. All individuals who contribute will be entered into a raffle for a \$50 gift card. For more information on S.A.Y. Detroit, or to contribute online, visit: [www.saydetroit.org](http://www.saydetroit.org)



## PROGRAM

**Annual Junior Fellow Research Day  
Michigan Section  
American College of Obstetricians and Gynecologists**

**May 25, 2011**

- 8:30 am Registration and Continental Breakfast
- 8:55 am Welcome and Opening Remarks
- Richard Leach, MD  
Junior Fellow Advisor, Michigan Section
- Sarah Goetz, MD  
Junior Fellow Chairperson, Michigan Section

### **Resident/Fellow Scientific Paper Presentations:**

- 9:00 am **Demographic Differences Between Antepartum Preeclampsia vs. New Onset Post Partum Preeclampsia**
- Pedro Argoti, MD  
Wayne State University
- 9:15 am **Impact of Dipeptide Glycine on Mouse Preimplantation Embryo Development In Vitro**
- Molly Moravek, MD, MPH  
University of Michigan
- 9:30 am **Co-distribution of Androgen and Estrogen Receptors with Leptin Receptors in Neurons of the Adult Murine Brain**
- Josh Skorupski, MD  
University of Michigan
- 9:45 am **Adverse Obstetric Outcomes Associated with Sonographically Identified Large Uterine Fibroids**
- Valerie Shavell, MD  
Wayne State University
- 10:00 am **Mean Platelet Volume for Intrapartum Prediction of Preeclampsia**
- Pedro Argoti, MD  
Wayne State University

- 10:15 – 10:45 am      **Break – View Poster Presentations & Exhibits**
- 10:45 am              **Retrospective Review of Endometrial Thickening on Pelvic Sonogram in Asymptomatic Postmenopausal Women and Subsequent Risk of Endometrial Carcinoma**
- Sarah Deighton-Collins, MD  
William Beaumont Hospital
- 11:00 am              **Discordant Dynamics of Amniotic Fluid and Fetomaternal Plasma Surfactant Protein-D (SP-D) Concentrations during Human Pregnancy: Demonstration that Human Neutrophils are a Novel Source of SP-D**
- Sun Kwon Kim, MD  
Wayne State University
- 11:15 am              **Investigation of Normal Newborn Tissue Oxygenation by Infrared Spectroscopy**
- Betty Koukis, MD  
Providence Hospital
- 11:30 am              **Speaker**  
**Michael Hertz, MD, MPH, Associate Clinical Professor, Dept. of Obstetrics and Gynecology, Wayne State University. “A (Very) Short History of Reproductive Healthcare and the Law...and Why You Should Care About what Happens in Lansing...”**
- 12:15 pm              **Lunch & View Posters & Exhibits**
- 1:15 pm                **IL-6 May Affect Metaphase-II Mouse Oocyte Spindle Structure In Vitro**
- Jashoman Banerjee, MD  
Wayne State University
- 1:30 pm                **Urinary, Gastrointestinal, Thyroid and Pain Disorders in Women with Vulvar Lichen Sclerosus**
- Mitchell Berger, MD, PhD  
University of Michigan
- 1:45 pm                **A Review of Pap Smear Indications: A Quality Improvement Project**
- Cecily Clark-Ganheart, MD  
Hurley Medical Center/MSU

- 2:00 pm                    **The Use of TDx-FLM in Predicting Fetal Lung Maturity in Fetuses of Diabetic Mothers. Is PG Necessary? A Retrospective Review at a Large Community Hospital**
- Jennifer Thompson, MD  
William Beaumont Hospital
- 2:15 pm                    **Markers of Amniotic Fluid Inflammation: Impact of Blood Contamination**
- Marcos Cordoba, MD  
Wayne State University
- 2:30 –  
3:00 pm                    **Break – View Posters & Exhibits**
- 3:00 pm                    **Category I Fetal Heart Monitoring Tracings as a Screening Test of Normal Fetal Acid-Base Status and Category III Fetal Heart Monitoring Tracings as a Screening Test for Abnormal Fetal Acid-Base Status**
- Steven Moser, MD  
Grand Rapids Medical Education Partners/MSU
- 3:15 pm                    **Evaluation of the Accuracy of Reporting of Delayed Complications of Elective Abortion**
- Erinn Hoekstra, MD  
Grand Rapids Medical Education Partners/MSU
- 3:30 pm                    **Non Bacterial Amniotic Fluid Inflammation and Outcome with Cervical Cerclage**
- Eduardo Aguin, MD  
Wayne State University
- 3: 45 pm                    **The Number of Scheduled Repeat Cesarean Sections Delivered Prior to the Scheduled Date**
- Ruchira Singh, MD  
Hurley Medical Center/MSU

4: 00 pm

**Effect of Ovarian Tumor Characteristics on Venous Thromboembolic Risk**

Arvind Bakhru, MD  
University of Michigan

4:30 pm

**Awards Presentation**



**Poster Presentations**

*Posters will be displayed by 9:00 a.m. and will be available for viewing during the breaks.*

**1. Examination of Alternate Forms of HEPES Buffer in IVF Handling Media and Impact on Resulting Mouse Preimplantation Embryo Development**

Matthew Will, MD  
University of Michigan

**2. Differences in Perception and Use of complementary and Alternative Medicine in Infertility Patients and Physicians**

Matthew Will, MD  
University of Michigan

**3. Rapidly Progressive Synchronous Uterine Papillary Serous Carcinoma(UPSC) in Both Horns of a Uterus Didelphys**

Mili Thakur, MD  
Wayne State University

**4. Co-existing Tubal Ectopic Pregnancy and Endometroid Adenocarcinoma of the Ovary, Masquerading as a Twin Ectopic Pregnancy: Management of Ectopic Pregnancy with Incidental Adnexal Mass**

Mili Thakur, MD  
Wayne State University

**5. Retained Foreign Body in Surgical Setting: A Single Center Experience**

Mili Thakur, MD  
Wayne State University

**6. Similar rates of Post-reduction Stress Urinary Incontinence in Symptomatic Anterior-versus Posterior-Predominant Pelvic Organ Prolapse Patients**

Tovia Smith, MD  
University of Michigan

**7. Can Bladder Outlet Obstruction Be Predicted Before Retro-pubic TVT Procedure?**

Aliaa Makkiya, MD  
Synergy Medical Education Alliance/MSU

**8. Analysis by Gender of Obstetrician Success with Umbilical Cord Blood Collection**

Charu Jain, MD  
Providence Hospital

**9. Acute Pseudo-obstruction of the Large Bowel with Skip Areas of Necrosis of Small and Large Bowel in 30 Weeks Gestation Pregnant Woman**

Swapna Killikonda, MD  
Henry Ford Hospital

**10. Do IUD's Placed by More Experienced OB/GYN Residents Stay in Longer?**

Jessica Kiley, MD  
Sparrow Health System/MSU

**11. Effect of Luteal Phase Estace Supplementation on In-Vitro Fertilization Pregnancy Success Rates**

Heidi Grabemeyer, MD  
Grand Rapids Medical Education Partners/MSU

**12. Evaluation of Tissue Oxygen Saturation Via Near-Infrared Spectrometer in Pregnancy**

Mona Fakih, MD  
St. Joseph Mercy Hospital

**13. Congenital High Airway Obstruction Syndrome: A Case Report and Review of Literature on The Role of Imaging in Predicting Outcome**

Thalia Pachiyannakis, MD  
Hurley Medical Center/MSU

**14. Prevalence of Endometrial Polyp in Reproductive-Age Infertile Women**

Molly Moravek, MD, MPH  
University of Michigan

**15. Does Length of Postgraduate Training Influence Physicians' Decision to Practice in Michigan?**

Benjamin Wood, DO  
Sparrow Health System/MSU

**16. Small Bowel Obstruction Subsequent to Essure Micro-Insert Sterilization: A Case Report**

Jimmy Belotte, MD  
Wayne State University

**17. Platinum-Based Combination Chemotherapy for the Treatment of Advanced Stage Squamous Cell Carcinoma of the Vulva**

Jimmy Belotte, MD  
Wayne State University

**18. Health Care Views of U.S. Women Compared to Women in a Developing Nation**

Kami Palmer, MD  
William Beaumont Hospital

**19. Neonatal Admission Trends Among Pediatricians and Neonatologists to Nursery Versus Intensive Care Unit**

Nicole Radulovich, DO  
Sparrow Health System/MSU

**20. Nondisclosure PGD for Late Onset Autosomal Dominant Diseases**

Roohi Najeemuddin, MD  
Wayne State University

**21. Treatment of Uterine Carcinosarcoma with Combination Ifosfamide/Platinum-Based Chemotherapy and Volume-Directed Radiation**

Kyla Carlson, DO  
Grand Rapids Medical Education Partners/MSU

**22. Role of Hysteroscopy in Diagnosis of Subtle Uterine Anomalies with Normal Hysterosalpingography**

Nisha Kalia, MD  
Hurley Medical Center/MSU

**23. Vanishing Septated Cystic Hygroma and Fetal Hydrops-Review of Literature for Fetal Implications**

Nisha Kalia, MD  
Hurley Medical Center/MSU

**24. Molar Pregnancy with an IUD – An Association or a Co-Incidence? Case Report with Review of Literature**

Nisha Kalia, MD  
Hurley Medical Center/MSU

**25. Paraneoplastic Encephalitis Associated with an Ovarian Mature Cystic Teratoma: A Case Report**

Randa Jalloul, MD  
Henry Ford Health System

**26. An Unusual Presentation of Müllerian Duct Dysgenesis Presenting as Subacute Bowel Obstruction**

Komal Agarwal  
Hurley Medical Center/MSU

**27. A Review of Intrauterine Fetal Demise in a Community Setting**

Cecily Clark-Ganheart, MD  
Hurley Medical Center/MSU

**28. Gastric Ulcer Perforation as a Post-Operative Complication of Benign Gynecologic Surgery**

Lakshmi Bangalore Vatsan Sri  
Henry Ford Hospital

**29. A Simplified Technique of Laparoscopic Cornuostomy for Interstitial Ectopic Pregnancy**

Hussein Warda, MD  
Hurley Medical Center/MSU

**30. Role of Tubal Embryo Transfer During Assisted Reproductive Technology**

Hussein Warda, MD  
Hurley Medical Center/MSU

**31. Spontaneous Vaginal Evisceration: A Case Report**

Mark Zakaria, MD  
Wayne State University

**32. Recurrent Brain Abscess Following Extraction of an Infected Tooth Complicating Pregnancy**

Deslyn Hobson, MD  
Wayne State University

**33. Gestational Weight Gain and Adverse Outcomes Among Term Infants of a Community Based Residency Clinic**

Pierre Barbot, MD  
Grand Rapids Medical Education Partners/MSU

***ORAL PRESENTATIONS***

**ABSTRACTS**

**TITLE:** Demographic Differences Between Antepartum Preeclampsia vs. New Onset Post Partum Preeclampsia  
**AUTHORS:** Pedro Argoti, Laura Londra, Anushka Chelliah, Gustavo Vilchez Ray O. Bahado-Singh  
**AFFILIATION:** Wayne State University

**Background:** Late onset post partum preeclampsia is a poorly defined condition, yet a very important cause of maternal morbidity. It accounts for a significant percentage of eclampsia cases. It is unclear whether this is a different disorder from antepartum and intrapartum preeclampsia.

**Objective:** To investigate whether demographic differences exist between patients with antepartum preeclampsia vs. patients with new onset post-partum preeclampsia as these could provide an indication of different etiologies for this disorder.

**Study Design:** A retrospective comparative analysis involving 150 patients with antepartum preeclampsia (AP) and 80 patients with new onset postpartum preeclampsia (NOPP) defined as, presenting after hospital discharge and at least 2 days after delivery with no antecedent hypertensive disorder in the pregnancy was performed. The demographic variables compared included maternal age, race, gravidity, parity, BMI, gestational age at birth, past medical history and smoking status. The chi-square test was used to analyze categorical variables, and the t-student test for numerical variables. P values < .05 were considered significant.

**Results:** There were significant differences between the NOPP group vs. AP group in maternal age [ $28.78 \pm 6.77$  years vs.  $23.28 \pm 6.03$  years old ( $p=.001$ )], race [96.3% vs. 88.0% of African American race ( $p<0.05$ )], gravidity [ $4.0 \pm 3.11$  vs.  $2.57 \pm 2.08$  ( $p=.001$ )], parity [ $2.69 \pm 2.01$  vs.  $0.91 \pm 1.42$  ( $p=.001$ )], BMI [ $34.45 \pm 8.36$  kg/m<sup>2</sup> vs.  $32.02 \pm 7.48$  kg/m<sup>2</sup> ( $p<0.05$ )], gestational age at birth [ $38.96 \pm 1.82$  vs.  $36.22 \pm 3.67$  ( $p=.001$ )], preterm delivery incidence [3.8% vs. 46% ( $p=.001$ )] and newborn weight [ $3274.84 \pm 615.24$ g vs.  $2625.02 \pm 985.52$ g ( $p=.001$ )] in each group, respectively. There were no significant differences related to past medical history or smoking status.

**Conclusion:** Compared with AP, NOPP patients are older, more likely African-American, have higher gravity, parity and BMI. The gestational age and the newborn weight at delivery are higher in NOPP, suggesting reduced fetal risk in this group. In the first study of this kind, NOPP cases displayed significant differences from AP. Further characterization, including molecular studies, is warranted.

**TITLE:** Impact of Dipeptide Glycine on Mouse Preimplantation Embryo Development In Vitro  
**AUTHORS:** Molly B. Moravek, Senait Fisseha, Jason E. Swain  
**AFFILIATION:** University of Michigan

**Objective:** Examine the impact of dipeptide forms of glycine on mouse embryo development in vitro. Methods: 1.0mM alanyl-glycine or glycyl-glycine was added to Human Tubal Fluid medium (HTF) + 5% Serum Substitute Supplement as a basal medium. Positive controls consisted of 1.0mM glycine. Embryos were cultured in groups of 10 in 500l media covered with 300l oil in 4-well dishes for 96h in 6% CO<sub>2</sub>. pH and osmolality of all media were kept between 7.27-7.32 and 285-287, respectively. All data were collected over three replicates and statistical differences determined using ANOVA followed by Bonferroni multiple comparison test. Subsequently, NaCl was used to create a high osmolality HTF media (310mOsm) + 3% Human Serum Albumin (HSA) as a stress system to determine protective effects of glycine forms against osmotic stress. Three replicates were performed.

**Results:** Utilizing control 285mOsm media, no significant differences were observed in rate of early cleavage >2-cell at 30h (63.3+/-8.8 vs. 73.3+/-12.0 vs. 60.0+/-15.3), development 8-cell at 48h (90%+/- vs. 93.3+/-3.3 vs. 86.7+/-3.3), early blastocyst formation at 72h (56.7+/-3.3 vs. 60.0+/-15.3 vs. 40.0+/-11.5), total blastocyst formation at 96h (76.7+/-3.3 vs. 86.7+/-8.8 vs. 83.3+/-8.8), or rate of blastocyst hatching (63.3+/-6.7 vs. 56.7+/-8.8 vs. 50.0+/-5.8), between glycine, glycyl-glycine or alanyl-glycine, respectively. Utilizing high osmolality media (310mOsm), initial results indicate all forms of glycine rescue embryo development. Negative controls with no glycine yielded 49.7% blastocyst development after 96h with 9.1% blastocyst hatching. Media supplemented with glycine, glycyl-glycine and alanyl-glycine yielded 77.7%, 68.2% and 95.5% blastocyst formation and 40.9%, 50% and 59.1% hatching, respectively.

**Conclusion:** Dipeptide forms of glycine support mouse embryo development in vitro and may provide superior protection against high osmolality. Future studies will explore ammonia production and dosing compensation.



**TITLE:** Co-distribution of Androgen and Estrogen Receptors with Leptin Receptors in Neurons of the Adult Murine Brain  
**AUTHORS:** Josh Skorupski, Megan L. Greenwald-Yarnel, Martin G. Myers, Jr.  
**AFFILIATION:** University of Michigan

**Objective:** Leptin, an anorexigenic protein produced predominantly by white adipose tissue in proportion to fat stores acts via the long form of the leptin receptor (LepRb) on neurons in the CNS. Sufficient leptin indicates the adequacy of fat stores to permit the allocation of resources toward energy-intensive functions, such as growth and reproduction. Diminished or absent leptin impairs the function of the neuroendocrine reproductive axis and blunts fertility. Leptin replacement restores reproductive competence. Estrogen and testosterone also act in the brain to impact reproduction, food consumption, and energy stores. Neurons jointly sensing leptin and gonadal steroids represent likely mediators of the central link between metabolism and reproduction. We hypothesized that specific subsets of neurons expressing LepRb also contain estrogen receptor-alpha (ER) or the androgen receptor (AR) in females and males, respectively, and set out to define such populations of neurons in the mouse brain.

**Design:** Prospective analysis.

**Materials and Methods:** Using our previously-described LepRb-GFP mouse model, we used immunohistochemistry to detect GFP in LepRb neurons in conjunction with immunofluorescent detection of AR in male brains or ER in female brains using commercially-available primary and Alexa-conjugated secondary antibodies. Sections were mounted and analyzed with fluorescent microscopy.

**Results:** Subsets of neurons containing both LepRb/AR or LepRb/ER were restricted in their distribution. LepRb/AR neurons were located in the arcuate (ARC) and ventral premammillary (PMv) nuclei of male mice; a small number of LepRb/AR neurons were seen in the ventromedial hypothalamus nuclei (VMH). While the female PMV was devoid of ER, numerous LepRb/ER neurons were observed in the ARC. LepRb/ER neurons were also observed in the preoptic area, DMH/VMH and periaqueductal gray (PAG).

**Conclusion:** Numerous leptin receptor-expressing ARC neurons contain AR in males or ER in females. In males, the PMv also contains large numbers of LepR/AR neurons, suggesting a potential role for these neurons specifically in the integration of signals from androgens and leptin. These neurons likely represent important sites for the integration of metabolic and reproductive signals to control energy and fertility.

**TITLE:** Adverse Obstetric Outcomes Associated with Sonographically Identified Large Uterine Fibroids  
**AUTHORS:** Valerie I. Shavell, Mili Thakur, Anjali Sawant, Manvinder Singh, Elizabeth E. Puscheck, Michael P. Diamond  
**AFFILIATION:** Wayne State University

**Objective:** To determine the impact of sonographically identified large uterine fibroids on obstetric outcomes.

**Methods:** Women with singleton gestations who had uterine fibroids identified on routine obstetric ultrasound from September 2009 through April 2010 and who delivered at >20 weeks gestation and age-matched controls were identified by searching the Departmental Obstetric Ultrasound database.

**Results:** 95 women were found to have uterine fibroids during the study period, of which 42 had large fibroids >5 cm in diameter. Compared to women with no fibroids or small fibroids, gestational age at delivery was significantly earlier in women with large fibroids (38.6 vs. 38.4 vs. 36.5 wks,  $p=.002$ ). Short cervix, PTD, and PPRM were also significantly more frequent in the large fibroid group and were associated with number of fibroids >5 cm. Blood loss at delivery was significantly higher in the large fibroid group (486.8 vs. 535.6 vs. 645.1 cc,  $p=.038$ ), as was need for postpartum blood transfusion (1.1 vs. 0.0 vs. 12.2%,  $p=.001$ ). Compared to women with small or no fibroids, women with large fibroids were not statistically different with respect to maternal age, race, gravidity, parity, body mass index, substance use, history of preterm delivery, or gestational age at ultrasound.

**Conclusion:** Women with large uterine fibroids in pregnancy are at significantly increased risk for delivery at an earlier gestational age compared to women with small or no fibroids, as well as obstetric complications including excess blood loss at delivery and increased frequency of postpartum blood transfusion.

**TITLE:** Mean Platelet Volume for Intrapartum Prediction of Preeclampsia  
**AUTHORS:** Pedro Argoti, Lindsay Allen, Gustavo Vilchez, Michael Kruger,  
Ray O. Bahado-Singh  
**AFFILIATION:** Wayne State University

**Objective:** Platelet activation and destruction are well recognized features of preeclampsia. We investigated whether mean platelet volume (MPV) measurement might be a useful intrapartum screening test for preeclampsia (PE).

**Study Design:** A retrospective case-control study matching one PE to two controls was performed. A number of hematologic indices including red cell MCV, platelet count and MPV were evaluated for PE detection. Logistic regression analysis, OR (95% CI) and p values for prediction of PE were evaluated.

**Results:** Of the total pool of patients, there were 156 PE and 300 controls. 6 cases and 3 controls were excluded (suspicion of chronic HTN). A total of 150 cases and 297 controls were used for analysis. MPV values were measured and available in 146 cases and 286 controls. The mean platelet volume was the only significant predictor of PE, OR (95% CI) = 4.51 (1.48,13.74) and severe PE, OR (95% CI) = 6.21 (1.57, 24.6)

**Conclusion:** Mean platelet volume is a significant predictor of PE and may be clinically more useful than routinely performed tests such as platelet volume in the assessment of PE.

**TITLE:** **Retrospective Review of Endometrial Thickening on Pelvic Sonogram In Asymptomatic Postmenopausal Women and Subsequent Risk of Endometrial Carcinoma**

**AUTHORS:** Sarah Deighton-Collins

**AFFILIATION:** William Beaumont Hospital

**Introduction:** Postmenopausal women with vaginal bleeding need endometrial assessment to rule out endometrial carcinoma. Transvaginal ultrasound is often used to determine the necessity of endometrial biopsy. The earliest reports comparing transvaginal ultrasonography with endometrial sampling consistently found that an endometrial thickness of less than or equal to 4–5 mm in patients with postmenopausal bleeding reliably excluded endometrial cancer. However, the significance of endometrial thickening identified on pelvic sonogram in postmenopausal women who do not have vaginal bleeding has not been determined.

**Objective:** To determine the percentage of endometrial sampling in asymptomatic postmenopausal women found to have thickened endometrial stripes on pelvic sonogram. Of those patients who were sampled, what is the percentage of benign compared to malignant pathology.

**Methods:** This was a retrospective chart review of outpatient pelvic sonograms in postmenopausal women not completed for postmenopausal bleeding at our institution over an 18 month time.

**Results:** 72 patients were identified (N=72). Of the 72 patients, 29.2% (21/72) had an endometrial stripe equal to or greater than 5mm and 61.1% (44/72) had a stripe of 4mm or less. No stripe was able to be measured in 9.7% (7/72). Of the total 72 patients, 9 underwent endometrial sampling (12.5%), of those 11.1% (1/9) resulted as malignancy identified. Considering only the patients with measureable endometrial stripes, of those with endometrial stripes of 4mm or less, 4.5% (2/44) underwent sampling while those patients with stripes 5mm or greater were sampled 28.5% of the time (6/21). This difference was statistically significant ( $p=0.029$ ). Of the 9 patients who underwent sampling, 66.6% (6/9) had a stripe of 5mm or greater and no patients with stripes less than 5mm were sampled.

**Conclusion:** In a patient who had an incidental finding of an endometrial stripe greater than 5mm on pelvic sonogram, endometrial sampling was commonly done to rule out carcinoma. When asymptomatic patients who had an endometrial stripe greater than 5mm were sampled, endometrial carcinoma pathology resulted 1 out of 6 times.

**TITLE:** **Discordant Dynamics of Amniotic Fluid and Fetomaternal Plasma Surfactant Protein-D (SP-D) Concentrations during Human Pregnancy: Demonstration that Human Neutrophils are a Novel Source of SP-D**

**AUTHORS:** Sun Kwon Kim, Roberto Romero, Deug-Chan Lee, Juan Pedro Kusanovic  
Sonia Hassan, Chong Jai Kim

**AFFILIATION:** Wayne State University

A critical role for amniotic fluid (AF) surfactant protein-A (SP-A) in murine parturition suggests that surfactant proteins of lung origin are important in pregnancy and parturition. This study was performed to determine regulation of SP-D in AF and plasma during human pregnancy. SP-D concentrations in maternal and fetal plasma and AF from patients with term not in labor (n=20), term in labor (n=31), preterm labor without intra-amniotic infection/inflammation (n=30), and preterm labor with intra-amniotic infection/inflammation (n=27) were measured using SP-D specific immunoassay. While AF SP-D concentration increased as a function of gestational age, maternal and fetal plasma SP-D concentration was decreased at term. Further assessment revealed readily detectable SP-D mRNA expression in maternal and fetal leukocytes with SP-D expression primarily localizing in the neutrophils. Immunoblotting of plasma and neutrophil proteins demonstrated SP-D with a molecular weight of 25 kD, which corresponded to an alternative splice variant composed of collagen domain in both samples in addition to 43 kD SP-D in the plasma. We report that human neutrophils are a novel source of SP-D which can potentially contribute to circulating SP-D concentration. The findings herein strongly suggest a role for SP-D in the modulation of the maternal and fetal immune responses particularly during pregnancy.

**TITLE:** Investigation of Normal Newborn Tissue Oxygenation by Infrared Spectroscopy  
**AUTHORS:** Betty Koukis, Betty Go, Michael Wider, Robert Welch  
**AFFILIATION:** Providence Hospital

**Objective:** Newborn health status is currently assessed by Apgar scores, pediatric assessment and blood gases. The purpose of this study was to use near infrared spectroscopy (NIRS) to establish baseline tissue oxygenation measurements in normal newborns.

**Study Design:** A total of 28 inborn, term, healthy neonates were recruited for the study. NIRS (Somaneticstm) tissue oxygen measurements (rSO<sub>2</sub>) were obtained over a period of six hours, including two feeding periods. The newborn brain, abdomen and kidney were sampled. Data were recorded for each and analyzed by Excel and SPSS.

**Results:** Average newborn rSO<sub>2</sub> was similar among the sampled organs (p = NS). Descriptives Cerebral Abdominal Renal Mean 76.02 70.61 76.44 SD 7.75 15.92 12.24 SEM 1.46 3.32 2.55  
Fig. 1 Cerebral, abdominal, and renal NIRS monitoring in normal newborns over six hours (overall mean ± SD, n = 28).

**Conclusion:** These baseline rSO<sub>2</sub> measurements may serve as a reference for future studies assessing oxygenation and vascular shunting in newborns with congenital anomalies or perinatal asphyxia.

**TITLE:** IL-6 May Affect Metaphase-II Mouse Oocyte Spindle Structure  
**In Vitro**  
**AUTHORS:** Jashoman Banerjee, R.K. Sharma, Ashok Agarwal, Michael Kruger  
Michael P. Diamond  
**AFFILIATION:** Wayne State University

**Objective:** To demonstrate effects of various concentrations of IL-6 on Metaphase II mouse oocyte spindle structure in vitro

**Background:** Patients with endometriosis or pelvic inflammation have poor reproductive outcomes. They have higher concentration of IL-6 in the peritoneal fluid. We hypothesize that this cytokine may alter the spindle affecting the quality of the mature oocyte after ovulation.

**Materials and Methods:** Metaphase-II mouse oocytes(n=200) were obtained commercially and incubated in human tubular fluid at 37°C with 5% CO<sub>2</sub> for 60 minutes. Subsequently the oocytes were divided equally & test groups exposed to different concentrations of mouse recombinant IL6 (50,100and 200ng/ml) unlike controls for 30 minutes.Oocytes underwent indirect immunofluorescent staining.Fluorescent & Confocal microscopy were performed and spindle changes scored.

**Results:** Pearson chi-square and Spearman correlation were used for multiple comparisons between both groups for microtubular(MT) and chromosomal(CH) alterations.Scores 1&2 were combined for good and 3&4 for poor outcomes Spearman correlation of 0.590 with p value of <0.01 was noted in chromosomes and 0.579 with p value of <0.01 was noted in microtubules respectively.Percentage of poor scores increased with increasing concentrations of IL-6 compared to controls (Table below) IL-6 Concentrations Good score Poor score Control MT 86.4% 13.6% CH 89.8% 10.2% 50 ng/ml MT 36.0% 64.0% CH 68.0% 32.0% 100 ng/ml MT 23.5% 76.5% CH 23.5% 76.5% 200 ng/ml MT 9.5% 90.5% CH 14.3% 85.7%

**Conclusion:** Poor scores in spindles increased with increasing concentrations of IL-6. 2. IL-6 may have critical role in altering quality of post ovulatory oocyte.

**TITLE:** Urinary, Gastrointestinal, Thyroid and Pain Disorders in Woman with Vulvar Lichen Sclerosus  
**AUTHORS:** Mitchell Berger, Nicholas J. Damico, Stacy B. Menees, Dee E. Fenner, Hope K. Haefner  
**AFFILIATION:** University of Michigan

**Objective:** To determine the prevalence of comorbid disorders in women with lichen sclerosus.

**Methods:** A retrospective review of self-administered questionnaires regarding health history of 168 randomly-selected women with lichen sclerosus seen at a tertiary referral vulvar clinic between 2006-2011 was performed. Data were collected regarding patients' responses to questions about bladder [overactive bladder (OAB), urinary incontinence, stress urinary incontinence (SUI)], bowel [inflammatory bowel diseases (IBD), constipation, irritable bowel syndrome (IBS)], thyroid dysfunction, and pain [interstitial cystitis (IC), fibromyalgia, temporomandibular joint disorder (TMJ)] disorders. Population-based prevalence of these disorders were obtained from published literature. The percentage of subjects self-reporting each symptom was computed using PASW Statistics 18.0

**Results:** Subject demographics are as follows (mean  $\pm$  standard deviation or percentage of total subjects): Age  $57.0 \pm 15.8$ , 92.3% Caucasian, body mass index  $28.8 \pm 6.1$  kg/m<sup>2</sup>, gravidity  $2.4 \pm 1.6$ , parity  $2.1 \pm 1.5$ , 64.0% with biopsy-proven disease. Prevalence of self-reported comorbidities in our subjects are as follows: OAB 15.5%, UI 39.9%, SUI 29.8%, IBD 2.4%, Constipation 33.3%, IBS 19.6%, Thyroid dysfunction 35.1%, IC 3.0%, Fibromyalgia 10.1%, TMJ 12.0%.

**Conclusion:** Vulvar lichen sclerosus is associated with numerous comorbid conditions. The prevalence of all of these disorders is higher in our cohort than in the general population except OAB, for which the self-reported prevalence in our patients with lichen sclerosus is approximately 1/3 that of the general population. Our findings suggest that patients presenting with lichen sclerosus should be screened for other disorders that may affect their health and/or quality of life.



**TITLE:** A Review of Pap Smear Indications: A Quality Improvement Project  
**AUTHORS:** Cecily A. Clark-Ganheart, Thalia Pachyannikis, Vickie Mello  
**AFFILIATION:** Hurley Medical Center/MSU

**Background:** In December 2009, ACOG revised cervical cytology guidelines. We suspected our clinic performed many unnecessary pap smears without patient benefit. Our study aim was to assess adherence to the 2009 guidelines in our residency clinic and to develop a tool to aid in deciding when screening cervical cytology is appropriate.

**Methods:** A query performed at the Hurley Medical Center Department of Pathology from Jan 1, 2010 through March 28, 2010 Identified 220 pap smears. 60 charts were randomly selected for review. The study received IRB approval. Residents were lectured on the 2009 guidelines. Residents and nurses were presented a pocket card with the revised guidelines. A second query from October 1, 2010 through December 31, 2010 identified 138 charts. 60 charts were randomly selected for comparison.

**Results:** 58 of 60 charts identified prior to intervention were analyzed. 38 (65.5%) pap smears were indicated while 20 (34.5%) were not. 10 (50%) were not indicated due to age under 21, nine (45%) due to time interval, and one (5%) after a hysterectomy without prior abnormal pap smears. Following intervention, 55 of 60 charts were analyzed. Of these, 53 (96.4%) pap smears were indicated, while two (3.6%) were not due to age less than 21.

**Conclusion:** Adherence to the 2009 ACOG guidelines in our clinic needed improvement. One third of screening pap smears in the first quarter were not indicated. After education, this rate decreased to 3.6%. Our data demonstrates quality improvement should involve education of physicians and nurses to improve outcome.

**TITLE:** The Use of TDx-FLM in Predicting Fetal Lung Maturity in Fetuses of Diabetic Mothers. Is PG Necessary? A Retrospective Review at a Large Community Hospital  
**AUTHORS:** Jennifer Thompson, Jay Fisher  
**AFFILIATION:** William Beaumont Hospital

**Objective:** The objective of this study was to determine the TDx-FLMII value at which phosphatidylglycerol is reliably present in pregnancies complicated by maternal diabetes mellitus.

**Methods:** A retrospective chart review of 526 charts was done of all women who had a diagnosis of pregestational or gestational diabetes and had undergone amniocentesis for fetal lung maturity from January 2000 – March 2009. TDx-FLM values were correlated with phosphatidylglycerol (PG). The neonatal records of each infant were reviewed to evaluate for the development of respiratory distress in an infant whose mother had undergone fetal lung maturity testing.

**Results:** There was a significant relationship between the TDx-FLM and the presence of PG. Receiver operator curves were used to predict the correlation, the area under the curve was 0.88,  $p < 0.0001$ . Using a TDx-FLM value of greater than or equal to 55, the positive predictive value was 94.9% for presence of PG with a sensitivity of 71.4% and a specificity of 85.7%. Four of the infants developed respiratory distress syndrome (RDS) out of 483 infants. All of the infants with RDS had a TDx-FLM of  $< 55$ , however, all four had PG present.

**Conclusion:** Our research demonstrated that a TDx-FLM value of 55 or greater closely correlates with pulmonary maturity based on the indices currently used for diabetic patients. However, given the fact that both the PG and L/S ratio tests are expensive and labor intensive, it is much more cost effective to base management decisions on the TDx-FLM in diabetic patients.

**TITLE:** Markers of Amniotic Fluid Inflammation: Impact of Blood Contamination  
**AUTHORS:** Marcos Cordoba, Samet Albayrak, Eduardo Aguin, Rashimi Bolinjar, Robyn Roberts, Ray O. Bahado-Singh  
**AFFILIATION:** Wayne State University

**Objective:** Evaluate the Impact of Blood contamination on the Markers of Amniotic Fluid Inflammation.

**Background:** Inflammatory markers measured in amniotic fluid (AF) are the best predictors of maternal and perinatal outcomes in preterm labor. However, the effect of blood contamination on the effectiveness of these markers have not been extensively studied.

**Methods:** Glucose and WBC were measured in 99 cases of bloody tap (AF>1000 RBC) and compared to 195 cases with clear fluid (controls). Cases and controls were at increased risk for prematurity. Inflammation was defined as glucose <14mg/dL or WBC >50/high power field. The impact of blood contamination on levels of inflammatory markers and their ability to predict positive AF culture were assessed.

**Results:** Among cases with a positive culture there was no difference in the frequency of WBC >50. Cases with negative culture, WBC >50 was significantly more frequent in study cases (Fisher exact test  $p < 0.005$ ). Multiple regression analysis revealed WBC >50 OR 2.51(1.1, 5.74),  $p < 0.03$  and preterm labor as the indication for amnio 2.95 (1.28, 6.81),  $p = 0.01$  to predict neonatal sepsis. Glucose < 14, OR 0.93 (0.89, 0.97),  $p < 0.001$  and WBC >50, 4.81 (2.0, 11.65),  $p = < 0.001$  were significant predictors of positive AF culture. Bloody status did not interact with AF glucose or WBC or affect their prediction of these adverse outcomes.

**Conclusion:** We report that while the frequency of elevated WBC is increased in bloody fluid with negative culture, the overall ability of inflammatory markers to predict adverse outcome is not significantly affected by blood contamination.

**TITLE:** Category I Fetal Heart Monitoring Tracings as a Screening Test of Normal Fetal Acid-Base Status and Category III Fetal Heart Monitoring Tracings as a Screening Test for Abnormal Fetal Acid-Base Status

**AUTHORS:** Steven Moser, Susan Fee

**AFFILIATION:** Grand Rapids Medical Education Partners/MSU

**Introduction:** Continuous fetal heart monitoring, with the goal of preventing fetal asphyxia, is the most common obstetric procedure performed in the U.S. Continuous monitoring is not without controversy, however, as current evidence suggests little actual benefit and some harm associated with continuous monitoring. Since monitoring began there have been attempts to improve outcomes by standardizing language and descriptions of tracings. ACOG released a Practice Bulletin in July of 2009 which recommends the use of the 2008 National Institute of Child Health and Human Development Working Group three-tier categorization system. This categorization system was designed to predict fetal acid-base status, with Category I tracings predicting normal fetal acid-base status, and Category III tracings predicting abnormal fetal acid-base status. Importantly, in the practice bulletin, no clinical evidence was given to support these claims. The purpose of this study is to validate the use of the new categorization system for continuous fetal heart tracings as a screening test for fetal acid-base status. Specifically, to determine if Category I fetal heart tracings predict normal acid-base status and if Category III fetal heart tracings predict abnormal acid-base status.

**Methods:** The final 30 minutes of fetal heart tracings of all liveborn infants >32 weeks gestation that were born at Spectrum Butterworth Hospital in Grand Rapids, MI between October 1, 2009 and December 31, 2009 were examined. The tracings were paired with umbilical artery blood gas analysis that was performed at the time of delivery. Sensitivity, specificity, positive predictive value, negative predictive value, positive likelihood ratio, and negative likelihood ratio were calculated, using Category I tracings as a positive screening test for normal acid-base status and Category III tracings as a positive screening test for abnormal acid-base status. Fetal umbilical cord gas pH of 7.2 and Base excess of -12 were used as cutoff points for the gold standard.

**Results:** Of 1780 deliveries during the study period, 864 tracings met inclusion criteria. Category I tracings as a screening test for normal acid-base status resulted in sensitivity of 44.9%, specificity of 72.9%, PPV of 93.0%, NPV of 14.2%, PLR of 1.66 and NLR of 0.76. Category III tracings as a screening test for abnormal acid-base status resulted in sensitivity of 0%, specificity of 99.5%, PPV of 0%, NPV of 100%, PLR 0, and NLR of 1.01.

**Discussion:** For numerous reasons, including the validation analysis in this study, Category I tracings do not provide a good screening test for normal fetal acid-base status, and Category III tracings do not provide a good screening test for abnormal fetal acid-base status.

**TITLE:** Evaluation of the Accuracy of Reporting of Delayed Complications of Elective Abortion  
**AUTHORS:** Erinn Hoekstra, Kristin Oldenberg  
**AFFILIATION:** Grand Rapids Medical Education Partners/MSU

**Objective:** To evaluate the accuracy of the Michigan Department of Community Health vital statistics data in regards to number of delayed complications of elective abortion, relative to the number treated at Spectrum Health Butterworth and Blodgett EDs in 2009, as well as to assess physician knowledge of Michigan law requiring complication reporting.

**Background:** Michigan law Act 208 for 1999, being MCL 333.2837, requires treating physicians to report complications of elective abortions which were not recognized and reported in conjunction with the original procedure. Most complications are cared for through emergency departments (EDs) by physicians who did not perform the original procedure and may not be aware of the law requirements.

**Methods:** A retrospective case series and physician survey were performed. Charts were reviewed to identify all patients presenting to the Butterworth and Blodgett EDs in 2009 who had undergone a recent elective termination of pregnancy and were now presenting with a complication. Data collected included type of complication, treatments received, gestational age at time of procedure, and time elapsed from the original procedure. These data were compared to data reported by the MDCH. In addition, OB/Gyn attending physicians were surveyed regarding their knowledge of reporting law and experience with complications of elective termination.

**Results:** In 2009, in the State of Michigan, a 0.03% delayed complication rate was reported. In 2009, 9.9% of elective abortions were performed in Kent County (2218/22357) and 11 patients were treated for complications of elective abortion at Butterworth and Blodgett EDs. Therefore, the delayed complication rate in Kent County was at least 0.5%, which is a statistically significant difference ( $p < 0.000001$ ) from the reported state-wide complication rate. The physician survey results showed that 65% of OB/Gyn physicians were not aware of the law requiring reporting of delayed complications of elective abortion to the state of Michigan. 74% of these physicians had seen a complication of an elective abortion, but only 12% had ever reported such a complication.

**Conclusion:** It appears that delayed complications of elective abortion are under-reported in Kent County. OB/Gyn physicians are not well informed of the law to report or how to report these complications.

**TITLE:** Non Bacterial Amniotic Fluid Inflammation and Outcome with Cervical Cerclage  
**AUTHORS:** Eduardo Aguin, Tina Aguin, Marcos Cordoba, Samet Albayrak, Robyn Roberts, Ray O. Bahado-Singh  
**AFFILIATION:** Wayne State University

**Objective:** To determine whether amniotic fluid markers of inflammation in the absence of infection correlate with pregnancy outcome in non-elective cervical cerclage patients.

**Background:** The clinical significance of amniotic fluid markers in the absence of infection (negative amniotic culture) and their impact on outcome after cerclage placement is unknown.

**Methodology:** A retrospective case-control study. The variables used to define amniotic fluid inflammation were white blood cell count (WBC), glucose and interleukin-6 (IL-6). The study group consisted of cases with intra-amniotic inflammation. And the control group with markers in the amniotic fluid of WBC < 50 cell/ml, glucose > 14 mg/ml and IL-6 < 11.3 ng/ml.<sup>2</sup> Adverse outcomes were evaluated with variables such as gestational age (GA) at delivery, interval from cerclage to delivery, placental inflammation and infection, and cumulative neonatal morbidity. Sub-analysis was also preformed in the group in which IL-6 concentrations were reported.

**Conclusion:** Study and control groups were not significant for any obstetric or demographic variables with the exception of parity. Elevated IL-6 significantly correlated with decreased GA at delivery and cerclage to delivery interval. There was a significantly lower glucose level in cases with histological chorioamnionitis. A significant correlation between amniotic fluid glucose and cerclage to delivery interval  $R=0.27$  ( $p<.02$ ) was also observed. Discussion: Elevated amniotic fluid IL-6 and low amniotic fluid glucose in the absence of a positive culture are markers of inflammation and are significantly associated with adverse pregnancy outcome in patients undergoing non-elective cerclage.

**TITLE:** The Number of Scheduled Repeat Cesarean Sections Delivered Prior to the Scheduled Date  
**AUTHORS:** Ruchira Singh, Ivana M. Vettraino, Nisha Kalia  
**AFFILIATION:** Hurley Medical Center/MSU

**Objective:** To assess the number and outcome of repeat cesarean sections (RCS) which take place before 39 weeks' gestation.

**Background:** Despite the recommended guidelines of delivery at 39 weeks by American Congress of Obstetricians and Gynecologists, early cesarean deliveries continue to occur.

**Methodology:** This is a retrospective chart review over a 6 month period. Charts were abstracted for: gestational age at delivery, indication for delivery, work shift when RCS occurred, newborn admission to the neonatal intensive care unit (NICU), and neonatal complications. SPSS Version 17 was used for statistical analysis.

**Conclusion:** Out of 258 patients, 166 (64.3%) underwent scheduled RCS and 92(35.7%) underwent unplanned RCS. Out of 92 unplanned RCS, an equal number (46,50%) occurred between 800 to 1630 and between 1630 to 800. Almost an equal number of NICU admission were noted amongst neonates born between 38 and 39 weeks' (18,19.8%) and those born beyond 39 weeks (19,20.4%). No significant difference was noted in the respiratory complications in the two groups as well. ( $p=0.286$ )

**Discussion:** A significant number of patients underwent unplanned RCS and do not reach 39 weeks' gestation. Half of unplanned RCS occurred during afternoon and night shifts, which have historically less personnel available. An increase in immediate neonatal morbidity between 38 and 39 weeks was not noted. Scheduling RCS between 38 and 39 weeks' gestation may result in less unplanned RCS performed during periods with less staff, which may result in greater patient safety and quality of care.

**TITLE:** Effect of Ovarian Tumor Characteristics on Venous Thromboembolic Risk  
**AUTHORS:** Arvind Bakhru  
**AFFILIATION:** University of Michigan

**Objectives:** Deep venous thrombosis and pulmonary embolism are common in patients with epithelial ovarian cancer, resulting in high costs associated with diagnosis and treatment. We aimed to identify subtypes of epithelial ovarian cancer that pose greater and lesser VTE risk.

**Methods:** We assessed the outcomes of 641 patients with epithelial ovarian, fallopian tube, and primary peritoneal cancer over a ten year period. All inpatient, outpatient, and pathology records were reviewed. The rates at which persons were evaluated for and diagnosed with venous thromboembolisms were assessed.

**Results:** Of the 641 cases, 30.0% underwent an imaging test to evaluate for deep venous thrombosis (DVT) and 21.7% underwent testing for pulmonary embolism (PE). 10.8% of all subjects were diagnosed with a DVT and 7.2% were diagnosed with a PE. Borderline tumors and mucinous showed a strikingly low rate of both DVT and PE. Transitional cell, clear cell, and high-grade undifferentiated adenocarcinomas were the most likely to result in a VTE. In a multivariate model, pathologic subtype was not only a significant predictor of VTE, but was the single best predictor of VTE.

**Conclusion:** The risk for venous thromboembolism varies substantially among epithelial ovarian carcinomas with differing pathologic subtypes. The underlying reason for this may related to differences in tumor biology and extent of surgery. By identifying low and high risk groups, we may both better conserve medical resources and design more effective thromboprophylaxis for our patients.



*POSTER PRESENTATIONS*

**ABSTRACTS**

## ABSTRACT #1

**TITLE:** Examination of Alternate Forms of HEPES in IVF Handling Media And Impact on Resulting Mouse Preimplantation Embryo Development

**AUTHORS:** Matthew Will, Jason Swain

**AFFILIATION:** University of Michigan

**Objective:** To compare alternate forms of HEPES buffer for ability to support mouse preimplantation embryo development.

**Methods:** Basal HTF media was formulated using 21mM of four commercial forms of HEPES buffer (sodium salt, hemi-sodium salt, free acid, potassium HEPES). For each media, osmolality was kept between 280-295mOsm by adjusting NaCl levels. Initial pH of each media was recorded and adjusted with HCl or NaOH to final pH 7.25-7.35. Media were compared in ability to buffer pH changes in acid/base challenge using titrations of 0.1M HCl or NaOH and ability to support mouse embryo development over 96h at 37°C in room air with periodic exposure to 5% CO<sub>2</sub>. Data were collected over 3 replicates and analyzed using ANOVA and Bonferoni multiple comparison.

**Results:** To obtain pH 7.25-7.35, HCl was added to potassium (8.65) and sodium HEPES (8.57) and NaOH was added to free-acid HEPES (6.45). pH of hemi-sodium HEPES media (7.45) required the least manipulation to reach correct pH. All four formulations yielded similar dose titrations curves, indicating similar buffering capacity. While sodium, hemi-sodium and free-acid HEPES supported mouse blastocyst formation equivalently at 72h (53%, 40%, 53%, respectively), potassium HEPES yielded significantly lower rates of blastocyst formation (7%), ( $p = 0.05$ ). Additionally, rates of expanding/hatching blastocysts at 96h were significantly higher in sodium, hemi-sodium and free-acid HEPES (93%, 80%, 80%), compared to potassium (43%), ( $p = 0.05$ ).

**Conclusion:** Hemi-sodium HEPES required the least amount of pH manipulation, but performed similarly to sodium and free-acid HEPES. Potassium HEPES required the most manipulation and was detrimental to mouse embryo development.

## ABSTRACT #2

**TITLE:** **Differences in Perception and Use of complementary and Alternative Medicine in Infertility Patients and Physicians**

**AUTHORS:** Matthew Will, M.D., Natalie Clark, MD, Molly Moravek, MD, Xiao Xu, PhD, Senait Fisseha, MD, JD

**AFFILIATION:** University of Michigan

**Objective:** To determine attitudes and use of complementary and alternative medicine (CAM) among infertility patients and REI physicians.

**Methods:** Patients were asked to complete written surveys anonymously in an academic infertility clinic; members of Society for Reproductive Endocrinology and Infertility (SREI) were sent surveys electronically. Both groups were assessed on use and general attitudes to CAM and measured using 5-point Likert scale, ranging 1 to 5 with 1=strongly agree and 5=strongly disagree. Data analysis was performed using descriptive statistics and 2-sample student's t tests.

**Results:** Of the surveys offered, a response rate of 32% (115/358) for patients and 22% (225/995) for physicians was noted. CAM use was reported by a significant number of those surveyed (91%, 105/115), 73% of which saw their CAM therapy as beneficial to their treatment. Physicians were more likely to see CAM as having no true impact on health care (3.13 vs 3.76,  $p < 0.001$ ) and potentially as a threat to public health (3.75 vs 4.37,  $p < 0.001$ ). Patients were more likely to see CAM as a potential benefit and that clinical care should integrate CAM into conventional allopathic treatments (1.89 vs 2.12,  $p < 0.01$ ; 1.75 vs 2.12,  $p < 0.001$ , respectively). Regarding use, only 26% of patients reported use to physicians, citing the most common reason as they were "never asked", despite 89.8% of REI physicians reporting they do inquire about CAM use.

**Conclusion:** Significant discrepancies exist between subfertile patients and physicians regarding their attitudes toward CAM. Current utilization and attitudes towards CAM amongst infertility patients requires greater attention by physicians and justifies further study on risks and benefits of integrating CAM modalities into current allopathic treatment of infertility

### ABSTRACT #3

**TITLE:** **Rapidly Progressive Synchronous Uterine Papillary Serous Carcinoma (UPSC) in Both Horns of a Uterus Didelphys**  
**AUTHORS:** Mili Thakur, Sanjeev Kumar, Elizabeth Puscheck, Veronica Schimp  
**AFFILIATION:** Wayne State University

**Background:** Pathological lesions associated with uterine anomalies, are both, uncommon and difficult to manage. Occurrence of synchronous cancers in both cavities of uterus didelphys is extremely rare. Uterine papillary serous carcinoma (UPSC) occurring bilaterally in uterus didelphys has never been reported.

**Case:** 40 yo woman with primary infertility and irregular vaginal bleeding had a pelvic sonogram which was suspicious of uterus didelphys. The endometrial thickness in the right endometrial cavity was 15mm and that of left was irregular, 6mm. Endometrial biopsy showed simple hyperplasia without atypia, bilaterally. The patient was treated with Provera, but returned three months later with continued irregular bleeding. Diagnostic hysteroscopy revealed that the right endometrial cavity was smooth and the left endometrial cavity contained multiple polyps. Curettings from both cavities demonstrated grade 2 endometrioid adenocarcinoma. A MRI and CT of the abdomen and pelvis revealed no myometrial invasion, no intra-abdominal disease and no lymphadenopathy. Chest x-ray was negative for metastasis. The patient had staging laparotomy. At the time of surgery, the diagnosis of didelphys uterus with complete vaginal septum was confirmed. The tumor was identified as high grade, poorly differentiated uterine papillary serous carcinoma, with extensive involvement of full thickness myometrium extending to the serosa. The tumor infiltrated full thickness of the cervix, up to parametrial resection margin. The omental and posterior bladder wall biopsies, bilateral fallopian tubes, bilateral ovaries, bilateral paraaortic and bilateral iliac lymph nodes were also involved (FIGO stage-IVB). Patient received 2 cycles of chemotherapy, developed liver metastasis and progressive anasarca and died of multisystem failure

**Conclusion:** We present the first ever case of synchronous UPSC arising in both endometrial cavities of a didelphys uterus. This case demonstrates that both horns of a uterus didelphys may be involved with malignancy and this combination may behave more aggressively.

## ABSTRACT #4

**TITLE:** Co-existing Tubal Ectopic Pregnancy and Endometroid Adenocarcinoma of the Ovary, Masquerading as a Twin Ectopic Pregnancy: Management of Ectopic Pregnancy with Incidental Adnexal Mass

**AUTHORS:** Mili Thakur, Sanjeev Kumar, Samuel Johnson, Gunter Deppe

**AFFILIATION:** Wayne State University

**Introduction:** The occurrence of ectopic tubal gestation with concurrent ovarian adenocarcinoma is rare. We describe a case which masqueraded as twin ectopic gestation.

**Case:** 40 yo G3P1011 with 6 weeks of amenorrhea and left lower quadrant pain presented to ER. She had history of bilateral tubal reanastomosis. She had stable vitals, left lower quadrant tenderness and no palpable adnexal masses with abnormally rising -HCG. Transvaginal ultrasound did not demonstrate an intrauterine pregnancy. Two left adnexal masses were noted. Both had cystic lumens with hyperechoic walls and prominent vascularity suggestive of gestational sac were noted. There was no fetal cardiac activity in either of the sacs. These ultrasound findings were suggestive of left twin ectopic pregnancy. Patient underwent diagnostic laparoscopy. The left adnexa revealed a 3 x 4 cm tubal mass fused with a 7 x 8 cm ovarian mass. Laparoscopic left salpingo-oophorectomy was performed. Pathology of frozen section of resected specimen showed the tubal mass to be an ectopic pregnancy; and the ovarian mass was described as endometroid adenocarcinoma of the ovary. After the index procedure, the patient later underwent an ovarian cancer staging procedure. Her surgical stage was IC and she subsequently completed six cycles of carboplatin and paclitaxel. The patient remains free of disease after 3 years of diagnosis. After the index procedure, the patient later underwent an ovarian cancer staging procedure. Her surgical stage was IC and she subsequently completed six cycles of carboplatin and paclitaxel. The patient remains free of disease after 3 years of diagnosis.

**Conclusion:** We present the first known case of endometroid adenocarcinoma of the ovary, complicating a tubal ectopic gestation. This case emphasizes that if there is an incidental adnexal mass noted along with a tubal ectopic, the possibility of finding an ovarian neoplasm should be kept in mind. Also management of tubal pregnancy with incidental adnexal mass is discussed.

## **ABSTRACT #5**

**TITLE:** **Retained Foreign Body in Surgical Setting: A Single Center Experience**  
**AUTHORS:** Mili Thakur, Sanjeev Kumar, Navleen Gill, Ray Bahado-Singh  
**AFFILIATION:** Wayne State University

**Objective:** To review risk factors and complications associated with retained foreign bodies in surgical patients. Method: Retrospective review of medical records and litigation claims with the providers between 1998 and 2010. Chi square test and logistic regression were used for analysis.

**Results:** There were a total of 67 patients who had 70 retained foreign bodies. These included 26 sponges (37.1%), 12 drains and catheters (17.1%), 6 instruments (8.5%), 3 needles (4.2%), 3 packings (4.2%) and 20 miscellaneous (one resected bowel loop). Median age was 51 years (range 1 day - 95 years), median BMI was 31.03 kg/m<sup>2</sup>. Abdomen (35.7%) and thorax (12.8%) were the most commonly involved body cavities. Most common reason for search for foreign body was pain (22.3%). Median latency time of detection was 84 days (range 0 days – 14 years). Of patients with retained sponges or instruments 63.6% had torrential bleeding, 36.3% had extensive adhesions, 27.2% had >1 surgical teams and 18% had intra-op change of procedure. 34.4% were emergency surgeries. Morbidity rate was 50.7%. Associated complications included fever, ileus, abscess, wound infection, acute ischemia and delayed recovery. There were no deaths.

**Conclusion:** Retained surgical foreign body is a persistent medical error with severe complications. The surgeon should be cognizant of this possibility, especially in cases complicated by obesity, emergency situations, bleeding, adhesions and change of surgical teams or procedures.

## ABSTRACT #6

**TITLE:** **Similar Rates of Post-reduction Stress Urinary Incontinence in Symptomatic Anterior-versus Posterior-Predominant Pelvic Organ Prolapse Patients**

**AUTHORS:** Tovia Smith, John DeLancey, Dee Fenner

**AFFILIATION:** University of Michigan

**Introduction:** Prior series have observed that women with symptomatic pelvic organ prolapse (POP) without concurrent stress urinary incontinence (SUI) can develop de novo SUI post reconstructive surgery. Preoperative prolapse reduction testing can help identify such women a priori and thus aid surgical planning. While studies have observed substantial rates of post reduction SUI (PRSUI) for anterior-predominant prolapse (APP), few data exist characterizing PRSUI in women with posterior-predominant prolapse (PPP). We hypothesize that prevalence of demonstrable PRSUI may be similar between APP and PPP patients.

**Methods:** A retrospective chart review was performed on a cohort of prospectively-enrolled women with symptomatic POP at least 1 cm below the hymen (N=264) recruited based on criteria described previously (1). Subjects were divided into groups of APP versus PPP with at least a 1 cm difference defining predominance. We evaluated the incidence of SUI, with and without prolapsed reduction, in the APP and PPP groups. Data for multichannel urodynamics and subject characteristics including age, BMI, parity, SUI symptoms, hysterectomy status, menopause, and exam findings were compared between groups by Wilcoxon methods. Association between these factors and PRSUI was tested by logistic regression.

**Results:** 63 PPP / 201 APP subjects were used in the analysis. We observed no significant differences between the groups in average age, BMI, parity, menopause status, and prolapse severity, although the later did show a non-significant trend towards more severe prolapse in the APP group (2.81cm vs. 2.4cm for PPP) (P= 0.07). There were significantly more post-hysterectomy subjects in the PPP group (P=0.002) and MUCP was significantly higher in the APP group (51.3cmH<sub>2</sub>O vs 59.0cmH<sub>2</sub>O in APP, P= 0.028). Baseline SUI rates were 4.76% in the PPP group (95% CI 0.011-0.136) and 11.44% in the APP group (95% CI 0.077-0.166), P=0.12. PRSUI rates for PPP and APP groups were similar, 11.3% (95% CI 0.049-0.229) and 11.5% (95% CI 0.073-0.175) respectively (P= 0.997). Of multiple variables assessed, only prolapse severity was associated with increased rates of post-reduction SUI (P=0.005).

**Conclusion:** In women with posterior predominate symptomatic vaginal prolapse, post-reduction bladder testing revealed similar rates of occult SUI to anterior predominate prolapsed patients. This should be taken into consideration when planning surgery for posterior compartment prolapse, even in patients without baseline SUI. Refernces (1) DeLancey, JO et al. Obstetrics and Gynecology. Vol. 109 (2), 2007.

## **ABSTRACT #7**

**TITLE:** **Can Bladder Outlet Obstruction be Predicted Before Retro-pubic TVT Procedure?**

**AUTHORS:** Aliaa Makkiya, Jeffrey Manley, Thomas Minnec

**AFFILIATION:** Synergy Medical Education Alliance/MSU

**Objectives:** To investigate pre-operative factors that may play a role in bladder outlet obstruction after retropubic TVT procedure for stress urinary incontinence.

**Methods:** We conducted a retrospective cohort study. Between June 2004 and March 2010, 452 women underwent TVT procedure for stress urinary incontinence, of which 8 with a mean age of 61.4 years underwent Tension-free Vaginal Tape release to treat bladder outlet obstruction secondary to retropubic suburethral TVT insertion. Urinary retention was defined as symptoms consistent with obstruction (including hesitancy, straining to void, or feeling of incomplete emptying) and elevated post void residual volume of more than 100 ml. Success was defined by resolution of the symptoms.

**Results:** The incidence of bladder outlet obstruction was less than 2%. We identified only 8 women that met inclusion criteria that had a mean age of 61.37 and a mean BMI of 33.18, all except one were above age of 55 years old and all patients had a BMI of more than 25. Only 2 of the eight (25%) had a history of a prior incontinence procedure. Two (25%) had a concurrent total vaginal hysterectomy and one (12.5%) had a concurrent total abdominal hysterectomy. It was noted that only two (25%) had a concurrent anterior colporrhaphy for symptomatic cystocele. The peak flow rate was less than 12 ml/sc in three patients (37.5%). The detrusor pressure at maximal flow was well below the level proven to increase risk of bladder outlet obstruction (>50cmH<sub>2</sub>O). The average maximal detrusor pressure at maximal flow rate was 25.57 cm H<sub>2</sub>O.

**Conclusion:** Overweight or obesity was the only consistent identifiable factor in the eight of 452 patients that met inclusion criteria.



## ABSTRACT #8

**TITLE:** Analysis by Gender of Obstetrician Success with Umbilical Cord Blood Collection  
**AUTHORS:** Charu Jain, Robert Welch  
**AFFILIATION:** Providence Hospital

**Objectives:** The use of umbilical cord blood stem cells to treat patients for genetic, blood and malignant disorders is a relatively recent innovation. A minimum amount of sample is required in order for the blood to be banked. This study assessed Obstetrician characteristics to identify collection patterns

**Study Design:** Over the course of two nine-month periods (time 1 and time 2), 30 Obstetricians were assessed for cord blood collection at Providence Park Hospital. Main variables evaluated were gender and high versus low collectors. Individuals collecting > 10 units during a nine month period were considered high collectors. Groups were stratified by successful collection which was 50 ml or greater of cord blood.

**Results:** 11 male obstetricians and 19 female obstetricians collected cord blood at Providence Park Hospital. A total of 628 units of cord blood were collected for the 18 months of the study. There were 309 male and 319 female Obstetrician cord blood collections. Data was analyzed by chi square. We found no difference in successful collections between male and female providers ( $p = .248$  Yates). Median scores were used to compare high and low collectors for the two different time periods. There was no statistical difference in success rate between low and high collectors at time1 ( $\alpha = .232$ ) or time 2 ( $\alpha = .866$ ).

**Conclusion:** Contrary to preconceived notions, there is no difference in umbilical cord blood collection success by obstetrician gender. There is also no difference in collection success between providers who are high collectors and low collectors.

## **ABSTRACT #9**

**TITLE:** **Acute Pseudo-obstruction of the Large Bowel with Skip Areas of Necrosis of Small and Large Bowel in 30 Weeks Gestation Pregnant Woman**

**AUTHORS:** Swapna Killikonda, J. Gray, Roopina Sangha

**AFFILIATION:** Henry Ford Hospital

**Introduction:** Acute pseudo- obstruction of the small and large bowel in 30 wk gestation pregnant patient, who pregnancy was also complicated by complete placenta previa and polyhydramnios.

**Case Presentation:** 31-year old Caucasian, normally fit healthy whose present pregnancy was complicated by complete placenta previa and polyhydramnios initially presented with vaginal bleeding and preterm contractions. During her hospital stay over a period of one week, was complaining of increase in abdominal distention and pain. Had C-section for excess vaginal bleeding because of placenta previa and was found to have massively distended bowels with skip areas of necrosis in small and large bowel without any evidence of perforation. Patient's abdomen was left open for one day post C-section and following day had segmental bowel resection with anastomosis.

**Conclusion:** Although very rare, Ogilvie's syndrome should be considered by obstetricians and general surgeons as potential cause of increase in abdominal distention and pain in pregnant women. Early recognition and management are essential to minimize the possibility of developing serious complications.

## ABSTRACT #10

**TITLE:** Do IUD's Placed by More Experienced OB/GYN Residents Stay in Longer?  
**AUTHORS:** Jessica Kiley, Matthew Allswede  
**AFFILIATION:** Sparrow Health System/MSU

**Objective:** Contemporary intrauterine devices (IUDs) are initially expensive due to the device charge and insertion fees. When used for the majority of their five to ten year lifespans, however, they become among the most cost-effective forms of reversible contraception. Early removal because of method dissatisfaction can be related to improper placement, poor patient selection, or inadequate counseling and support. We wanted to see if the rate of early IUD removal was influenced by the level of experience of the resident that placed the device.

**Methods:** Billing data was used to identify patients who underwent both IUD insertion and removal between January 2006 and January 2011 in our Ob-Gyn residency continuity clinic. Charts were reviewed for duration of IUD use and training year of the resident at time of insertion. IUDs removed due to device expiration or desire to conceive were excluded from the analysis. Discontinuation because of pain, bleeding or medical indications were labeled "early removal." Duration of use and removal rates were compared by resident training year using Student T test and Chi-square analysis, respectively.

**Results:** Three-hundred and twelve(312) IUDs were inserted and fifty-eight (58) were subsequently removed during the study period. None of the IUDs removed were placed by first-year (R1) residents. The rates of early removal for R2, R3, and R4 insertions were 57%, 27%, and 16%, respectively. The average durations of IUD use for R2, R3, and R4 insertions was 19m, 23m, and 31m, respectively.

**Conclusion:** IUDs placed by residents with fewer years of residency experience were more likely to be removed due to dissatisfaction, and after a shorter interval, than those placed by more experienced residents.

## **ABSTRACT #11**

**TITLE:** Effect of Luteal Phase Estrace Supplementation on In-Vitro Fertilization Pregnancy Success Rates  
**AUTHORS:** Heidi Grabemeyer, William Dodds, Erin Schwab  
**AFFILIATION:** Grand Rapids Medical Education Partners/MSU

**Objective:** To determine if estrace supplementation during the luteal phase of IVF retrieval and transfer cycles improves pregnancy and live birth rates.

**Methods:** Retrospective cohort study of 1056 patients who underwent IVF retrieval and transfer cycles at The Fertility Center from 2/2006 – 12/2008. Subjects from 2/2006 – 10/2006 did not receive Estrace supplementation. Retrieval and transfer cycles occurring between 11/2006 – 12/2008 were given 2mg Estrace beginning on the day of oocyte retrieval. Patients that underwent PGD analysis, frozen embryo transfer or donor egg cycles were excluded. Data recorded included: age, indication for seeking fertility treatment, treatment cycle number, number of oocytes retrieved & transferred, endometrial lining thickness, pregnancy, and live birth. Analyses were performed with the t-test and the Pearson Chi-square test. Significance was assessed at  $p < 0.05$ .

**Results:** Ultrasound evidence of pregnancy was documented for 379 of the 765 patients who received estrace supplementation and 148 of 291 who received no estrace ( $p=0.70$ ) A livebirth occurred for 336 in the estrace group and 131 of the patients who did not receive estrace supplementation ( $p=0.75$ )

**Conclusion:** Estrace supplementation during the luteal phase of IVF cycles has no effect on pregnancy or live birth success rates.

## ABSTRACT #12

**TITLE:** Evaluation of Tissue Oxygen Saturation Via Near-Infrared Spectrometer in Pregnancy  
**AUTHORS:** Mona Fakhri, Robert Stager, Mary Purtil, Ruth Churley-Strom  
**AFFILIATION:** St. Joseph Mercy Hospital

**Objective and Background:** Near-Infrared spectroscopy (NIRS)-derived tissue oxygen saturation (StO<sub>2</sub>) is a non-invasive method for monitoring StO<sub>2</sub>. It is used in intensive care and trauma patients as an early indicator of poor tissue perfusion and shock. Normal values of StO<sub>2</sub> have not been established during pregnancy. The purpose of this study is to establish the normal range of StO<sub>2</sub> for each trimester of pregnancy.

**Methods:** Ninety-seven subjects were entered into the study, 15 in the first trimester, 40 in the second trimester and 42 in the third trimester. NIRS tissue spectrometer (Hutchinson Technology Inc. was applied according to protocol and three measurements were taken. The reliability of the NIRS measurement was evaluated using the mean coefficient of variation (CV) and the intraclass correlation coefficient (ICC). A repeated measures ANOVA was used to test whether the StO<sub>2</sub> was different between trimesters.

**Results/Conclusion:** The mean (SD) StO<sub>2</sub> in the 1st, 2nd and 3rd trimesters were 82.6 (2.4), 80.8 (4.9), and 83.0 (4.1), respectively. The average CV was 0.01 and the ICC was 0.93, indicating excellent reliability. There was a non-statistically significant difference between the StO<sub>2</sub> measurements for the three trimesters (p=0.06). The mean for the second trimester was 2 percentage points lower than the means for the first and third trimesters.

**Discussion:** Standard clinical signs of blood loss are often poor early predictors of the need for resuscitation, especially in pregnancy, where physiologic adaptations may mask the signs of hypovolemia and tissue hypoxia. Having established normal values, we hope to study whether a decrease in NIRS-derived StO<sub>2</sub> is an early predictor of the need for fluid and/or blood in obstetric patients with peripartum hemorrhage.

## ABSTRACT #13

**TITLE:** Congenital High Airway Obstruction Syndrome: A Case Report and Review of Literature on the Role of Imaging in Predicting Outcome

**AUTHORS:** Thalia Pachiyannakis, Nisha Kalia, Cecily Clark-Ganheart, Ivan Vettrano

**AFFILIATION:** Hurley Medical Center/MSU

**Background:** Congenital High Airway Obstruction Syndrome (CHAOS) is a rare life-threatening syndrome. It is caused by complete or near complete obstruction of the fetal upper airway. Obstruction leads to a sequence of events that are associated with significant morbidity and mortality.

**Objective:** To present a case report of CHAOS to highlight the importance of prenatal ultrasound and MRI in diagnosing and predicting the postnatal outcome.

**Case Report:** A 16 year old Primigravida at 25 weeks and 2 days gestation was referred for an MFM consultation for sonographic findings of echogenic fetal lungs, flattened diaphragm and a unilateral left multidysplastic kidney. The patient had an unremarkable medical history and genetic survey. MRI performed at 30 weeks and 6 days gestation confirmed diagnosis of CHAOS with focal obstruction at the level of the larynx with dilatation of the airway distal to this level. There was no evidence of fetal hydrops. Patient was delivered at 36 weeks via Cesarean section at the University of Michigan with an Ex utero intrapartum (EXIT) procedure.

**Discussion:** • The effect of MRI and ultrasound findings on management and outcome. • To discuss outcomes of 12 reported fetuses in a study published by The Journal of Pediatric Surgery (January 2010, by J. L. Roybal et al, at Children's Hospital of Philadelphia), in order to have a better understanding of the spectrum of clinical severity and the variable natural history of CHAOS.

## **ABSTRACT #14**

**TITLE:** Prevalence of Endometrial Polyp in Reproductive-Age Infertile Women

**AUTHORS:** Molly Moravek, Matthew Will, Natalie Clark, Anjel Vahratian, Senait Fisseha

**AFFILIATION:** University of Michigan

**Objective:** The purpose of this study is to determine the prevalence of and risk factors for endometrial polyps in all patients evaluated for infertility at the Center for Reproductive Medicine at the University of Michigan.

**Materials and Methods:** A retrospective chart review of all patients age 18-45 who underwent saline infusion sonography (SIS) or office hysteroscopy (OHS) from 2006 to 2008 was performed, examining both demographic and clinical characteristics. Data were analyzed using t-tests, chi-square tests, and multivariable logistic regression.

**Results:** Of 1480 studies identified, 1295 studies in 1136 patients were included in the analysis. The prevalence of endometrial polyps in this population was 15.3% (174 women with 196 polyps). Polyp size ranged 1-25 mm (mean 9.8 mm), and 14% of polyps were noted to be at the cornua. Women with polyps were older (mean age 35 vs. 33.5,  $p < 0.001$ ) or had a prior history of polyps ( $p < 0.0001$ ). No significant differences were noted based on race or BMI. Parity was protective against polyps, particularly in women with 2 or more deliveries (AOR 0.33, 95% CI: 0.14-0.81). Polyps were found in 16% of asymptomatic women. Of those polyps on which pathology was available, 75.5% (105/139) had confirmation of benign polyp, and 8% (8/105) showed evidence of hyperplasia or atypia. No patients had evidence of malignancy. Of women who had both studies within one month, results were concordant in 88.8% (16/18) of cases. The sensitivity and specificity of SIS in diagnosing endometrial polyps was 88% and 100%, respectively.

**Conclusion:** Although certain patient characteristics were associated with an increased risk of polyps, one out of seven women screened in this population were diagnosed with an endometrial polyp, suggesting a need for routine screening in women presenting for infertility evaluation.

## ABSTRACT #15

**TITLE:** Does Length of Postgraduate Training Influence Physicians' Decision to Practice in Michigan?  
**AUTHORS:** Benjamin Wood  
**AFFILIATION:** Sparrow Health System/MSU

**Objective:** Physicians tend to practice near where they train. As of 2008, sixty-one percent of Michigan physicians trained in Michigan. By 2020, however, Michigan is projected to have a physician shortage. Concurrently, Michigan is losing its highly educated population. This study examines if it is more likely for residents and fellows who train in Michigan for longer periods to practice in Michigan

**Methods:** A link to an anonymous survey was e-mailed to program coordinators of 261 ACGME, 144 AOA and 23 dually accredited programs in Michigan. Program coordinators were asked to distribute the survey to residents and fellows. Theoretically, the survey was distributed to 6,044 physicians-in-training. Subjects were divided based on the number of years they have trained in Michigan. Respondents were asked if they planned to practice in Michigan after completion of their program. The percentage of residents that planned to stay in Michigan was compared with the number of years of training in Michigan

**Results:** Training in Michigan ranged from one to seven years. 404 people supplied years of training and choice of practice location. Overall, 38.5% of respondents plan to practice in Michigan. The decision to stay in Michigan did not follow a trend with the length of training. The percentage of trainees that plan to stay in Michigan were, 47.7% (51/107), 33.0% (32/97), 38% (30/79), 28.4% (23/81) and 47.5% (19/40) for 1-4 and >4 years of training respectively.

**Conclusion:** Increased length of training in Michigan does not influence the decision to stay and practice in Michigan after completion of training.



## **ABSTRACT #16**

**TITLE:** **Small Bowel Obstruction Subsequent to Essure Micro-Insert Sterilization: A Case Report**

**AUTHORS:** Jimmy Belotte, Valerie Shavell, Awoniyi Awonuga, Michael Diamond, Jay Berman, Amanda Yancy

**AFFILIATION:** Wayne State University

**Background:** An uncommon complication of the Essure sterilization method is perforation of either the fallopian tube or the uterus, which has been reported to occur in approximately 3% of women. This case demonstrates that small bowel obstruction (SBO) is a potential complication of Essure sterilization.

**Case:** A young woman developed nausea, vomiting, and constipation one month after Essure sterilization. Radiological investigations suggested distal SBO with the left micro-insert noted in the pelvis. These findings were confirmed at operative laparoscopy. Lysis of adhesions, removal of the Essure micro-insert, and left salpingectomy were performed.

**Conclusion:** This case is reported to increase awareness that SBO is a potential complication of micro-insert placement. **Keywords:** Essure hysteroscopic sterilization, small bowel obstruction, micro-insert.

## **ABSTRACT #17**

**TITLE:** **Platinum-Based Combination Chemotherapy for the Treatment of Advanced Stage Squamous Cell Carcinoma of the Vulva**

**AUTHORS:** Jimmy Belotte, Al-Wahab Zaid, Rashmi Bolinjkar, Leigh Solomon, Robert Morris, Gunter Deppe

**AFFILIATION:** Wayne State University

**Objective:** To report our experience using platinum-based combination chemotherapy for the management of advanced stage squamous cell carcinoma of the vulva.

**Methods/Design:** Retrospective case –control chart review.

**Setting:** University teaching hospital.

**Patients:** All patients with advanced stage (III/IV) squamous cell carcinoma of the vulvar seen at Karmanos Cancer Institute (KCI) from 09/01/2005 to 09/1/2010 treated with platinum-based combination chemotherapy. Control were extracted from SEER database of Wayne County.

**Variables:** Age, Race, FIGO Grade, FIGO Stage, Chemoradiation, Surgery, Chemotherapy, Vital status. Measurements & Main Results: Clinical Response and overall survival (OS).

**Results:** We identified 16 patients with a diagnosis of vulvar cancer. Eight (50%) of them were treated at KCI from September 2005 to September 2009 and represent the study population; the other half (control) was extracted from the SEER database of Wayne County. There were no significant differences between both groups in age, race, FIGO grade and FIGO stage. The Median age was 52 and 55 for the case and control groups respectively. 62 percent were FIGO stage III versus 37 FIGO stage IV and were evenly distributed between the cases and controls. Eleven of the sixteen patients received Concurrent chemoradiation with weekly cisplatin regimen, 62 percent of the treatment group versus 75 percent of the control. Half of the control was treated with some form of surgery compared to 12 % of the study group. All of the study population received at some point combination platinum-based combination chemotherapy compare to none in the control group. Carboplatin and a taxane represent 62.5% versus 37.5 % Cisplatin and a taxane. Fisher's Exact Test was used for statistical analysis. Mean survival was calculated using the Kaplan-Meier analysis with a trend toward a survival advantage for the controls.

**Conclusion:** No general conclusions can be made from the data presented due to lack of power; statistical significance could not be reached. If we were to double the sample size, we would have reached statistical significance with a survival advantage for the non-chemotherapy group. However, three out of the eight patient of the treatment group showed clinical response and two of them complete response and remains NED to date.

## **ABSTRACT #18**

**TITLE:** Health Care Views of U.S. Women Compared to Women in a Developing Nation  
**AUTHORS:** Kami Palmer, Karen Venero  
**AFFILIATION:** William Beaumont Hospital

**Objective:** Define what priority women of different socioeconomic classes place on various components of health care maintenance.

**Methods:** A survey regarding health care maintenance knowledge and priorities was distributed to female patients over presenting for health care visits at three clinical settings: Beaumont Hospital Obstetrics and Gynecology Clinic, Generations Obstetrics and Gynecology Office, and Cuzco Regional Hospital in Cuzco, Peru.

**Results:** 139 surveys were completed. A significant difference was found in regards to priority placed on regular pre-natal care ( $p = .039$ ), screening for sexually transmitted infections (STIs) ( $p = <0.0001$ ), and knowledge of the indication for a pap smear ( $LR <0.0001$ ). There was no significant difference in regards to priority placed on other elements of preventive and health care maintenance surveyed.

**Conclusion:** Women from different socioeconomic groups place different priority on receiving regular pre-natal care and screening for STIs. Educational programs regarding these elements of health care may increase compliance with current recommendations.

## ABSTRACT #19

**TITLE:** Neonatal Admission Trends Among Pediatricians and Neonatologists to Nursery Versus Intensive Care Unit  
**AUTHORS:** Nicole Radulovich, Paul Schluckebier  
**AFFILIATION:** Sparrow Health System/MSU

**Introduction:** Many factors likely contribute to where neonates are admitted after birth, whether they stay with the mother, go to the nursery or to a neonatal intensive care unit. This study explores the possibility that the unit to which the neonate is admitted is dependent on their birth attendant (pediatrician or neonatologist). Our hypothesis is that birth attendants may preferentially admit to their own unit.

**Methods:** This retrospective chart review looked at births from January 1, 2010 to December 31, 2010 to determine rates of admissions by birth attendant, time of day and mode of delivery. Vaginal and cesarean deliveries over 35wks were included. Deliveries not attended by a physician were excluded as were infants with major congenital anomalies.

**Results:** 400 newborns met inclusion criteria during the study period. 241 (60%) neonates were initially evaluated by a staff neonatologist and 159 (40%) by a staff pediatrician. Neonates were admitted more frequently to the NICU by neonatologists than pediatricians (29% vs. 7%,  $p < 0.05$ ). In the evening hours, when staff pediatricians are not present and neonatologists attend all c-sections and vaginal deliveries as needed, newborns were more commonly admitted to the NICU than the nursery (25% vs. 9%,  $p < 0.05$ ); and more neonates delivered by c-section went to the NICU than those delivered vaginally (23% vs. 16%,  $p < 0.05$ ).

**Conclusion:** This study shows that neonatologists are more likely to admit late preterm and term infants to the NICU than pediatricians. Whether these admissions are indicated remains to be determined in future study. Over or under admitting to a certain unit can clearly have cost effectiveness implications and disrupt parent-infant bonding. Study of factors that influence admitting patterns are warranted.

## **ABSTRACT #20**

**TITLE:** Nondisclosure PGD for Late Onset Autosomal Dominant Diseases  
**AUTHORS:** Roohi Najeemuddin, Ilan Tur-Kaspa  
**AFFILIATION:** Wayne State University

**Objective:** Most potential carriers of late onset dominant diseases decide that knowing their status as a carrier is detrimental to their well being. Meanwhile, they wish their children not to inherit the mutation and go through similar emotional turmoil. Nondisclosure PGD, in which mutation results are not disclosed to the couple, can achieve both goals. Our aim was to resolve ethical and practical dilemmas of patients and medical staff with the current process.

**Methods:** A revised protocol was developed based on ethical considerations and clinical experience, and was approved by the institutional ethical and review boards. The current protocol for nondisclosure or exclusion PGD raises some ethical concerns: 1. payment for PGD that is not performed if pre-testing is negative; 2. possible mock ET; 3. avoiding embryo freezing; 4. unaffected embryos may be discarded by exclusion testing; and 5. ensuring non-divulgence. The revised protocol resolves these concerns: 1. PGD for aneuploidy was added to decrease risk of fetal aneuploidy, so PGD will be performed regardless of the mutation result; 2. since no-ET cannot indicate the genetic status because it may occur due to blastocyst development, aneuploidy, or PGD result for the mutation, mock ET is not needed; 3. cryopreservation can be done; 4. direct mutation testing is done so no unaffected embryos will be discarded; 5. staff in direct contact with the couple will not be aware of the mutation result so they can maintain their standard of care.

**Results:** Patients underwent successful such nondisclosure PGD, healthy children were born, and couples have cryopreserved embryos. While many professionals were involved in their care, including from out of state centers, ensuring non-divulgence was easily maintained.

**Conclusion:** Exclusion testing has answered some ethical concerns but may still result in discarding of unaffected embryos. This revised nondisclosure PGD protocol overcomes dilemmas of both patients and staff and should be offered to couples first.

## **ABSTRACT #21**

**TITLE:** Treatment of Uterine Carcinosarcoma with Combination Ifosfamide/Platinum-Based Chemotherapy and Volume-Directed Radiation

**AUTHORS:** Kyla Carlson, Stanley Frye, Garrett Kerndt, Michael Bianco, Christopher Vaughns, Joanne LaFleur, Lindsey Korepta, Elizabeth Sontag Gordon Downey

**AFFILIATION:** Grand Rapids Medical Education Partners/MSU

Carcinosarcoma is a rare but aggressive form of uterine malignancy, accounting for 4-9% of all uterine cancers. There are 0.5-3.3 cases/100,000 females per year. It contains both epithelial and stromal elements. There is a high risk of recurrence and distant metastasis. Most recurrence occurs within the first year of diagnosis. Patients presenting with early stage disease have a 2-5 year overall survival of ~50%. No consensus with regard to overall benefit or optimal adjuvant treatment regimens. This study was a retrospective case series in which 38 patient charts were reviewed. Data collected included patient demographics, staging information, treatment, toxicities, recurrence, disease-free interval and overall survival. Results from this study show improved disease-free survival for women with Stage I-III uterine carcinosarcoma. The median disease-free and overall survival interval could not be calculated due to >50% of patients alive and/or disease free at the end of the study period. Patients with stage III-IV uterine carcinosarcomas were more likely to recur; most often within the pelvis, but distant metastasis to the liver, brain, and lung were also demonstrated. Larger scale studies are needed to determine if combination treatment with ifos/platinum-based chemotherapy and radiation are effective in treatment of uterine carcinosarcoma.

## ABSTRACT #22

**TITLE:** **Role of Hysteroscopy in Diagnosis of Subtle Uterine Anomalies With Normal Hysterosalpingography**  
**AUTHORS:** Nisha Kalia, Omar Abuzeid, Mohamed Ashraf, Mostafa Abuzeid  
**AFFILIATION:** Hurley Medical Center/MSU

**Objective:** Hysterosalpingogram (HSG) is an initial screening tool for evaluation of the uterus and fallopian tubes. The purpose of this study is to determine whether in patients with infertility and/or recurrent pregnancy loss a normal appearance of the endometrial cavity on HSG can rule out subtle incomplete uterine septum or an arcuate uterus. We also evaluated reproductive outcomes after surgery.

**Background:** Hysteroscopy and HSG are very important methods in the management of an infertile patient.

**Material and Methods:** 317 patients who presented to our unit with infertility and or recurrent pregnancy loss (1992 - 2008), and subsequently underwent hysteroscopic division of a short incomplete septum or an arcuate uterus were studied. All patients underwent HSG as a part of their workup. We compared the findings on HSG with respect to the appearance of the endometrial cavity with the hysteroscopic findings. The reproductive outcome after hysteroscopic surgical correction of such pathologies was also studied.

**Results:** 168 patients (53.0%) had a normal HSG finding in the presence of abnormal finding of either a subtle incomplete uterine septum or an arcuate uterus on hysteroscopy. Adequate surgical management of these pathologies improved reproductive outcome with a pregnancy rate of 56.1% and miscarriage rate of 14.1%

**Conclusion:** This study suggests that HSG should not be used to rule out arcuate uterus or subtle uterine septum when the clinical presentation of the patient suggests a subtle uterine anomaly. The underlying reason for failure of HSG to detect such anomalies in some patients is not clearly understood.

## ABSTRACT #23

**TITLE:** Vanishing Septated Cystic Hygroma and Fetal Hydrops-Review  
Of Literature for Fetal Implications

**AUTHORS:** Nishia Kalia, Thalia Pachiyannakis, Ivana Vettraino

**AFFILIATION:** Hurley Medical Center/MSU

**Background:** Fetal hydrops is defined as presence of excessive fluid accumulation in at least two fetal body cavities. Nuchal thickening or cystic hygromas represent a congenital malformation of the lymphatic system associated with a high incidence of aneuploidy, particularly Turner or Down syndrome and has been associated with poor prognosis. 84% of hydropic fetuses have chromosomal abnormality.

**Case:** A 31 year old G5P4 female was referred at 19.1 weeks' gestation for consultation for a sonographic finding of a 'cyst of the fetal head'. The outside scan reported a  $3.2 \times 3.6$  cm complex cystic mass suggestive for encephalocele. Repeat sonogram showed a large septated nuchal cystic hygroma, pleural effusion, pericardial effusion, ascitis and fetal skin edema. Amniocentesis showed a 46 XX karyotype fetus. All work up including congenital infections were negative. Maternal blood type is Rh (+). Serial sonograms showed spontaneous and sequential resolution of the hydrops and cystic hygroma beginning at 25 weeks gestation. The patient underwent a spontaneous vaginal delivery at term of a normal appearing infant. The only finding at delivery was a small amount of redundant skin at the back of the neck.

**Conclusion:** This case illustrates that a bad outcome is not always the case even when the second trimester sonogram shows extensive hydropic findings. However, due to diverse etiology and outcome, a decision could cause a lot of dilemma both for the obstetrician and the parents. We suggest the possibility of survival when such lesions are detected prenatally may be greater than previously thought.



## **ABSTRACT #24**

**TITLE:** Molar Pregnancy with an IUD – An Association or a Co-Incidence?  
Case Report with Review of Literature

**AUTHORS:** Nisha Kalia, Rajul Pandya, Shavell Karel

**AFFILIATION:** Hurley Medical Center/MSU

**Background:** The incidence of hydatidiform mole is 1-2 per 1000 pregnancies. The risk factors for molar pregnancy are maternal age at either extreme of reproductive spectrum, prior molar pregnancy. Adolescents and women aged 36- 40 years have a twofold risk and those over 40 years have an almost tenfold risk

**Case:** A 21 year old, para3, living 2 female presents with complaints of vaginal bleeding ongoing since Paragard IUD placement 2 months ago. Bleeding got worst the night before presentation with passage of clots and lower abdominal pain. She did not give any history of passage of tissue or bubble like structure. Patient had a vaginal delivery 5 month ago and was not on any birth control after that. On examination the patient had bleeding from the os with visualization of the IUD thread. Ultrasound showed a complex, heterogenous lesion in the fundus with multiple cystic changes, suggestive of a molar pregnancy or an incomplete abortion. Serum HCG level was 198587 MIU/ML. Patient underwent suction evacuation of the uterus and removal of the IUD. The pathology confirmed complete molar pregnancy. Patient had weekly serum HCG draws and drop in HCG level was serially followed.

**Conclusion:** As per the best ability of the authors after a detailed Medline search, this is the first case of a complete molar pregnancy with a non hormonal IUCD in place. Contraception after molar pregnancy is very debatable in itself. More research is needed to highlight the association between molar pregnancy and contraception, if any.

## ABSTRACT #25

**TITLE:** Paraneoplastic Encephalitis Associated with an Ovarian Mature Cystic Teratoma: A Case Report  
**AUTHORS:** Randa Jalloul, Yvonne Butler, Kenneth Kuper, Mangat Charanpal  
**AFFILIATION:** Henry Ford Health System

**Background:** Anti-N-methyl-D-aspartate receptor (anti-NMDA-R) encephalitis is a paraneoplastic syndrome recently recognized to occur in susceptible young women with mature ovarian teratomas. The cause is speculated to be the presence of onconeural antigens in the tumor, triggering the formation of autoantibodies to the receptor mostly expressed in the adult hippocampus (forebrain). Symptoms consist of psychiatric, autonomic and neurologic deregulation. New treatment options include the use immune-modulating agents in addition to surgical excision and supportive care.

**Case:** A 27 year old previously healthy woman presented with severe nausea, fever, mental status changes and headaches to the emergency room. She was admitted to the hospital with a working diagnosis of viral encephalitis after a negative extensive work up. She later developed dyskinesias and decompensated despite supportive care, antiviral and antiepileptic treatment. She sustained status epilepticus requiring intubation, sedation and the use of vasopressors. A tracheostomy was soon needed. Her cerebral spinal fluid was positive for antibodies to the NMDA receptor. An Ultrasound and MRI of the pelvis confirmed the presence of a 4 cm ovarian teratoma. Following surgical excision, she continued to have severe encephalopathy. She was subsequently treated with steroid pulse therapy, intravenous immunoglobulins and received four cycles of weekly chemotherapy consisting of Rituximab and cyclophosphamide. She had a slow gradual improvement in her mental status, became stable and was discharged from the unit with the tracheostomy. Three months after her surgery, she is currently able to speak with the help of a special apparatus and is undergoing physical therapy in a rehabilitation center.

**Comments:** Cystic ovarian teratomas are common benign ovarian tumors that can be often asymptomatic. Their association with the NMDA-R encephalitis has been recently investigated in the neurologic literature. Our purpose is to increase the awareness of gynecologists of this entity as they play part in the multidisciplinary approach involving patient management. We also summarize the literature about the possible differential diagnosis, treatment options and outcomes.

## ABSTRACT #26

**TITLE:** An Unusual Presentation of Müllerian Duct Dysgenesis Presenting As Subacute Bowel Obstruction

**AUTHORS:** Komal Agarwal, Mohamed Ashraf, Mostafa Abuzeid

**AFFILIATION:** Hurley Medical Center/MSU

**Background:** The usual presentation of Mayer Rokitansky Kuster Hauser Syndrome is primary amenorrhea in late teenage years. Small rudimentary uterine bulbs are usually present with rudimentary fallopian tubes. An active endometrium may be present in 7% of the patients.

**Case:** We report a 24 year old female patient who presented with the chief complaint of generalized abdominal pain and nonbilious vomiting for 4 days. She was known to have spina bifida, bilateral hydronephrosis and neurogenic bladder. She did not attain menarche and never had a gynecologic exam or attempted intercourse. On abdominal examination a vague mass with ill defined margins was palpable over right lower, middle and upper quadrant which seemed to be arising from the pelvis. On gynecologic exam she had a blind vaginal pouch of approx.0.5 cm. After a MRI and a multidisciplinary workup, and laparotomy the patient was found to have a complete vaginal agenesis with markedly enlarged and dilated right unicornuate uterus, cervix, and right fallopian tube with hematometra. Small bowel loops were adherent to each other and to the anterior abdominal wall because of extensive endometrial implants. She underwent lysis of adhesions, hysterectomy, right salpingectomy and right hemicolectomy.

**Conclusion:** This was an unusual case of Müllerian ducts dysgenesis and unicornuate uterus with active endometrium presenting as sub acute bowel obstruction and a large mass. What was thought to be distended vaginal cuff and hence hematocolpos was actually distended cervix with old blood. Literature review revealed no such clinical presentation of Müllerian abnormality reported in the past.

## **ABSTRACT #27**

**TITLE:** A Review of Intrauterine Fetal Demise in a Community Setting  
**AUTHORS:** Cecily Clark-Ganheart, Candice Nelson, Ahmed Akl, Mohamed Khedr, Ivana Vettraino  
**AFFILIATION:** Hurley Medical Center/MSU

**Objective:** To describe demographics associated with intrauterine fetal demise in an urban community setting to assess interventions to improve outcome.

**Methods:** Our retrospective study received IRB approval. Medical record billing codes were reviewed using the parameters “Intrauterine Fetal Death” and “Intrauterine Fetal Demise.” Inclusion criteria were stillbirth on arrival, delivery at index hospital between January 1, 2000 and December 31, 2009, and gestational age of 20 weeks’ or greater. Charts with insufficient information regarding gestational age were excluded. Variables included maternal age, race, presenting complaint, maternal drug screen, gestational age, birth weight, autopsy results, and placental pathology.

**Results:** 190 cases were identified. 114 met inclusion criteria. The rate of fetal demise is 5.1/1000 live births. 70 (61.4%) occurred after 28 weeks gestation. Most frequent maternal condition included diabetes mellitus, chronic hypertension, and preeclampsia. Mean maternal age was 25.8 years. 81 patients (71.1%) were African American. 64 (56.1%) of the study population was insured by Medicaid. 40 (35.1%) stillbirths occurred on the staff teaching service. The most common placenta pathology identified was ‘normal histology’ in 32 (27.4%) cases, followed by 27 (23.1%) with ‘chorioamnionitis’. 22 (38.7%) women complained of decreased fetal movement.

**Conclusion:** The overall rate of fetal demise in our study population was 5.1/1000. The most common presenting complaint was decreased fetal movement, reinforcing the role of fetal kick counts in antenatal surveillance. The lower rate of demise on the staff service is likely due to an aggressive practice management style in our high risk population.

## **ABSTRACT #28**

**TITLE:**                    **Gastric Ulcer Perforation as a Post-Operative Complication  
Of Benign Gynecologic Surgery**

**AUTHORS:**                Lakshmi Bangalore Vatsan Sri, Ronald Strickler

**AFFILIATION:**            Henry Ford Hospital

Gastric ulcer perforation is an infrequent complication during the immediate post operative period after total abdominal hysterectomy. In this case, a 57 year old G1P1, with no significant past medical history, underwent total abdominal hysterectomy and bilateral salphingo oophorectomy secondary to enlarging uterine fibroids ( 20 weeks size) during the post menopausal period. She developed persistent nausea and vomiting during the immediate postoperative period which was initially thought to be due to ileus and later was diagnosed with intra-abdominal abscess. Upon re-exploration on post operative day 7, she was diagnosed with a perforated gastric ulcer which was repaired with an omental patch.

## **ABSTRACT #29**

**TITLE:** A Simplified Technique of Laparoscopic Cornuostomy for Interstitial Ectopic Pregnancy  
**AUTHORS:** Hussein Warda, Hussein Salem, Mostafa Abuzeid  
**AFFILIATION:** Hurley Medical Center/MSU

**Background:** Interstitial ectopic is a rare clinical situation which carries a high mortality rate. The purpose of this presentation is to describe (video presentation) a simplified technique of laparoscopic linear cornuostomy for treatment of a large interstitial ectopic pregnancy.

**Case:** A 30 year old patient with a history of secondary infertility for one year presented for in-vitro fertilization (IVF) at our unit. The patient had a history of right salpingectomy due to previous ruptured ectopic and a history of pelvic inflammatory disease resulting in extensive pelvic adhesions and damage of the left fallopian tube. The patient conceived on her second trial of IVF/Embryo transfer. Pregnancy ultrasound showed possible 3 non-viable gestational sacs at 6 week-gestation. Subsequent ultrasound at 8 week- gestation showed a possible right interstitial ectopic pregnancy together with 2 collapsed intrauterine sacs. The patient was strongly advised to undergo a diagnostic laparoscopy to confirm the diagnosis and to correct it surgically, however she refused. At 10 weeks gestation the patient had a repeat ultrasound scan confirming the diagnosis, and consented to undergo surgery. Diagnostic laparoscopy and operative laparoscopy with linear cornuostomy of a large right interstitial ectopic pregnancy was performed at the same setting. Details of the technique will be presented in a video clip. The patient had an uneventful recovery and was discharged home on the same day. Repeated  $\beta$ -hCG values showed gradual decrease to normal non pregnant levels.

**Conclusion:** This case illustrates a simplified, safe and effective technique of laparoscopic management of interstitial ectopic pregnancy.

## **ABSTRACT #30**

**TITLE:**                    **Role of Tubal Embryo Transfer During Assisted Reproductive Technology**

**AUTHORS:**               Hussein Warda, Hussein Salem, Mostafa Abuzeid

**AFFILIATION:**         Hurley Medical Center/MSU

**Background:** Laparoscopic tubal embryo transfer (TET) after in-vitro fertilization (IVF) has become obsolete as a result of recent advances in both laboratory and embryo transfer (ET) techniques. In this presentation we demonstrate a possible role for TET in certain clinical situations in patients with repeated failure of IVF/ET **CASE SERIES:** Three cases of infertility presented to our clinic with different diagnosis that required IVF/ET.

**Case A:** A 24 years old patient with primary infertility for 1 year due to severe male factor. The patient underwent 3 unsuccessful IVF/ET cycles .TET was performed during the fourth IVF cycle and the patient delivered twins.

**Case B:** A 35 years old patient with primary infertility for 13 years due to severe male factor. The patient went through 6 unsuccessful IVF/ET cycles abroad. Mock transfer revealed very difficult cervical curve, which makes ET very difficult and may have contributed to the previous failure. TET was performed and the patient is currently pregnant.

**Case C:** A 30 years old patient with primary infertility for 5 years due to stage 4 endometriosis and uni-cornuate uterus. The patient had 3 fresh and 1 frozen cycle transfers abroad with negative results. The patient underwent IVF, TET and delivered twins.

**Conclusion:** Providing at least one fallopian tube is patent and healthy, TET still has an important role in selected cases with repeated IVF/ET failure either due to difficult ET or unexplained failure.

## **ABSTRACT #31**

**TITLE:** Spontaneous Vaginal Evisceration: A Case Report  
**AUTHORS:** Mark Zakaria, Mili Thakur, Michael Dean, George Shade  
**AFFILIATION:** Wayne State University

**Background:** A case of spontaneous vaginal evisceration is presented.

**Case:** The patient is a 59 y/o postmenopausal female with acute onset vaginal bleeding and associated pelvic pain. A protruding mass in the inferior wall of the vagina was noted on speculum exam. Pelvic ultrasound showed a normal-sized uterus with no evidence of endometrial thickening. Spontaneous protrusion of bowel through the vagina was found. The patient was then taken to the operating room for laparotomy, reduction of bowel evisceration, repair of bowel injury, and vaginal defect repair. The patient was treated with IV antibiotics, transfusion of blood and was discharged to home following passage of flatus.

**Conclusion:** The presentation of spontaneous vaginal evisceration is a rare clinical scenario that, when properly identified requires prompt and appropriate management.



## **ABSTRACT #32**

**TITLE:**                    **Recurrent Brain Abscess Following Extraction of an Infected Tooth Complicating Pregnancy**  
**AUTHORS:**                Deslyn Hobson, Anthony Imudia, Eleazar Soto, Awoniyi Awonuga  
**AFFILIATION:**            Wayne State University

**Study Objective:** To present a case of a pregnant patient who underwent extraction of an infected tooth in second trimester which lead to multiple brain abscesses and partial lobectomies.

**Background:** Odontogenic infections are quite common and, in some cases, can extend beyond the oral cavity with potentially life-threatening complications.

**Methods:** A case report. A 35-year old G3P0020, underwent extraction of an infected left maxillary third molar tooth at 19-3/7 weeks gestation, and later presented with mental status changes. Computed tomography revealed left pterygoid muscle abscess, which progressed to brain abscess. She underwent multiple partial lobectomies to drain her recurrent brain abscesses. The pregnancy continued until term and she underwent a cesarean delivery.

**Conclusion:** Brain abscess is a rare, but life threatening complication of pregnancy. This case illustrates the potential complications following extraction of an infected tooth in pregnancy.

## ABSTRACT #33

**TITLE:** Gestational Weight Gain and Adverse Outcomes Among Term Infants of a Community Based Residency Clinic  
**AUTHORS:** Pierre Barbot, I. Stanley Frye, Garrett Kerndt, Kristen Oldenberg  
**AFFILIATION:** Grand Rapids Medical Education Partners/MSU

**Introduction:** Maternal obesity and excessive weight gain in pregnancy have been linked to adverse maternal and neonatal outcomes. These include increased risk of gestational diabetes, preeclampsia, gestational hypertension, macrosomia, and cesarean section rates. In reviewing the literature, 42%-51% of women gained in excess of the Institute of Medicine's (IOM) recommendations for weight gain during pregnancy. The majority of these women were overweight or obese at the beginning of pregnancy. It is estimated that 38% of all women of reproductive age are overweight or obese.

**Methods:** The patients were placed into categories set up by the IOM based on their BMI at their first prenatal visit. They were grouped as underweight, normal weight, overweight, or obese. Gestational weight gain was categorized as the percentage above, within or below the IOM guidelines. As secondary outcomes, this information was also analyzed to evaluate the relationship between weight gain and obstetrical and neonatal outcomes

**Results:** 685 Charts were reviewed and 409 met study inclusion criteria. 59.1 % of our clinic population started pregnancy either overweight or obese. 39.4% (162) of our clinic patients gained in excess of the recommended weight during pregnancy, 31.5% (128) were within range of the recommendations and 29.6% (119) gained less. Of the women who gained more than recommended, 12.3% delivered infants that were LGA. This was statistically significant when compared to women who gained within or below the weight gain recommendations.

**Conclusion:** Gestational weight gain above the IOM guidelines (39.4%) was more common than gestational weight gain below (29.6%) or within recommendation (31.1%). Excessive weight gain during pregnancy is associated with LGA. Women with pre-pregnancy BMI in the overweight or obese category are more likely to gain above the IOM guidelines. It was expected that there would be a large proportion of patients gaining more weight than IOM guidelines (39.4%). It was somewhat surprising the large number of pt's that gained less than recommended (29.6%). A few studies have shown that Low gestational weight gain has been associated with an increased risk of delivering SGA infants. Our study did not show this relationship. Some studies have reported that SGA infants are more likely to have non-severe non-neurologic dysfunction, reduction in intellectual capacity, ADHD, higher BMI later in life, metabolic syndrome, and cardiovascular complications. Important to be aware of excessive and restricted weight gain in pregnancy.

## **NOTES**