27th Annual LSU School of Medicine Department of Obstetrics & Gynecology



Resident Research Day Friday, May 15, 2015

LSU Health Sciences Center 1542 Tulane Ave, 1st Floor Auditorium New Orleans, LA

Keynote Speaker:

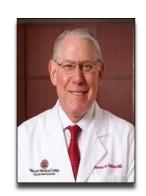
Steven G. Gabbe, M.D.
Senior Vice President for Health Sciences
Emeritus, Chief Executive Officer
Professor, Obstetrics and Gynecology
The Ohio State University Wexner Medical Center

STEVEN G. GABBE, M.D.

Senior Vice President for Health Sciences The Ohio State University

Emeritus CEO The Ohio State University Wexner Medical Center

Professor, Obstetrics and Gynecology



Dr. Gabbe is senior vice president for Health Sciences for The Ohio State University and Emeritus chief executive officer of The Ohio State University's Wexner Medical Center. He is one of the world's leading experts on the complications of diabetes in pregnancy.

Dr. Gabbe has guided Ohio State's largest construction project, which includes a new James Cancer Hospital and Solove Research Institute and Critical Care Center which opened in 2014. Dr. Gabbe led Ohio State to its first ranking on the U.S. News & World Report "Best Hospitals" Honor Roll in 2009. In 2013, the Medical Center achieved top rankings in 10 specialties, including cancer and cardiology. It was among a handful of hospitals ranked in multiple specialties. OSU was again named the Best Hospital in Columbus. OSU's College of Medicine was ranked 38th in research and 24th place in primary care among in the 2014 U.S. News & World Report "America's Best Graduate Schools."

Ohio State received the University Health System Consortium Quality Leadership Award in 2013 recognizing it as a top 10 academic medical center in the nation. Three OSU hospitals — James Cancer Hospital, University Hospital and the Ross Heart Hospital — have Magnet® status, considered the highest nursing honor for quality patient care.

Under Dr. Gabbe's leadership at the OSU College of Medicine, a complete re-design of the medical curriculum was undertaken to provide an integrated approach to competency based training. He also led efforts to expand OSU's Clinical Skills Education and Assessment Center, which provides opportunities for students to sharpen their skills using state-of-the-art patient and surgical simulations. Dr. Gabbe spent years traveling the nation visiting medical schools as cochair of the Liaison Committee for Medical Education, the accreditation body for North American medical schools. In 2004, Dr. Gabbe chaired the AAMC Clinical Research Task Force II, which created a blueprint for future clinician-scientists. In 2009, Dr. Gabbe was appointed chair of the AAMC's MR5 MCAT Review Committee. This committee's work resulted in a revision of the MCAT that will be used in 2015.

Dr. Gabbe completed his undergraduate degree magna cum laude at Princeton University, his medical degree with Alpha Omega Alpha honors at Weill Cornell Medical College, a residency in obstetrics and gynecology at Boston Hospital for Women and a clinical fellowship at Harvard Medical School. He has served on the faculty of six universities, including the University of Southern California, University of Colorado, University of Pennsylvania, University of

Washington as well as nine years as chair of Ohio State's Department of Obstetrics and Gynecology (1987 – 1996). He was dean of the Vanderbilt University School of Medicine for seven years before returning to Ohio State in 2008.

Dr. Gabbe is a member of the Institute of Medicine, and is senior editor of Obstetrics: *Normal and Problem Pregnancies*, the leading obstetrics textbook. He and his wife, Dr. Patricia Temple Gabbe, have four children and two grandchildren.

Gestational Diabetes: Detection and Management

Learning Objectives:

- 1) Describe the metabolic changes in pregnancy which produce a "diabetogenic stress" and insulin resistance.
- 2) Describe the short-term and long-term morbidities for the woman with gestational diabetes mellitus and her infant.
- 3) Discuss the need to detect gestational diabetes and methods presently in use for screening and diagnosis.
- 4) Explain the use of dietary therapy, the indications for insulin and oral hypoglycemic agents and strategies for monitoring maternal glucose control.

27th Annual LSU School of Medicine Department of Obstetrics & Gynecology Resident Research Day Friday, May 15, 2015



7:30-8:00am Continental Breakfast & Sign-In

8:00-8:15am Welcome & Introduction of Guest Speaker

Lisa Peacock, MD, Chairman LSUHSC Dept. of OBGYN

8:15-9:00am Gestational Diabetes: Detection and Treatment

Steven Gabbe, MD

The Ohio State University Wexner Medical Center

9:00-9:10am Break

9:10-9:40am Abdominal Shake Test

Jessica Jones, MD, House Officer IV

Advisor: Felton Winfield, MD Discussant: F.A. Moore, MD

9:40-10:10am Transabdominal Ultrasound versus Transvaginal Ultrasound in the

Cervical Length Evaluation of Patients with Previous Preterm

Delivery

Adriana Luciano Del-Valle, MD, House Officer IV

Advisor: Ann Chau, MD Discussant: Joseph Miller, MD

10:10-10:40am Recurrent Urinary Incontinence after Transvaginal Mesh Revision: A

Comparison of Treatment Paradigms

Barry Hallner, MD, FPMRS Fellow

Advisor: Chris Winters, MD Discussant: Chris Winters, MD

10:40-11:00am Break

27th Annual LSU School of Medicine Department of Obstetrics & Gynecology Resident Research Day Friday, May 15, 2015



11:00-11:30am Pregnancy Outcomes in Patients Carrying Fetuses with Thickened Nuchal Translucency in a Diverse United States Population

David Goodyear, MD, House Officer III

Advisor: Ann Chau, MD

Discussant: Robert Maupin, MD

11:30-12:00pm Knowledge of Postpartum Depression in High-Risk Patients and

Their Families

Michelle Schussler Taheri, MD, House Officer IV

Advisors: F.A. Moore III, MD Discussant: Rebekah Gee, MD

12:00-12:30pm Prenatal and Postnatal Course of Isolated Ventricular Septal Defects

Diagnosed by Color Doppler Sonography

Andrew Jones, MD, House Officer III

Advisor: Ann Chau, MD Discussant: Asha Heard, MD

12:30-1:15pm Lunch

1:15-1:30pm Group Photo

Please follow us out to the front steps of 1542 for a group photo.

1:30-2:15pm Poster Viewings

2:15-2:45pm Award Presentation and Final Remarks

The Abdominal Shake Test: A Pilot Study

Jessica Jones MD, Felton Winfield MD

Louisiana State University Health Sciences Center - New Orleans
Department of Obstetrics and Gynecology

Objective: Pelvic adhesions may be described as bands of scar-like tissue that form between two surfaces of the body. They can lead to pelvic pain, impair fertility and cause bowel obstruction while making gynecologic reoperation more difficult. At this time there has been no validated assessment in practice which can adequately predict the severity of adhesions. A recent physical exam known as *The Abdominal Shake Test* has been proposed as a variant of the standard preoperative exam under anesthesia which routinely accompanies all gynecologic surgical procedures. This study aims to validate *The Abdominal Shake Test* to reliably predict pelvic adhesive disease preoperatively.

Methods: All patients undergoing gynecologic procedures in which the abdominal cavity was surveyed were enrolled in the study. Consent was obtained and *The Abdominal Shake Test* was performed under general anesthesia. The patient then underwent her scheduled surgery and the pelvic adhesive disease was characterized by the grading system piloted by Gynecare. The resident surgeon and attending assigned to the patient's case then completed the survey provided.

Results: 21 patients were enrolled into the study and 42 surveys were completed. The sensitivity, specificity, positive predictive value, negative predictive value and overall accuracy was computed for the average grade cutoff with the highest area under the curve using the shake test cut point yielding the highest sensitivity/specificity average. Spearman's Correlation was used to examine the association between the shake test scores and grade with the p-value corresponding to the test that the true correlation is 0. The Weighted Kappa coefficient was used to assess inter-rate reliability of raters' grades and shake test scores.

Conclusion: When using a grade of 0 or above to define disease, The Abdominal Shake test was significantly better than chance at predicting pelvic adhesive disease with a p=0.025. Spearman's correlation was statistically significant p=0.031 which showed a correlation between *The Abdominal Shake Test* and grading of adhesions. Inter-rater reliability showed "almost perfect agreement" using the Weighted Kappa coefficient.

Transabdominal Ultrasound versus Transvaginal Ultrasound in the Cervical Length Evaluation of Patient with Previous Preterm Delivery

Adriana Luciano-Del Valle MD, Ann Chau MD

Louisiana State University Health Science Center - New Orleans Department of Obstetrics and Gynecology

Objective: To evaluate if transabdominal ultrasound is an effective method to assess cervical length in an obstetrical population with previous history of preterm delivery compared to transvaginal ultrasound assessment.

Methods: Retrospective chart review was performed. Data from 69 pregnancies were analyzed. Simple linear regression was performed to compute the fitted linear regression equation for the relationship between transabdominal measurements and transvaginal ultrasound measurements. If there was perfect agreement, the slope coefficient would be 1 and the y-intercept would be 0.

R² was computed to quantify the proportion of the variation in transvaginal ultrasound measurements explained by transabdominal measurements.

A Receiver Operating Characteristic (ROC) curve analysis was performed to examine the ability of transabdominal measurements to predict a transvaginal ultrasound cervical length measurement ≤25 mm and dilatation measurement > 10 mm.

Transvaginal ultrasound measurements were compared to transabdominal measurements. 95% Confidence Intervals on the mean difference (transabdominal - transvaginal ultrasound) in each type of measurement were computed and a p-value was obtained by using a one-sample t-test to test the null hypothesis that the mean difference is 0.

Results: ROC curve analysis showed that considering a transabdominal distal functional cervical length of <30 mm yielded the highest sensitivity-specificity average for the prediction of transvaginal distal functional cervical length of <25mm. Sensitivity of 76%, specificity of 69%, PPV: 45% and NPV: 90%. Also considering a transabdominal cervical dilation of >7mm yielded the highest sensitivity-specificity average for the prediction of transvaginal dilation of >10 mm. Sensitivity of 71%, Specificity of 82%, PPV: 50%, NPV: 92%.

Conclusion: Distal functional cervical length of <30mm by transabdominal US and a cervical dilation of >7 mm by transabdominal US have good negative predictive values and could be used as screening imaging for obstetrical patients at high risk for preterm delivery.

Recurrent Urinary Incontinence after Transvaginal Mesh Revision: A Comparison of Treatment Paradigms

Barry Hallner MD, Brooke Brown MD, Ryan Krlin MD, Jack Winters MD

Louisiana State University Health Sciences Center – New Orleans

Department of Urology

Objective: To determine if transvaginal mesh revision with concomitant prophylactic urethral bulking agent injection reduces secondary urinary incontinence, decreases the need for secondary procedures, and improves patient satisfaction.

Method: A retrospective chart review was done to stratify patients undergoing transvaginal mesh sling revision alone compared to patient undergoing transvaginal mesh sling revision and prophylactic periurethral injection. Secondary urinary incontinence outcomes and the need for retreatment were analyzed between the groups to determine if the treatment was effective. Patient satisfaction was evaluated with two validated questionnaires, the Patient Global Impression of Improvement (PGI-I) and the Medical, Epidemiologic, and Social Aspects of Aging (MESA) Stress and Urge Incontinence.

Results: 52 patients met inclusion criteria with an average follow-up of 11 months. 17 (32.7%) patients elected to undergo transvaginal mesh sling revision and prophylactic urethral bulking agent injection. 13 (76.5%) reported no recurrent urinary incontinence and 4 (23.5%) reported recurrent urinary incontinence, 1 (25%) elected to undergo an autologous fascial sling. 35 (67.3%) patients underwent TV mesh revision alone. 9 (25.7%) reported no recurrent urinary incontinence and 26 (74.3%) patients reported recurrent urinary incontinence. In these patients, 13 (50%) elected to have a secondary procedure. 3 (23.1%) patients elected to undergo repeat sling placement. 2 (66.7%) were autologous fascial slings and 1 (33.3%) was a repeat midurethral sling. In these patients, no further procedures were required. 10 (76.9%) patients elected to undergo urethral bulking agent injection. 3 (30%) of these patients required no further procedures, 7 (70%) required at least 1 to 3 subsequent injections over the next 6 months. There was a 59.6% (31/52) response rate to the questionnaire. Patient satisfaction was highest in the sling group with the lowest rates of recurrent incontinence. Those patients that underwent prophylactic injection did not require further procedures but do not report improvement in patient satisfaction or overall improvement in their symptoms.

Conclusion: The incidence of recurrent urinary incontinence after transvaginal mesh sling revision is high. A sling may be more effective and have higher patient satisfaction as a secondary procedure. Prophylactic urethral bulking agent injection appears to delay urinary incontinence after transvaginal mesh sling revision, but does not change overall patient satisfaction. Prophylactic injection can be an effective strategy in pain patients as an adjunct in the management of secondary urinary incontinence.

Pregnancy Outcomes in Patients Carrying Fetuses with Thickened Nuchal Translucency

David S. Goodyear V, MD, Ann Chau MD, Joseph Hagan ScD

Louisiana State University Health Sciences Center – New Orleans Department of Obstetrics and Gynecology

Objective: To study pregnancy outcomes in patients with fetuses having thickened nuchal translucency (>95% for given crown rump length) at 10-14 weeks gestational age in a diverse United States population. To provide useful information to parents regarding fetal prognosis in cases of fetuses with thickened nuchal translucency with a normal karyotype and normal anatomical ultrasound findings.

Methods: Retrospective chart review of pregnancy outcomes, including antenatal, delivery, and neonatal complications, of all patients with fetuses having thickened nuchal translucency from 1/2011 through 12/2014 at the Perinatology offices at Touro Infirmary and East Jefferson General Hospital. Each detailed anatomic ultrasound examination was analyzed to look for cardiac, CNS, skeletal, or diaphragmatic anomalies in these patients' fetuses. Other specific outcomes also included: IUGR, IUFD, preterm delivery, miscarriage, successful and uncomplicated deliveries. The maternal age, ethnic background, and medical co-morbidities were also analyzed.

Results: Of the total 47 patients with fetal NT thickening, 14 were lost to follow up and their final pregnancy outcome could not be tracked. Of the 33 that were tracked, 72% had a term delivery, 12% with preterm delivery, and 5% ended in a miscarriage. Of the total 47 patients, 42 underwent detailed anatomical ultrasound examination. Of the remaining 42, 62% of patients were found to have an abnormal ultrasound finding. The abnormal findings that were documented included, cardiac (16), choroid plexus cyst (1), shortened long bones (1), diaphragmatic hernia (4), megacystis (2), and omphalocele (1). The antepartum course was tracked for 35 of the patients and 62% experienced at least one delivery or antepartum complication during their pregnancy; however, only 20% experienced a neonatal complication.

Conclusion: The majority of patients carrying fetuses with thickened NT had abnormal ultrasound findings. The majority of patients carrying fetuses with thickened NT experienced at least one antepartum or delivery complication. Despite the higher than expected abnormal US findings and delivery and antepartum complications, the majority of infants born had no neonatal complications. This offers somewhat reassuring data to present to patients when counseling regarding fetuses with thickened NT. However, the lack of patient diversity from an ethnic standpoint within this study, makes it difficult to generalize to our entire patient population.

Knowledge of Postpartum Depression in High-Risk Patients and Their Families

Michelle Schussler Taheri MD, F.A. Moore MD, Amy Young MD, Katie Vignes

Louisiana State University Health Sciences Center – Baton Rouge Department of Obstetrics and Gynecology

Objective: The goal of this project is to determine the knowledge of postpartum depression (PPD) in high-risk patients and their families.

Methods: An anonymous population-based survey for pregnant patients, their family members/significant others to assess awareness of PPD was distributed at antenatal visits by four participating clinics at Woman's Hospital in Baton Rouge. The survey also collected demographic information. A description of the project was provided, indicating that consent was implied with completing the survey. The data was compiled into an Excel spreadsheet, and statistical analysis performed using Fisher's Exact Test, Wilcoxcon Rank Sum and Kruskal-Wallis One-Way Analysis of Viariance.

Results: There were 760 surveys collected (91.44% were patients). Of these 78.85% reported not receiving education about PPD during their course of care; however, 84.21% reported having had heard of PPD and 61.84% had heard of "baby blues."

Those who had not heard of PPD were younger (60.92% 18-24y/o; p<0.001), had a lower education level (78.02% \leq high school education; p<0.001), lower income (63.64% had income < \$10,000 annually; p < 0.001), and were less likely to have known someone with a history of PPD (79.41%; p<0.001.)

Over sixty-nine percent (69.86%) responded that PPD does require professional help. Of those who have not heard of PPD, only 35.87% (p< 0.001) think that PPD requires professional help. Participants who were younger (51.67% were 18-24 y/o; p < 0.001) and had a lower level of education (52.46% \leq high school education; p<0.001) did not think that PPD requires professional help. In addition, 72.30% of participants who were uncertain about the need for professional help had less than a high school education (p< 0.001).

Participants who reported a history of PPD preferred education by discussion with their doctor (66.21%; p= 0.001). Participants who preferred written education materials were older (67.84% >25 y/o; p=0.002), reported higher annual income (33.35% earned > \$30,000 annually; p=0.006), and had higher level of education (59.28% \geq some college; p=0.002). Those who preferred an internet module or smart phone app reported education levels of \geq some college (67.50% and 63.54%, respectively; p=0.029).

Conclusion: Although the majority of participants had heard of the phrase PPD, most participants did not receive PPD education during their pregnancy. Those who were younger, less educated, with lower income or had not known someone with PPD were significantly less likely to be aware of PPD. Participants who were younger and had a lower level of education were significantly less likely to think that PPD required professional help. Those who reported a history of PPD preferred education via direct discussion with their physician. Other preferred methods of educational materials depended on level of education, age and income.

Prenatal and Postnatal Course of Isolated Ventricular Septal Defects Diagnosed by Color Doppler Sonography

Andrew Jones MD, Ann Chau MD, Christian Lilje MD, Nancy Ross-Ascuitto MD

Louisiana State University Health Sciences Center – New Orleans Department of Obstetrics and Gynecology

Objective: Fetal anatomic survey screening is becoming increasingly popular in obstetric populations using high-resolution ultrasonography; therefore, more isolated ventricular septal defects (VSDs) are diagnosed in utero by ultrasound. Hence, counseling patients carrying fetuses with isolated VSDs has become more clinically important. The prenatal course of isolated VSDs has not been widely studied, especially in low risk populations. This study examined the prevalence of VSDs in utero at East Jefferson General Hospital and Touro Infirmary with the intent to provide more accurate counseling to patients after such a diagnosis is made.

Methods: An observational chart review was performed on patients carrying fetuses with a diagnosed VSD. Maternal characteristics and history as well as fetal characteristics were reviewed to attempt to identify correlations with presence of fetal VSDs. Once a VSD was diagnosed, serial ultrasounds were performed in utero and fetal echocardiograms were performed after delivery to evaluate spontaneous closure vs. continued patency.

Results: Spontaneous closure of the fetal VSD was diagnosed in 91% of our patient population. Advanced maternal age was associated with 35.5% of the fetal VSDs diagnosed in this study. Most VSDs were isolated without associated fetal cardiac or extracardiac defects. The majority of VSDs in our study were muscular in location, not membranous. Subjects who did not experience spontaneous closure had a statistically significantly greater initial VSD size and maximum VSD size than those who experienced spontaneous closure. Subjects who did not experience spontaneous closure had significantly lower gestational age of delivery than those who experienced spontaneous closure.

Conclusions: Fetal VSDs are a common cardiac abnormality. Diagnosis is becoming more frequent with increasing use of ultrasonography and improvements in technology. The majority of VSDs in our study spontaneously resolved in utero. The VSDs that remained patent were significantly larger at initial diagnosis and at maximum size.

Poster Presentations

Miriam Busch MD, House Officer III, LSUHSC Baton Rouge

The Incidence of Underlying Endometrial Cancer in Biopsy Proven Complex Atypical Endometrial Hyperplasia-To Do or Not To Do Dilation and Curettage Miriam Busch MD, Ashley Cowart MD, Beverly Ogden MD

Vanessa Cloutier MD, House Officer II, LSUHSC New Orleans

Electrosurgery: Does Interactive Training Increase Level of Safety When Operating? Vanessa Cloutier MD, Traci Iwamoto MD, Nia Thompson MD, Joseph Hagan ScD, Jamie Alleyn MD

Jay Davis MD, House Officer II, LSUHSC New Orleans

Does SSRI Use in Pregnancy Increase the Rate of Preterm Delivery in Male Fetuses?

Jay Davis MD, Joseph Hagan ScD, Asha Heard MD

Abigail Hart MD, House Officer III, LSUHSC Baton Rouge

Comparison of Cervical Cancer Staging with MRI versus Cystoscopy-Proctoscopy with Cost Analysis Abigail Hart MD, Tammy Dupuy MD, James Ruiz MD, F.A. Moore MD, Milton Fort MD

Regina McCutcheon MD, House Officer III, LSUHSC Baton Rouge

Demographics of Women Who Deliver With Late or No Prenatal Care and Neonatal Outcomes
Regina McCutcheon MD, Andrea Usher MD

Ashley O'Keefe MD, House Officer II, LSUHSC New Orleans

Review of Surgical Site Infections after Hysterectomy in Obese Patients: Do Modifiable Risk Factors Matter?

Ashley O'Keefe MD, Valerie Williams MD, Joseph Hagan ScD, Stacey Holman MD

Tabitha Quebedeaux MD PhD, House Officer II, LSUHSC New Orleans

Impact of Current Expectant Management Protocols on Fetal Neurodevelopment in Pregnancies Complicated by Hypertension and Intrauterine Growth Restriction Tabitha Quebedeaux MD PHD, Asha Heard MD, Alberto Musto MD PHD, Joseph Miller MD

Eric Siegel MD, House Officer II, LSUHSC New Orleans

Expulsion Rate of Post-Placental 13.5 mg Levonorgestrel IUDs Eric Siegel MD, Asha Heard MD, Valerie Williams MD

Amanda Thomas MD, House Officer II, LSUHSC New Orleans

The Use of Vaginal Packing at the Time of Surgery for Pelvic Organ Prolapse and Incontinence:

A Retrospective Chart Review

Amanda Thomas MD, Caitlyn Louviere, Joseph Hagan ScD, Lisa Peacock MD

Ashley Van Wormer MD, House Officer II, LSUHSC New Orleans

An Education Intervention for Postpartum Depression Ashley Van Wormer MD, Valerie Williams MD



The Incidence of Underlying Endometrial Cancer in Biopsy Proven Complex Atypical Endometrial

Authors: PI: Ashley Cowart, MD Co Investigator: Miriam Busch, MD and Beverly Ogden, MD

Department of Obstetrics and Gynecology

Literature Review: Endometrial Cancer is the most common gynecological malignancy in the United States with approximately 41,000 new cases diagnosed yearly.[1] About 2.62% of women in the US will develop endometrial cancer and their lifetime mortality risk will be 0.5%, equaling almost 7,350 deaths yearly.[2].[3] Risk factors include increasing age, Caucasian ethnicity, obesity, nulliparity, Lynch syndrome and unopposed estrogen.[4] As of yet there is no established screening test for asymptomatic patients available; fortunately, 90% of women diagnosed with endometrial cancer have abnormal uterine bleeding as the presenting symptom. According to the American Congress of Obstetrics and Gynecology, endometrial biopsies (EMB) should be performed in all women with postmenopausal bleeding, age 45 or greater with abnormal uterine bleeding, or in women with unopposed estrogen exposure or failed medical management.[5] Traditionally dilation and curettage (D&C) has been used as the gold standard for diagnosis but this procedure is performed in an operating room whereas EMB is performed as an office procedure but typically obtains less tissue for diagnosis. A Meta-analysis of EMB in diagnosis of patients with endometrial carcinoma revealed a sensitivity of 91% in perimenopausal women, 99.6% in postmenopausal women, and in postmenopausal women with complex atypical endometrial hyperplasia, sensitivity was 88% and specificity was greater than 98%.[6] in 2006 the Gynecologic Oncology Group compared biopsy proven complex atypical endometrial hyperplasia to hysterectomy pathology twelve weeks later finding 42.6% were found to have concurrent endometrial cancer.[7]

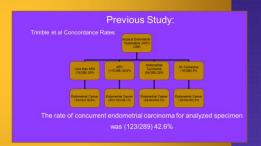
Hypothesis:

D&C is not a necessary step between EMB and hysterectomy because complex hyperplasia with atypia likely has a lower rate of concurrence of endometrial carcinoma than previously stated 43%.

Materials and Method

- •Retrospective Chart Review
- •Inclusion of all patients with endometrial biopsy(EMB) and/or dilation and curettage(D&C) with complex atypical endometrial hyperplasia at Woman's Hospital between January 1, 2000 and December 31, 2013.
- Chart patient results from EMB/D&C and hysterectomy

Expected Results: Incidence of underlying endometrial cancer in patients with atypical complex hyperplasia will be well below the previously stated 43%. Therefore, dilation and curettage does not need to be done prior to surgery.



References sive Gynecology, Katz, VL, Lentz, GM, Lobo, RA, Gershenson, DM; 5th

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Electrosurgery: Does Interactive Training Increase Level of Safety When Operating?

Vanessa Cloutier MD, Traci Iwamoto MD, Nia Thompson MD, Joseph Hagan ScD, Jaime Alleyn MD

Department of Obstetrics and Gynecology

Background

Electrosurgery is a surgical technique in which high frequency electric current is used to cut, coagulate, dessicate, and fulgurate biological tissue. Electrosurgery offers an array of benefits including less bleeding, precision of surgical technique, faster healing, less postoperative pain, and in some cases it is less expensive. However, electrosurgery does have some safety concerns.

The ultimate goal of this project is to examine and educate medical students on the OBGYN clerkship in order to increase level of safety when using electrosurgery.

Hypothesis

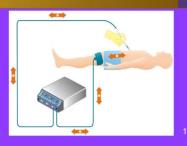
Interactive training courses in electrosurgery will be more effective at increasing medical students' level of knowledge compared to lecture series.

Methods and Materials

- This project will examine medical students' level of knowledge regarding safety with electrosurgery by using pre and post tests following lectures and interactive lab training courses.
- The students will be randomized into two groups. One group will be given a lecture series, and the second group will attend an interactive skills lab. Both will be administered the same pre and post test.
- A t-test will be used to confirm randomization, determine if there is significant improvement from pre to post-test, and to compare the change. ANOVA will be used to assess and adjust for students who have previously completed a surgical rotation.
- The anticipated sample size of 50 subjects per arm would provide 80% statistical power to detect an effect size of 0.556 at the 5% significance level.

Expected Outcome

We expect that both groups of students will demonstrate some level of improvement. However, we anticipate that the group of students who participate in the interactive course will show a greater improvement when comparing pre and post test scores.



References

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Does SSRI use in pregnancy increase the rate of preterm delivery in male fetuses?

Jay Davis MD, Joseph Hagan ScD, Asha Heard MD

Department of Obstetrics and Gynecology

Background:

Depression is often an under diagnosed disease with serious sequelae if not properly managed. Depression rates have been increasing in pregnancy, ranging from 7-13%.1 Antidepressant medication use during pregnancy has also been rising, with rates up to 7.5% in the US.2 Multiple studies have investigated whether the use of SSRIs has been linked to adverse pregnancy outcomes such as spontaneous abortion, low birth weight, congenital anomalies, and decreased APGAR scores.

There has also been an association between the use of SSRIs during pregnancy and increased risk of preterm birth, specifically in the 2nd and 3rd trimesters. 5 However, it has been difficult to assess whether confounding variables such as depression alone without treatment, ethnicity, STD pregnancy outcomes that may have erroneously been attributed to SSRI

Hypothesis:

In women who use SSRIs in pregnancy, there is a higher rate of preterm delivery, especially among those who are carrying male fetuses.

Materials and Methods:

We will utilize the Louisiana State Medicaid database to identify women that were taking SSRIs in pregnancy, assess PTD rates, and stratify by fetal gender.

- Descriptive statistics will be computed for patient demographic variables with standard deviation used to quantify the variability of quantitative variables.
- including the proportion of male and female fetuses delivered preterm among
- Fisher's Exact test will be used to determine if there is an association between gender and risk of preterm delivery among women taking SSRIs and the odds ratio will be used to quantify this association.
- Logistic regression will be used to examine the relationship between gender and odds of preterm delivery among women taking SSRIs after adjusting for relevant

Expected Outcome:

Based on preliminary work at other institutions, we expect to find an increased risk of preterm delivery in male fetuses of mothers who use SSRIs in pregnancy.

The findings of this study may further help us to understand the risks of specific medication use during pregnancy. Our study may be a first step in changing protocols for depression treatment in certain populations.

	Adverse Outcome†		
Group*	Yes	No	OR (95% CI)#
	Preterm Deliv	ery (<37 wk)	
Total population	28 634	535 022	1.006
All antidepressants	101	875	1.96 (1.60-2.41
≥24 wk	58	486	2.02 (1.54-2.63
Tricyclic drugs	49	351	2.50 (1.87-3.34
SSRIs	60	492	2.06 (1.58-2.69
		ght (<2500 g)	
Total population	18 377	542 932	1.006
All antidepressants	69	854	1.98 (1.55-2.52
=24 wk	35	505	1.66 (1.18-2.34
Tricyclic drugs	27	343	1.88 (1.28-2.76
SSRIB	38	480	1.98 (1.42-2.76
	8GA (=		
Total population	12 350	548 247	1,006
All antidepressants	21	899	0.83 (0.53-1.30
=24 wk	14	524	0.96 (0.56-1.65
Tricyclic drugs	9	360	1.00 (0.52-1.94
SSRIS	12	505	0.80 (0.44-1.44
	LGA (>	2 SDs)	
Total population	34 640	525 993	1.006
All antidepressants	64	856	1.20 (0.93-1.56
=24 wk	36	502	1.20 (0.85-1.70
Tricyclic drugs	28	341	1.18 (0.79-1.74
SSRIs	33	484	1.19 (0.83-1.70
Abbreviations: CI, conf., odds ratio; SGA, sme ptake inhibitor, "The total population i men using any antides were exposure to an an gs, women using tricy Ris during pregnancy. "Data are given as nur Data compare the tot up after adjustment fo	all for gestation of the control of	nal age; SSRI, in price of the pregnancy; in the pregnancy in the pregnancy; in the pregnancy; tes.	selective serotonin th; all antidepressa :24 wk, women witt week 23; tricyclic SSRIs, women usi

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Comparison of Cervical Cancer Staging with MRI versus Cystoscopy-Proctoscopy with Cost Analysis

Department of Obstetrics and Gynecology

Abigail Hart, MD; Tammy Dupuy, MD; James Ruiz, MD; Ferney Moore, MD; Milton Fort, MD

Past studies internationally have found MRI staging of cervical cancer to be as accurate as cystoscopy/proctoscopy in early stages, and more accurate than cystoscopy/proctoscopy in later stages, especially as tumor spreads to the adnexae. Some countries use MRI to primarily stage cervical cancer and rely less on cystoscopy/proctoscopy. In this study, we aim to compare the staging accuracy of MRI with cystoscopy/proctoscopy on patients who have already been evaluated at our institution. We also will compare the costs of each procedure within the last year to determine if MRI would be an appropriate procedure for cervical cancer staging and be more cost effective

Hypothesis: MRI is more accurate and more cost effective than cystoscopy-proctoscopy when used to stage cervical cancer.

Data collected from Woman's Hospital archives will be used to compare the staging obtained from cervical cancer patients who received both MRI and cystoscopy/proctoscopy. Cost analysis will be performed to determine if MRI should become the standard of care for cervical cancer staging if MRI staging proves as accurate or more accurate than cystoscopy/proctoscopy. Data will be included only from patients who received both MRI and cytoscopy/proctoscopy with a diagnosis of cervical cancer. Duration of study expected to last 6-8 months.

Expected results: MRI is a more accurate tool to stage cervical carcinoma, especially to differentiate between IIA and IIB, thus affecting treatment modality.



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Demographics of Women Who Deliver With Late or No Prenatal Care and Neonatal Outcomes

Department of Obstetrics and Gynecology

RESULTS

Percent delivering with no prenatal care*

What are the characteristics of the Earl K. Long patient population that put patients at

DATA ANALYSIS PENDING

highest risk to not receive prenatal care?

Andrea Usher, MD, FACOG (Primary Investigator) Regina McCutcheon, MD/MPH, House Officer III (Co-Investigator)

BACKGROUND



It is estimated that for every \$1 spent on prenatal care, \$3.38 is saved in medical costs for low birth weight infants.

Recommended Visit Schedule

Weeks Gestation		Expert Panel Nullip	Expert Panel Multip	Clinical Intervention
1-4		х	X	Preconception/dating
5-8	X	x	X	Dating
9-12	X	X		1st trimester screen
13-16	X	X	X	
17-20	X			Quad screen
21-24	X			
25-28	X	X	X	Glucose test
31-32	X	X	X	Childbirth Education
35-36	X	X	X	Growth
37	X	x		Risk assessment
38	X	x		Risk assessment
39	х			
40	X	х		Risk assessment
41	х	X	X	Post dates

Louisiana

- 0.92% delivered with no prenatal care
- 1.7% didn't initiate care until the 3rd trimester



OBJECTIVES

The purpose of this study is to create a demographic profile and briefly examine the neonatal outcomes associated with no or inadequate prenatal care.

METHODS

- Earl K. Long Medical Center deliveries between 2004 2008
- prenatal care to controls with adequate prenatal care

- DEMOGRAPHICS
- Race
- Gravity
- Marital Status

- · Sexually Transmitted Diseases

study group and controls.

Zip Code

NEONATAL

- Apgar Score
- Gestational Age at Birth
- Birth Weight
- Mode of Delivery Length of Hospital Stay

area at particular risk, area with an outreach

If we can identify an



With a better understanding of our patients we can provide better prenatal care and improve neonatal

Future Projects

· Survey of psychosocial factors

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• SPSS statistical software used to analyze the data to

determine if significant differences exist between the

a state-med Job. 1,725-736 a, PA, 2007;111-137 erican Journal of Public Health, 1994 84(9): 1414-1420 etan American Women, Journal of Perinatology, 1999; 19(1):53-60 leath Statistics (CDC/NCHS)



Review of Surgical Site Infections after Hysterectomy in Obese Patients: Do modifiable risk factors matter?

Department of Obstetrics and Gynecology

Ashley E. O'Keefe MD, Valerie Williams MD, Joseph Hagan ScD, Stacey L. Holman, MD

Background:

Hysterectomy is the most common gynecologic procedure performed in the United States, with more than 600,000 performed each year. Infectious complications after hysterectomy are variable depending on surgical route but range from 0-22.6%. Multiple factors impact postoperative infection risk including body mass index, antimicrobial prophylaxis, operative time, comorbidities, and the route of hysterectomy¹.

Obesity is associated with increased risk of death and morbidity, and it is an independent predictor of wound complications. Adverse events after gynecologic surgery, such as infection, thromboembolism, and wound complications are more prevalent in obese women than in normal weight women³. As BMI increases, so does he risk for wound complications¹

at Interim LSU Hospital (ILH) and assess for preoperative characteristics associated with wound breakdown in the obese population. We hope to determine if these patients are at an even higher risk for wound complication due to additional modifiable risk factors. We plan to apply a nomogram previously published for an gyn oncology patient population to our benign patients to determine if similar risk factors apply.

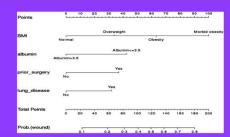
Hypothesis:

Obese patients have increased surgical site infection (SSI) rates following hysterectomy. Associated risk factors for infection further increase the rate of SSI in our patients.

- Data collection from July 2012 to July 2015 at Interim LSU hospital will occur by retrospective chart review. The patient population will include all who underwent a hysterectomy for benign indications during the 3-year period. Standard data collection will include: demographics, comorbid conditions, operative details, and postop visit information.
- Infection rate will be determined using infection control records as well as chart review of patient visits to the clinic for up to 60 days post surgery.
- The study design will be a retrospective cohort to assess surgical site infections in obese patients. Data analysis will be performed with a logistic regression model to control for covariates that might also put the patient at risk for SSI.

Expected Outcome:

Surgical site infection rates will be increased in obese patients. Secondary analysis will look at whether other preoperative risk factors (prior surgery, lung disease, etc.) further affects the surgical site infection rate in our patient population.



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Impact of Current Expectant Management Protocols on Fetal Neurodevelopment in Pregnancies Complicated by Hypertension and Intrauterine Growth Restriction

Tabitha Quebedeaux, MD, PhD¹, Asha Heard, MD¹, Alberto Musto, MD, PhD² and Joseph Miller, MD¹

¹ Department of OB/GYN, ²Neuroscience Center of Excellence

Department of Obstetrics and Gynecology

Background

Fetal neurodevelopment is influenced by a complex interaction between the placenta and fetal brain⁴. Neuroprotective steroids, such as allopregnanolone (APN), produced by the placenta, foster a quiescent environment within the maturing fetal brain and protect it from excitatory damage at times of intrauterine hypoxia¹. Allopregnanolone metabolites serve as agonists in GABAergic pathways that in turn inhibit overstimulation of excitatory neurons⁵. A calcium channel protein (S100B) found amongst neuronal excitatory networks has been utilized in clinical studies to predict perinatal brain injury³. S100B levels are elevated amongst IUGR infants and those who develop intraventricular hemorrhage (IVH)².

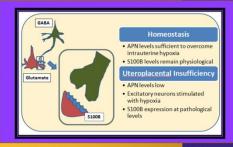
The goals of this study are to investigate: (1) the relationship of S100B and APN levels at the time of delivery, (2) how S100B/APN ratios change in pregnancies complicated by hypertension (HTN) and intrauterine growth restriction (IUGR), and (3) if elevated S100B/APN ratios can be correlated with worsening antenatal fetal surveillance findings that prompt delivery in patients being expectantly managed for HTN and IUGR.

Hypotheses

- Expression of S100B will be inversely related to APN at the time of delivery.
- S100B/APN ratios will be elevated in pregnancies complicated by uteroplacental insufficiency.
- Elevated S100B/APN ratios will show correlation with abnormal doppler studies and low BPP scores.

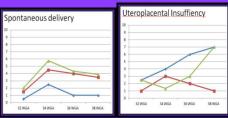
Materials and Methods

- <u>Subjects</u>: Prospective study to include deliveries between 32 0/7 and 38 6/7 WGA. Groups will be stratified into (1) HTN and IUGR, (2) IUGR alone, (3) HTN alone (4) spontaneous labor only.
- <u>Sample Collection</u>: Collect umbilical artery blood samples and placentas at time of delivery on all patients meeting gestational age criteria. Utilize enzyme linked immunosorbent assays (ELISA) to measure concentrations of S100B and APN in umbilical artery blood samples. Placentas will be sent for surgical pathology analyses.
- <u>Secondary Analysis</u>: Retrospective, blinded chart review of enrolled patients for maternal history and antenatal testing results including umbilical artery Doppler studies, EFW with percentile for gestational age, and BPP scores.
- Statistical Analysis: Chi-square and ANOVA will be used for analysis of data.



Expected Outcomes: S100N and APN at Time of Delivery





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Expulsion Rate of Post-placental 13.5mg Levonorgestrel IUDs

Eric Siegel MD, Asha Heard MD, Valerie Williams MD

Department of Obstetrics and Gynecology

Background

Literature search shows that the studies regarding postplacental IUDs with current models are scarce. Few institutions allow it and even fewer have published on it. There are currently no data on 13.5mg levonorgestrel expulsion rates.

Hypothesis

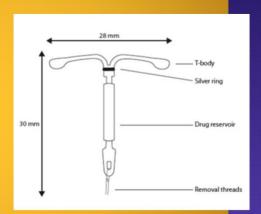
Post-placental 13.5mg levonorgestrel IUD expulsion rates will be approximately 10%.

Materials and Methods

- This descriptive study will identify patients who had immediate post-placental placement of the 13.5mg levonorgestrel. The patient's post-partum clinic visits will be reviewed to assess for expulsion of the device. If the patient has not been seen, they will be called and asked questions regarding their continued use of the IUD.
- Primary analysis will be the percentage of expulsed IUDs at 6 months and continued IUD use at 1 year. Secondary analysis will compare expulsion rates between sub-groups, including mode of delivery, parity, BMI, and method of placement.

Expected Outcomes

partum. Secondary outcomes will include continuation at 1 year.



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The Use of Vaginal Packing at Time of Surgery for Pelvic Organ Prolapse and Incontinence: A Retrospective Chart Review

Amanda Thomas MD, Caitlyn Louviere, Joseph Hagan ScD, Lisa Peacock MD

Department of Obstetrics and Gynecology

Background

Vaginal packing is widely used after many common gynecologic surgeries. There is a paucity of data regarding the use of vaginal packing after vaginal surgery. The first study addressing this common medical practice was published in December 2013. A randomized control trial: it evaluated postoperative pain, bleeding, and infection after the use of vaginal packing.

This study concluded that there was a trend towards increased hematoma formation and complications but was not statistically significant.³ There are no other studies directly evaluating the use of vaginal packing after reconstructive surgery. Additional studies are needed to further investigate its use.

Hypothesis

The use of vaginal packing after pelvic floor surgery for pelvic organ prolapse and stress urinary incontinence can affect postoperative voiding function, as well as postoperative blood loss, postoperative pain scores, febrile morbidity, and postoperative pelvic infections.

Methods and Materials

- A retrospective chart review of all pelvic floor surgery for pelvic organ prolapse and stress urinary incontinence will be performed from January 1, 2009 to December 31, 2015. The clinical sites will include Interim LSU Hospital and Touro Infirmary.
- The primary objective of investigation will be the need for prolonged catheterization in the presence or absence of vaginal pack usage.
- Additional factors to be evaluated will include patient demographics, perioperative blood loss, postoperative pain scores, febrile morbidity, and postoperative pelvic infections.

Expected Outcome

The expected outcome of this research is to further clarify the effect of vaginal packing on postoperative voiding function at the time of surgery for pelvic organ prolapse and incontinence.



Assortment of vaginal packing material

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An Educational Intervention for Postpartum Depression

Ashley Van Wormer, MD; Valerie Williams, MD

Department of Obstetrics and Gynecology

Background:

Approximately 10-15% of women will experience a depressive episode during the perinatal period^{2,3}. Current guidelines encourage providers to screen for depressive symptoms and provide follow up and treatment¹.

We have designed an educational intervention to increase awareness of postpartum depression and symptoms. Our objective is to assess the tool's accessibility and utilization in the clinical setting. The goal is to improve community awareness of postpartum depression and increase utilization of community resources.

Hypothesis:

There will be increased awareness of postpartum depression among women receiving the educational intervention.

Materials and Methods:

- This will be a prospective cohort study comparing women receiving the educational intervention versus routine, provider dependent education.
- Patients will be screened for inclusion at 24-28
 weeks. The intervention group will be provided with
 a patient handout from JAMA (in English and Spanish)
 on postpartum depression⁴. The control group will
 receive provider education as per standard of care.
- Knowledge of postpartum depression will be assessed at the 4-6 week postpartum visit.

Expected Outcomes:

Primary - Patient knowledge of postpartum depression

Secondary - Diagnosis of postpartum depression, utilization of treatment resources



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LSU OB/GYN Resident Research Day Presentations

2014

Megan Bina, DO, House Officer III

Advisor: Danny Barnhill, MD

Louisiana Obstetrician-Gynecologists' Opinion Concerning Home Screening for Cervical Cancer

***LaToya Clark, MD, House Officer IV

Advisor: Joseph Miller, MD Umbilical Artery - The Small for Gestational Age Fetus and Single Cord Umbilical Arteries: A Retrospective Chart Study

Ashley Hirsch, MD, House Officer III

Advisor: Joseph Miller, MD Hypoplastic Umbilical Artery: Is There a Need for Universal Fetal Echocardiography Referral?

***Brett Larson, MD, House Officer IV

Advisor: Asha Heard, MD Improving the Accuracy of Visual Estimations of Blood Loss through Simulation Training

Jennifer Mury, MD, House Officer III

Advisor: Jamie Alleyn, MD

Medical Student Education in the OB/GYN Clerkship: Increasing Student Knowledge,
Satisfaction, and Interest in Obstetrics & Gynecology

***Kellin Reynolds, MD, House Officer III

Advisor: Danny Barnhill, MD

Utilization of QR Reader to Provide Real Time Evaluation of Residents' Skills Following Surgical Procedures

Anna Rybka, MD, House Officer IV

Advisor: Valerie Williams, MD Resident Run Journal Club: A New Approval

***2014 Research Award Recipient