

MAY 2017 ■ Volume 216, Number 5

EDITORIAL

431 Toward safe standards for assessment of fetal growth in twin pregnancy

Jason Gardosi

➤ Related article, page 514

REPORTS OF MAJOR IMPACT

434 Reducing preterm birth by a statewide multifaceted program: an implementation study

John P. Newnham; Scott W. White; Suzanne Meharry; Han-Shin Lee; Michelle K. Pedretti; Catherine A. Arrese; Jeffrey A. Keelan; Matthew W. Kemp; Jan E. Dickinson; Dorota A. Doherty

A multidisciplinary clinical and educational prevention program across Western Australia reduced the rate of singleton preterm birth by 7.6% in the first year of its implementation.

EXPERT REVIEWS

443 Unscheduled vaginal bleeding with progestin-only contraceptive use

Rachel E. Zigler; Colleen McNicholas

Unscheduled vaginal bleeding is a common side effect of progestin-only contraceptive use and can be difficult to manage.

SYSTEMATIC REVIEWS

451 Googling endometriosis: a systematic review of information available on the Internet

Martin Hirsch; Shivani Aggarwal; Claire Barker; Colin J. Davis; James M. N. Duffy

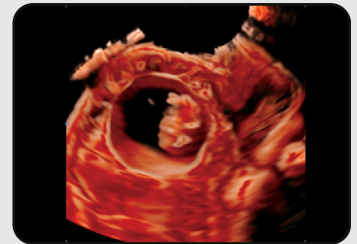
Online endometriosis information for patients is of poor quality.

(continued)

 Selected papers presented at the January 2017 meeting of the Society for Maternal-Fetal Medicine and sped to press for the benefit of our readers.

Original research articles, whose abstracts appear in this issue, are posted in full at ajog.org

ON THE COVER



Enhanced visualization of internal and external structures provided by advances in 3D technology facilitates precise diagnosis. Here, 3D sonography showed a defect at a cesarean scar adjacent to the gestational sac and free blood in the pouch of Douglas, suggestive of impending uterine rupture.

Article, page 531

Image by Sa Ra Lee, MD, PhD, Department of Obstetrics and Gynecology, Ewha Womans University School of Medicine, Seoul, Republic of Korea.

AJOG Roundup at ajog.org

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IDSOG papers



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SYSTEMATIC REVIEWS *(continued)*

459 Sentinel lymph node assessment in endometrial cancer: a systematic review and meta-analysis

Anna Jo Bodurtha Smith; Amanda Nickles Fader; Edward J. Tanner

Sentinel lymph nodes are detected in 81% of women with endometrial cancer and identify 96% of lymphatic metastases, and cervical injection and indocyanine green improve mapping.

CLINICAL OPINION

477 The systematic error in the estimation of fetal weight and the underestimation of fetal growth restriction

Justin R. Lappen; Stephen A. Myers

The systematic error in ultrasound estimation of fetal weight should be incorporated into current screening and surveillance recommendations for the detection and management of fetal growth restriction.

CALL TO ACTION

484 Twin vaginal delivery: innovate or abdicate

Sarah Rae Easter; Laura Taouk; Jay Schulkin; Julian N. Robinson

Innovative approaches to provider training and support systems likely are required to increase rates of twin vaginal delivery.

ORIGINAL RESEARCH

Articles abstracted in this issue appear in full at ajog.org

GYNECOLOGY

489 Use of combined hormonal contraceptives among women with migraines and risk of ischemic stroke



Steven W. Champaloux; Naomi K. Tepper; Michael Monsour; Kathryn M. Curtis; Maura K. Whiteman; Polly A. Marchbanks; Denise J. Jamieson

Risk of stroke is increased among women with migraine with aura who use combined hormonal contraceptives.

491 Randomized controlled trial of postoperative belladonna and opium rectal suppositories in vaginal surgery

Kristina Butler; John Yi; Megan Wasson; Jennifer Klauschie; Debra Ryan; Joseph Hentz; Jeffrey Cornella; Paul Magtibay; Roseanne Kho

The use of belladonna and opium suppositories did not impact pain significantly after vaginal surgery, and there were no significant adverse effects on perioperative outcomes.

493 Racial and ethnic differences in the polycystic ovary syndrome metabolic phenotype

Lawrence Engmann; Susan Jin; Fangbai Sun; Richard S. Legro; Alex J. Polotsky; Karl R. Hansen; Christos Coutifaris; Michael P. Diamond; Esther Eisenberg; Heping Zhang; Nanette Santoro; the Reproductive Medicine Network

Hispanic women with polycystic ovarian syndrome have the most severe metabolic phenotype while non-Hispanic black women have a milder phenotype.

(continued on page 6A)

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(continued)

ORIGINAL RESEARCH (continued from page 4A)**495** Is vaginal mesh a stimulus of autoimmune disease?

Bilal Chughtai; Art Sedrakyan; Jialin Mao; Karyn S. Eilber;
Jennifer T. Anger; J. Quentin Clemens

Mesh-based vaginal surgery is not associated with the development of systemic/autoimmune diseases.

497 Patient, surgeon, and hospital disparities associated with benign hysterectomy approach and perioperative complications

Ambar Mehta; Tim Xu; Susan Hutfless; Martin A. Makary;
Abdulrahman K. Sinno; Edward J. Tanner III; Rebecca L. Stone;
Karen Wang; Amanda N. Fader

Use of minimally invasive hysterectomy for benign indications remains variable, with most patients undergoing open, more morbid procedures. Hysterectomies performed for benign indications by high-volume surgeons or by minimally invasive techniques may represent an opportunity to reduce preventable harm.

500 Periprocedural outcomes comparing fibroid embolization and focused ultrasound: a randomized controlled trial and comprehensive cohort analysis

Emily P. Barnard; Ahmed M. Abdelmagied; Lisa E. Vaughan; Amy L. Weaver;
Shannon K. Laughlin-Tommaso; Gina K. Hesley; David A. Woodrum;
Vanessa L. Jacoby; Maureen P. Kohi; Thomas M. Price; Angel Nieves;
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Lisa G. Peterson; Elizabeth A. Stewart

Women undergoing focused ultrasound had longer procedures, whereas women undergoing uterine artery embolization used more postprocedural pain medications and took longer to resume baseline functioning.

502 Are perioperative bundles associated with reduced postoperative morbidity in women undergoing benign hysterectomy? Retrospective cohort analysis of 16,286 cases in Michigan

John A. Harris; Anne G. Sammarco; Carolyn W. Swenson; Shitanshu Uppal;
Neil Kamdar; Darrel Campbell; Sarah Evilsizer; John O. DeLancey;
Daniel M. Morgan

Among hospitals in a statewide collaborative, hysterectomies that met criteria for 4 evidence-based perioperative processes were associated with decreased postoperative complications and readmissions.

504 Racial/ethnic differences in contraceptive preferences, beliefs, and self-efficacy among women veterans

Lisa S. Callegari; Xinhua Zhao; Eleanor Bimla Schwarz;
Eliau Rosenfeld; Maria K. Mor; Sonya Borrero

Women veterans' contraceptive preferences, beliefs, and self-efficacy vary by race and ethnicity, which can provide insight into disparities in contraceptive use and unintended pregnancy.

506 A model to predict risk of blood transfusion after gynecologic surgery

Jamie Stanhiser; Kevin Chagin; J. Eric Jelovsek

This model accurately predicts a patient's risk of transfusion after gynecologic surgery and may improve efficiency of preoperative testing and perioperative blood management.

(continued on page 8A)

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(continued)

ORIGINAL RESEARCH (continued from page 6A)**OBSTETRICS****507** Predicting the difficulty of operative vaginal delivery by ultrasound measurement of fetal head station

Sidi Kasbaoui; François Séverac; Germain Aïssi; Adrien Gaudineau; Lise Lecointre; Chérif Akladios; Romain Favre; Bruno Langer; Nicolas Sananès
This study shows that ultrasound is a useful predictor of difficult operative vaginal delivery.

508 Reduction of total labor length through the addition of parenteral dextrose solution in induction of labor in nulliparous: results of DEXTRONS prospective randomized controlled trial

Josianne Paré; Jean-Charles Pasquier; Antoine Lewin; William Fraser; Yves-André Bureau

Parenteral glucose supplementation significantly reduces the total length of induced labor without increasing the rate of complications in nulliparous women.

510 The clinical outcome of cesarean scar pregnancies implanted “on the scar” versus “in the niche”

Andrea Kaelin Agten; Giuseppe Cali; Ana Monteagudo; Johana Oviedo; Joanne Ramos; Ilan Timor-Tritsch

Cesarean scar pregnancies that are implanted “on the scar” have a substantially better pregnancy outcome compared with cesarean scar pregnancies that are implanted “in the niche.”

512 *Helicobacter pylori* infection: a predictor of vomiting severity in pregnancy and adverse birth outcome

Iris J. Grooten; Wouter J. Den Hollander; Tessa J. Roseboom; Ernst J. Kuipers; Vincent W. Jaddoe; Romy Gaillard; Rebecca C. Painter

Helicobacter pylori is an independent risk factor for more severe vomiting in pregnancy; in women with daily vomiting, *Helicobacter pylori* is associated with a reduction of total maternal weight gain and small-for-gestational-age babies.

514 Development of customized fetal growth charts in twins

Tullio Ghi; Federico Prefumo; Anna Fichera; Mariano Lanna; Enrico Periti; Nicola Persico; Elsa Viora; Giuseppe Rizzo; for the Società Italiana di Ecografia Ostetrica e Ginecologica Working Group on Fetal Biometric Charts

The growth of uncomplicated twin fetuses is influenced by parental variables and fetal sex, and it is reduced in comparison with singletons starting from 26 to 28 weeks onward. This reduction is more evident in monochorionic twins.

➤ Related editorial, page 431

516 Fetal and neonatal outcomes of preterm infants born before 32 weeks of gestation according to antenatal vs postnatal assessments of restricted growth

Isabelle Monier; Pierre-Yves Ancel; Anne Ego; Pierre-Henri Jarreau; Cécile Lebeaux; Monique Kaminski; François Goffinet; Jennifer Zeitlin; for the EPIPAGE 2 Study Group

When antenatal and postnatal assessments of restricted fetal growth were discordant, low birthweight was more predictive of adverse short-term outcomes than diagnosis during pregnancy.

ORIGINAL RESEARCH (continued)

518 Leading causes of preterm delivery as risk factors for intraventricular hemorrhage in very preterm infants: results of the EPIPAGE 2 cohort study

Marie Chevallier; Thierry Debillon; Veronique Pierrat; Pierre Delorme; Gilles Kayem; Mélanie Durox; François Goffinet; Stephane Marret; Pierre Yves Ancel; the Neurodevelopment EPIPAGE 2 Writing Group (Catherine Arnaud [Toulouse], Olivier Baud [Paris], Nathalie Bednarek [Reims], Olivier Claris [Lyon], Cyril Flamant [Nantes], Catherine Gire [Marseille], Elie Saliba [Tours], Olivier Brissaud [Bordeaux], Marie Laure Charkaluk [Lille], Geraldine Favrais [Tours], Florence Bodeau-Livinec [Paris])
This study on very preterm infants shows that specific and rare conditions at the time of birth such as placental abruption and/or acute maternal inflammation are associated with increased risk of intraventricular hemorrhage.

521 Is middle cerebral artery Doppler related to neonatal and 2-year infant outcome in early fetal growth restriction?

Tamara Stampalija; Birgit Arabin; Hans Wolf; Caterina M. Bilardo; Christoph Lees; on behalf of the TRUFFLE investigators
Middle cerebral artery Doppler and umbilico-cerebral ratio are less strongly associated with outcome than birthweight or gestation at delivery in early fetal growth restriction.

523 Effect of early-onset preeclampsia on cardiovascular risk in the fifth decade of life

Anouk Bokslag; Pim W. Teunissen; Constantijn Franssen; Floortje van Kesteren; Otto Kamp; Wessel Ganzevoort; Walter J. Paulus; Christianne J. M. de Groot
Women with a history of early-onset preeclampsia have major cardiovascular risk factors in the fifth decade of life compared with healthy controls.

525 Antiphospholipid antibody profile based obstetric outcomes of primary antiphospholipid syndrome: the PREGNANTS study

Gabriele Saccone; Vincenzo Berghella; Giuseppe Maria Maruotti; Tullio Ghi; Giuseppe Rizzo; Giuliana Simonazzi; Nicola Rizzo; Fabio Facchinetti; Andrea Dall'Asta; Silvia Visentin; Laura Sarno; Serena Xodo; Dalila Bernabini; Francesca Monari; Amanda Roman; Ahizechukwu Chigoziem Eke; Ariela Hoxha; Amelia Ruffatti; Ewoud Schuit; Pasquale Martinelli; on behalf of the PREGNANTS (PREGNancy in women with ANTiphospholipid Syndrome) working group
In women with primary antiphospholipid syndrome, anticardiolipin antibodies is the most common sole antibody present, but anti- β_2 glycoprotein-I is the one associated with the lowest live birth rate and highest incidences of obstetric complications, compared with the presence of anticardiolipin antibodies or lupus anticoagulant alone. Women with primary antiphospholipid syndrome have an increased risk of obstetric complications and lower live birth rate when >1 antibody is present.

527 Repeated measures of inflammation and oxidative stress biomarkers in preeclamptic and normotensive pregnancies

Kelly K. Ferguson; John D. Meeker; Thomas F. McElrath; Bhramar Mukherjee; David E. Cantonwine
Using repeated biomarkers from 4 time points across pregnancy, we demonstrated significant associations between biomarkers of inflammation and oxidative stress and preeclampsia.

(continued)

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(continued)

ORIGINAL RESEARCH *(continued)*

529 Maternal buprenorphine treatment and fetal neurobehavioral development

Lauren M. Jansson; Martha Velez; Krystle McConnell; Nancy Spencer; Michelle Tuten; Hendree E. Jones; Van L. King; Neeraj Gandotra; Lorraine A. Milio; Kristin Voegtline; Janet A. DiPietro

Maternal buprenorphine administration suppresses fetal neurobehaviors with increasing magnitude over the course of gestation; these effects are related to maternal daily dose.

IMAGES IN GYNECOLOGY

531 Cesarean scar pregnancy associated with an impending uterine rupture diagnosed with 3-dimensional ultrasonography

Sa Ra Lee; Soo Yeon Park; Mi Hye Park

We demonstrate typical sonographic features of a cesarean scar pregnancy associated with an impending uterine rupture.

LETTERS TO THE EDITORS

532 Defining the limits of electronic fetal heart rate

Barry S. Schifrin; Brian Koos

533 Abnormal uterine bleeding in premenopausal women and the role of body mass index

Luca Giannella; Simone Paganelli

Reply, page 533

Michelle R. Wise; Cynthia M. Farquhar

534 Regarding "Toward normal birth—but at what cost?"

David L. Newfield

Reply, page 535

Hans Peter Dietz; Stuart Campbell

535 Current base deficit is not a relevant marker of neonatal metabolic acidosis

Claude Racinet; Paul Ouellet; Thierry Daboval

Reply, page 536

Steven L. Clark; Emily H. Hamilton; Thomas J. Garite

537 Intrauterine hemostatic balloon placement: is <12 hours really better?

Shigeki Matsubara; Hironori Takahashi; Alan Kawarai Lefor

Reply, page 538

Brett D. Einerson; Moeun Son; Emily S. Miller

CME MULTIMEDIA ACTIVITY

539 Long-acting reversible contraception: an important solution to reduce unintended pregnancy

Anita L. Nelson; Andrew M. Kaunitz

CORRECTION

530 September 2016 (vol. 215, no. 3, page 395)

The order of the authors of a Research Letter published in September 2016 is corrected.

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