

OCTOBER 2019 ■ Volume 221, Number 4

## EXPERT REVIEWS

### 295 Maternal self-harm deaths: an unrecognized and preventable outcome

Kimberly Mangla; M. Camille Hoffman; Caroline Trumpff; Sinclaire O'Grady; Catherine Monk

Effort must be made to identify and prevent maternal suicide and overdose, which begins with universal language and shared information.

## SYSTEMATIC REVIEWS

### 304 Elective induction of labor at 39 weeks compared with expectant management: a meta-analysis of cohort studies

William A. Grobman; Aaron B. Caughey

In this meta-analysis of observational studies, 39-week labor induction among low-risk nulliparas is associated with reduced risks of cesarean delivery and multiple adverse perinatal outcomes.

## CLINICAL OPINION

### 311 Putting the "M" back in maternal-fetal medicine: A 5-year report card on a collaborative effort to address maternal morbidity and mortality in the United States

Mary E. D'Alton; Alexander M. Friedman; Peter S. Bernstein; Haywood L. Brown; William M. Callaghan; Steven L. Clark; William A. Grobman; Sarah J. Kilpatrick; Daniel F. O'Keeffe; Douglas M. Montgomery; Sindhu K. Srinivas; George D. Wendel; Katharine D. Wenstrom; Michael R. Foley

Since the first "M in MFM" meeting 5 years ago, major educational, research, and clinical strides have been made to improve maternal safety by a broad collaborative effort.

(continued)

Original research articles, whose abstracts appear in this issue, are posted in full at [ajog.org](http://ajog.org)

## AJOG EPONYMS

### Lippes loop (1965)

In the Dec. 1, 1965, issue of the Journal, Jack Lippes, MD, of the Department of Obstetrics and Gynecology, State University of New York at Buffalo School of Medicine, Buffalo, NY, presented the results of an early study of the contraceptive loop that now bears his name.<sup>1</sup>

Subjects were patients at the Planned Parenthood Center of Buffalo or the author's private practice in Kenmore, NY. The study incorporated 4 sizes of a flexible S-shaped loop made of polyethylene with barium sulfate added for x-ray visualization. Loops were inserted 2,179 times into 1,713 patients over several years. The overall pregnancy rate was 2.2 per 100 women per year.

The author concluded, "The intrauterine loop appears to be an acceptable, safe, inexpensive, and effective method of contraception."

This article, among others whose authors' names have become associated with their findings, is available under "AJOG Eponyms" in the Collections tab at [ajog.org](http://ajog.org).

## REFERENCE

1. Lippes J. Contraception with intrauterine plastic loops. *Am J Obstet Gynecol* 1965;93:1024-30.

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Maternal-Fetal  
Medicine



Infectious Diseases  
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### IDSOG papers



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## ORIGINAL RESEARCH

Articles abstracted in this issue appear in full at [ajog.org](http://ajog.org)

### GYNECOLOGY

#### 318 Assessing endometrial cancer risk among US women: long-term trends using hysterectomy-adjusted analysis

Kemi M. Doll; Aaron N. Winn

Among US women older than 50 years with a uterus, endometrial cancer incidence is highest among Black women; the relative proportion of high-risk histology increased over time.

#### 320 The differential diagnoses of uterine leiomyomas and leiomyosarcomas using DNA and RNA sequencing



Aymara Mas; Roberto Alonso; Tamara Garrido-Gómez; Patricia Escorcía;



Beatriz Montero; Jorge Jiménez-Almazán; Julio Martín; Nuria Pellicer;

Javier Monleón; Carlos Simón

Next-generation sequencing identified differential genetic targets in uterine leiomyomas and leiomyosarcomas to establish a preoperative differential diagnosis to help prevent accidental malignant dissemination from morcellation.

#### 322 The effect of childbirth on urinary incontinence: a matched cohort study in women aged 40–64 years

Maria Gyhagen; Sigvard Åkervall; Mattias Molin; Ian Milsom

Pregnancy and vaginal delivery increase the risk of urinary incontinence; cesarean delivery provides long-term protection.

#### 324 Sentinel-node biopsy in early-stage ovarian cancer: preliminary results of a prospective multicentre study (SELLY)

Stefano Uccella; Camilla Nero; Enrico Vizza; Virginia Vargiu;

Giacomo Corrado; Nicolò Bizzarri; Fabio Ghezzi; Francesco Cosentino;

Luigi Carlo Turco; Anna Fagotti; Giovanni Scambia

Sentinel-node biopsy in early-stage ovarian cancer using ICG seems feasible and safe.

#### 326 A novel classification of residual disease after interval debulking surgery for advanced-stage ovarian cancer to better distinguish oncologic outcome

Beryl L. Manning-Geist; Katherine Hicks-Courant; Allison A. Gockley;

Rachel M. Clark; Marcela G. Del Carmen; Whitfield B. Growdon;

Neil S. Horowitz; Ross S. Berkowitz; Michael G. Muto; Michael J. Worley Jr

Single-anatomic location, low-volume residual may be an alternative goal when complete surgical resection is unattainable during interval debulking surgery.

#### 328 Use of fertility preservation services in female reproductive-aged cancer patients



Jessica Selter; Yongmei Huang; Lisa C. Grossman Becht;

Katherine L. Palmerola; S. Zev Williams; Eric Forman; Cande V. Ananth;

Chin Hur; Alfred I. Neugut; Dawn L. Hershman; Jason D. Wright

Only a small fraction of reproductive-aged female cancer patients receiving chemotherapy are evaluated for fertility preservation or undergo fertility-preserving procedures.

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**ORIGINAL RESEARCH** (continued from page 6A)

**330** Impact of polypropylene prolapse mesh on vaginal smooth muscle in rhesus macaque



Rebecca M. Shaffer; Rui Liang; Katrina Knight; Charelle M. Carter-Brooks; Steven Abramowitch; Pamela A. Moalli

This study reports on the impact of polypropylene mesh and/or an extracellular matrix bioscaffold implanted via sacrocolpopexy on vaginal smooth muscle micromorphology, contractile properties, and innervation.

**333** Breastfeeding and pelvic floor disorders one to two decades after vaginal delivery

David A. Lovejoy; Jennifer L. Roem; Joan L. Blomquist; Prerna R. Pandya; Victoria L. Handa

Pelvic floor disorders are not associated with breastfeeding in women who have had at least one vaginal delivery.

**OBSTETRICS**

**335** Labor progress determined by ultrasound is different in women requiring cesarean delivery from those who experience a vaginal delivery following induction of labor



Wing Ting Tse; Piya Chaemsathong; Winnie W. Y. Chan; Angel H. W. Kwan; Junhong Huang; Kubi Appiah; Ka Chun Chong; Liona C. Poon

Serial intrapartum transperineal ultrasound assessment of fetal head descent can differentiate women who can have a vaginal delivery or require a cesarean delivery.

**337** Maternal outcomes in unexpected placenta accreta spectrum disorders: single-center experience with a multidisciplinary team

Hadi Erfani; Karin A. Fox; Steven L. Clark; Martha Rac; Shiu-Ki Rocky Hui; Atefeh Rezaei; Soroush Aalipour; Amir A. Shamshirsaz; Ahmed A. Nassr; Bahram Salmanian; Kelsey A. Stewart; Elizabeth S. Kravitz; Catherine Eppes; Michael Coburn; Jimmy Espinoza; Jun Teruya; Michael A. Belfort; Alireza A. Shamshirsaz

Outcomes of expected placenta accreta spectrum are better than unexpected despite severity.

**339** A Core Outcome Set for the prevention and treatment of fetal GROwth restriction: deVeloPping Endpoints: the COSGROVE study



Patricia Healy; Sanne J. Gordijn; Wessel Ganzevoort; Irene M. Beune; Ahmet Baschat; Asma Khalil; Louise Kenny; Frank H. Bloomfield; Mandy Daly; Jamie Kirkham; Declan Devane; Aris T. Papageorghiou

COSGROVE has identified which 22 core outcomes should be included in all future trials in fetal growth restriction.

**341** Cervical length and quantitative fetal fibronectin in the prediction of spontaneous preterm birth in asymptomatic women with congenital uterine anomaly

Alexandra E. Ridout; Linda A. Ibeto; Georgia N Ross; Joanna R. Cook; Lynne Sykes; Anna L. David; Paul T. Seed; Rachel M. Tribe; Phillip R. Bennett; Vasso Terzidou; Andrew H. Shennan; Manju Chandiramani; and collaborators: Richard G. Brown; Susan Chatfield; Dana Sadeh

Predictive tests for preterm birth (cervical length and quantitative fetal fibronectin) do not have clinical utility in women with congenital uterine anomalies related to fusion defects.

ORIGINAL RESEARCH *(continued)***343** Evaluation of fetal exposure to external loud noise using a sheep model: quantification of in utero acoustic transmission across the human audio range

Pierre Gélat; Anna L. David; Seyyed Reza Haqhenas; Julian Henriques; Aude Thibaut de Maisieres; Tony White; Eric Jauniaux

Measurement of in utero acoustic attenuation in fetal sheep across the audio range (100 Hz to 20 kHz, at 6 Hz intervals) revealed transmission of external noise sources by as little as 3 dB through the abdominal wall and uterine cavity.

**345** Sequencing shorter cfDNA fragments improves the fetal DNA fraction in noninvasive prenatal testing

Longwei Qiao; Bin Yu; Yuting Liang; Chunhua Zhang; Xiaojuan Wu; Ying Xue; Cong Shen; Quanze He; Jiafeng Lu; Jingjing Xiang; Hong Li; Qiping Zheng; Ting Wang

Sequencing shorter cell-free DNA fragments constitutes a great screening strategy that can significantly reduce the probability of a no-calls result in noninvasive prenatal testing.

**347** Miscarriage among women in the United States Women's Interagency HIV Study, 1994–2017

Kristin M. Wall; Lisa B. Haddad; C. Christina Mehta; Elizabeth T. Golub; Lisa Rahangdale; Jodie Dionne-Odom; Roksana Karim; Rodney L. Wright; Howard Minkoff; Mardge Cohen; Seble G. Kassaye; Deborah Cohan; Igho Ofotokun; Susan E. Cohn

Poorly controlled HIV infection and tobacco, alcohol, and marijuana use were associated with increased miscarriage risk, while protease inhibitors were protective compared with a noncombination antiretroviral treatment.

## MEETING PAPERS



SELECTED PAPERS FROM THE 39TH ANNUAL MEETING (THE PREGNANCY MEETING) OF THE SOCIETY FOR MATERNAL-FETAL MEDICINE

**349** An enhanced recovery after surgery pathway for cesarean delivery decreases hospital stay and cost

Emily E. Fay; Jane E. Hitti; Carlos M. Delgado; Leah M. Savitsky; Elizabeth B. Mills; JoAnn L. Slater; Laurent A. Bollag

Implementation of an enhanced recovery after surgery pathway for cesarean delivery decreased postoperative length of stay and direct cost.

**351** Physiological and psychological stress responses to labor and delivery as expressed by salivary cortisol: a prospective study

Netanella Miller; Aula Atamna Asali; Moran Agassi-Zaitler; Eran Neumark; Michal Matzkin Eisenberg; Efrat Hadi; Michal Elbaz; Yael Pasternak; Ami Fishman; Tal Biron-Shental

Physiological stress increases mostly immediately postpartum, whereas psychological stress levels decrease over the course of labor.

*(continued)*

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## MEETING PAPERS *(continued)*

### 353 The worst of both worlds—combined deliveries in twin gestations: a subanalysis of the Twin Birth Study, a randomized, controlled, prospective study

Amir Aviram; Hayley Lipworth; Elizabeth V. Asztalos; Elad Mei-Dan; Xingshan Cao; Nir Melamed; Arthur Zaltz; Hannah B. Anastasio; Vincenzo Berghella; Jon F. R. Barrett

Twin B's transverse/oblique lie is a risk factor for combined delivery of twins.

### 355 Maternal surgery during pregnancy has a transient adverse effect on the developing fetal rabbit brain



Lennart Van der Veeken; Johannes Van der Merwe; Sarah Devroe;

Annalisa Inversetti; Angela Galgano; Tom Bleaser; Roselien Meeusen; Steffen Rex; Jan Deprest

Maternal surgery during pregnancy has a negative effect on fetal brain development, both histologic and neurobehavioral, but with time these differences fade.

### 357 The effect of placental location in cases of placenta accreta spectrum

Elizabeth A. Morgan; Abbey Sidebottom; Marc Vacquier;

Whitney Wunderlich; Matthew Loichinger

Placental location and its risk factors, diagnosis, and outcomes in women with placenta accreta spectrum (PAS).

## IMAGES IN OBSTETRICS AND GYNECOLOGY

### 359 Painful ulceration of the vulva

Elisabeth Gómez Moyano; María Ayala Blanca; Leandro Martínez Pilar

Pemphigus vulgaris is an autoimmune blistering disease of skin and mucosal membranes.

### 361 Diagnosis airhead: a case of pneumocephalus in labor

Jenani S. Jayakumaran; Ushma Thomas; Meike Schuster

This image illustrates a novel presentation of pneumocephalus in a laboring patient and the importance of maintaining a broad differential.

## RESEARCH LETTERS

### 362 Atomic force microscopy: a promising aid in diagnosis of uterine smooth muscle neoplasms

Leonardo A. Peñuela; Ezio Fulcheri; Valerio G. Vellone; Roberto Fiocca;

Gian M. Vigliercio; Roberto Raiteri; Simone Ferrero

### 364 Impact of a structured obstetrics and gynecology residency research program

Maryam Guiahi; Sara Mazzoni; Torri Metz; Meredith Alston

### 365 Transvaginal ultrasound is superior to transabdominal ultrasound in the identification of a short cervix

Jenani S. Jayakumaran; Sue Egan; Mallika Tatikola; Meike Schuster;

Christina M. Duzyj; Justin S. Brandt; Cande V. Ananth

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- 374** In women with transplantable euploid blastocysts, age does not affect transplant potential  
Yi Guo; Shuaishuai Guo; Henan Zhang  
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Mohamad Irani; Nikica Zaninovic; Zev Rosenwaks; Kangpu Xu

## CORRECTION

- 358** May 2019 (vol. 220, no. 5, page 504)  
A sentence and citation were omitted in a Letter to the Editors published in the May 2019 issue.

## SOCIETY FOR MATERNAL-FETAL MEDICINE

- B2** Executive summary: Reproductive Services for Women at High Risk for Maternal Mortality Workshop, February 11–12, 2019, Las Vegas, Nevada  
 Society for Maternal-Fetal Medicine (SMFM)  
This executive summary briefly reviews the primary discussion points and findings from the SMFM workshop “Reproductive Services for Women at High Risk for Maternal Mortality.”

## RECRUITMENT & EMPLOYMENT OPPORTUNITIES

- 15A** Classified advertising