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Celebrating her

Among other things, March is Women’s History Month, giving us an opportunity to acknowledge and appreciate the contributions women have made to society at large while enhancing their own lives.

One such influential woman Contemporary OB/GYN would like to thank and celebrate is Editorial Advisory Board member Laura Riley, MD, who was recently awarded the Society for Maternal-Fetal Medicine’s (SMFM) Lifetime Achievement Award at SMFM’s 42nd Annual Pregnancy Meeting held January 31 to February 5, 2022. This award was created to recognize physicians who have made significant contributions to the field of maternal-fetal medicine.

We asked Riley’s fellow board members about the significance of this award and the impact Riley’s work has had on this field. Here’s what some of them had to say:

“Laura has been an important and influential leader, expert, mentor, and researcher in maternal-fetal medicine and obstetrics-gynecology her entire life,” said Christian Pettker, MD. “Her lifetime experience and achievement, and her stature and credibility were critical to disseminate accurate information, mobilize better resources and attention, and correct the major gaps and disenfranchisement affecting pregnant people affected and at risk for COVID-19. It is clear that, although this is a lifetime achievement award, her work is nowhere near complete.”

Sarah Kilpatrick, MD, added, “Dr Riley is a fantastic choice for the SMFM Lifetime Achievement Award. She has contributed across our field and within SMFM from mentor to presenter to organizer to leader.”

Again, we thank Riley for all her contributions to both maternal-fetal medicine and Contemporary OB/GYN.

Mike Hennessy Jr
President and CEO, MJH Life Sciences®

To see a recent interview with Riley on our 24-hour medical news platform, Medical World News, where she discussed what it’s like being a board member as well as a member of a COVID-19 task force, scan this QR code.
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In this issue, Contemporary OB/GYN® sat down with Jessica Shim, MD, an attending in the Division of Gynecology, Department of Surgery, Boston Children’s Hospital and Harvard Medical School to discuss Myfembree (relugolix, estradiol, and norethindrone acetate; Myovant Sciences, Pfizer) and its potential approval in May 2022. If approved, Myfembree could be game-changing for women with moderate to severe endometriosis-associated pain.
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References:
4. HHS Office of Minority Health; Cancer and Hispanic Americans.
帮助你的患者打破反复性阴道白念珠菌病（RVVC）的循环。

大约50%的女性会经历反复性阴道白念珠菌病（RVVC），其中6-9%的女性会发展成慢性阴道白念珠菌病（RVVC）。

慢性阴道白念珠菌病（RVVC）定义为3个或以上时期内的复发，共12个月。

你的患者可能没有告诉你有关RVVC的一切。

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RVVC影响女性的恋爱关系、自尊和社交生活—76%的女性表示RVVC令她感到痛苦，96%的女性改变生活方式以适应RVVC。

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Bringing awareness to endometriosis

National awareness months and days span a variety of topics, from celebrated foods (think National Ice Cream Day, National Bagel Day, National Pizza Day) to businesses (free Slurpee at 7-Eleven) to our terrain: health issues. March alone is a national health awareness month for over 10 conditions, one of which is endometriosis.

Endometriosis is a topic that is relevant to both our patients and providers, judging by the number of page views on our website (Table). Endometriosis is estimated to affect over 6 million women in the United States.1 Symptoms include pain, bleeding between menses, gastrointestinal problems (such as diarrhea, constipation, bloating, and nausea), and infertility. Although the most common symptom is pain, more than one-third of women with grade IV endometriosis present without pain, suggesting the need to keep endometriosis in the differential, even if pain free.2

National awareness months are useful not only to bring awareness to a particular disease or disorder but also to raise interest, provide knowledge, and offer a better understanding of the condition. With this month being National Endometriosis Awareness Month, Contemporary OB/GYN® is featuring an article on page 11 on how patients use social media to learn more about the condition on page 11.

Research on endometriosis includes understanding the etiology or cause; the role of genetics, hormones, and the immune system; and management options. Interestingly, funding for endometriosis from the National Institutes of Health has fluctuated from $6 million to $15 million since 2008 (Figure).3 Compared with other diseases with similar 2020 and estimated 2021 funding, endometriosis affects a much greater proportion of the population than the funding might suggest.

Endometriosis is diagnosed when endometrial tissue—which typically is inside and lines the uterus—is present outside the uterus, most commonly in the ovaries, fallopian tubes, and the tissue lining the pelvis. Although history and physical exam may be helpful with the diagnosis, definitive diagnosis often requires laparoscopy. Given the common symptoms, on average it takes more than 7 for a woman to get the diagnosis.

Scholarly peer-reviewed articles about endometriosis in PubMed have risen almost every year and now top 2000 per year. Despite this, more studies need to be done. For an illness that affects 1 in 10 women, this

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With everything going on, it’s easy to become a faceless cog in the machine of healthcare. If you’re looking to reconnect with your passion for medicine, we can help you find the perfect job that’s tailored to who you are, not just what you are.

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month, let’s up the ante on support, research, and commitment to an issue that significantly and adversely affects women’s health—and that of their families. ■

Catherine Y. Spong, MD, editor in chief, is professor and chair in the Department of Obstetrics and Gynecology and chief of the Division of Maternal-Fetal Medicine at UT Southwestern Medical Center in Dallas. She holds the Gillette Professorship of Obstetrics and Gynecology. Email her at cspong@mhlifesciences.com.

FOR REFERENCES, VISIT contemporaryobgyn.net/view/editorial-endometriosis-awareness

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Patient perspectives on vulvovaginal candidiasis

by BOB KRONEMYER

Among females with vulvovaginal candidiasis (VVC) or recurrent VVC (RVVC), the 3 most common symptoms are itching (91.2%), burning (68.3%), and redness (58.1%), according to an online patient survey in *BMC Women’s Health*. The 4 most frequently cited risk factors for VVC and RVVC were antibiotic use (37.8%); intercourse (21.6%); situations that can cause hormonal changes like pregnancy, use of oral contraceptives, and hormone replacement therapy (13.7%); and humid weather (11.3%).

In addition, 55.4% of respondents noted that their VVC episodes had no known cause. These idiopathic attacks were reported by similar proportions of females: 51.2% with a history of VVC and 62.9% with a history of RVVC.

Business cards containing online survey information were distributed to healthy volunteers and patients seeking standard, elective, or referral gynecologic care at 4 university-affiliated obstetrician-gynecologist clinics. The questionnaire was completed between February 2016 and May 2018 by 284 nonpregnant females: 78% identified as White, 14% as Black, and 8% as Asian.

Overall, 78% of participants indicated a history of VVC, with 34% defined as having RVVC.

Other common features of symptomatic VVC and RVVC episodes were vaginal discharge described as thick, white, or cottage cheese-like (55.6%); pain during intercourse (40.5%); vaginal pain (38.1%); and vaginal dryness (29.3%).

The survey also found a moderate association between VVC and RVVC incidence and the use of feminine hygiene products (10.8%), a new sexual partner (8.3%), and receptive oral sex (6.9%). Less than 3% of cases were reported as related to diabetes.

In total, 72.9% of VVC and RVVC episodes were diagnosed by physicians, with 71.7% of cases in this category diagnosed using a combination of pelvic examination and laboratory tests, followed by prescribed antifungals. But 28.3% of females reported that physician diagnosis was based upon a pelvic examination alone.

Following physician diagnosis, 66.5% of VVC cases were treated with oral or topical antifungal medications prescribed by the physician, whereas only 7.5% of cases were treated with OTC antifungal medications as instructed by the physician. The remaining 24.1% of VVC and RVVC episodes were self-diagnosed without seeking medical care and treated with OTC medications.

Physician-treated cases achieved an 84% symptom-relief success rate compared with 57% who self-medicated. Overall, 71% of females with RVVC required continual or long-term antifungal medication as maintenance therapy to control symptoms.

“Current patient perspectives closely reflect historically documented estimates of VVC/RVVC prevalence and trends regarding symptomatology, disease management, and posttreatment outcomes,” wrote the authors. They noted, however, that for more than 3 decades there has not been any significant reduction in lifetime or annual prevalence rates of VVC, despite several new drugs and effective maintenance therapies for RVVC.

At least 1 review, published in *Lancet Infectious Diseases* in 2018, predicted an upward trend in RVVC cases by 2030. This lack of progress is disheartening, according to the current authors, in part because of all the available data about the pathogenesis of disease and potential immunotherapeutic strategies.

**REFERENCES**


Self-managing pelvic pain via the internet

by BOB KRONEMYER

A survey in the American Journal of Obstetrics & Gynecology reveals that patients with chronic pelvic pain are twice as likely to use social media to understand or manage their condition as those without pain: 37.8% vs 19.7%, respectively. Similarly, 88.4% of the pain group used the internet for the same purpose compared with 69.4% in the no-pain group.

“Social media is increasingly becoming a health resource for [individuals] suffering from complex and debilitating health conditions,” wrote the authors. The study, conducted between February 2018 and April 2019, was comprised of patients who presented with a new complaint to a gynecologist at 1 of 6 fellowship in minimally invasive gynecologic surgery-affiliated hospital systems. Of 517 participants, 92% completed the survey, with 69.1% (n = 328) assigned to the pain group and 30.9% (n = 147) to the no-pain group. The mean age was 39.1 years in the pain group and 43.8 years in the no-pain group.

Besides significantly greater use of the internet among those in the pain group to understand or manage their condition, the pain group was more likely to engage in social media: 3.5 vs 1.7 (on a scale of 0-10) in the no-pain group (P < .0001). The pain group was also more motivated by interpersonal elements of online engagement (P < .0001).

In addition, members of the pain group preferred an interactive component to their online health resource: 35.6% vs 24.3% in the no-pain group (P < .0433). Furthermore, the pain group was more influenced by others in choosing a gynecologist: 0.37 vs 0.32 (on a scale of 0-1; P < .009).

The pain group also saw a mean of 2.92 physicians for the specific presenting complaint compared with only 1.80 physicians in the no-pain group (P < .0001). However, the pain group was more likely to use social media as a coping tool: 38.3% vs 17.0% (P < .0001).

The pain group was also more trusting of information found on social media: 31.4% vs 16.7% (P < .0033). Likewise, the pain group was more likely to trust other women with the same condition, trust informal health resources and trust personal sources, but less likely to trust doctors and formal health resources, (P = .0083).

Women in both groups reported higher levels of social media engagement with higher levels of symptom bother: a 28% increase in engagement with every doubling of bother level (P < .0001).

“Our study suggests that higher social media use and engagement stems from medical needs unmet by the formal health care system,” wrote the authors. “Cultivating a patient care environment in which both social media and formal care can exist together might achieve better patient outcomes.” They also noted that a comprehensive understanding of how and why social media and other internet sources are used by patients with chronic gynecologic pain will allow incorporation of web-based tools into patient care plans.

REFERENCE
**Indication**

BREXAFEMME® is a triterpenoid antifungal indicated for the treatment of adult and postmenarchal pediatric females with vulvovaginal candidiasis (VVC).

**Important Safety Information**

- BREXAFEMME is contraindicated during pregnancy and in patients with a history of hypersensitivity to ibrexafungerp.
- BREXAFEMME administration during pregnancy may cause fetal harm based on animal studies. Prior to initiating treatment, verify pregnancy status in females of reproductive potential and advise them to use effective contraception during treatment.
- When administering BREXAFEMME with strong CYP3A inhibitors, the dose of BREXAFEMME should be reduced to 150 mg twice a day for one day. Administration of BREXAFEMME with strong CYP3A inducers should be avoided.
- Most common adverse reactions observed in clinical trials (incidence ≥2%) were diarrhea, nausea, abdominal pain, dizziness, and vomiting.
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MOA = mechanism of action.

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To report SUSPECTED ADVERSE REACTIONS, contact SCYNEXIS, Inc. at 1-888-982-SCYX (1-888-982-7299) or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

Please see accompanying Brief Summary of full Prescribing Information on the following page.


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BREXAFEMME® (ibrexafungerp tablets), for oral use

BRIEF SUMMARY OF PRESCRIBING INFORMATION

This Brief Summary does not include all information needed to use BREXAFEMME safely and effectively. Please visit www.BREXAFEMMEHCP.com for full prescribing information (PI).

INDICATIONS AND USAGE

BREXAFEMME® is indicated for the treatment of adult and post-menarchal pediatric females with vulvovaginal candidiasis (VVC).

Usage

If specimens for fungal culture are obtained prior to therapy, antifungal therapy, may be instituted before the results of the cultures are known. However, once these results become available, antifungal therapy should be adjusted accordingly.

DOSEAGE AND ADMINISTRATION

Recommended Dosage

The recommended dosage of BREXAFEMME is 300 mg (two 150 mg tablets) administered approximately 12 hours apart (e.g., in the morning and in the evening) for one day, for a total daily dosage of 600 mg (four 150 mg tablets).

BREXAFEMME may be taken with or without food.

Dosage Modifications in Patients due to Concomitant Use of a Strong Inhibitor of Cytochrome P450 Isoenzymes (CYP) 3A

With concomitant use of a strong CYP3A inhibitor, administer BREXAFEMME 150 mg approximately 12 hours apart (i.e., in the morning and in the evening) for one day. No dosage adjustment is warranted in patients with concomitant use of a weak or moderate CYP3A inhibitor.

Pregnancy Evaluation Prior to Initiating Treatment

Verify the pregnancy status in females of reproductive potential prior to initiating treatment with BREXAFEMME.

CONTRAINDICATIONS

BREXAFEMME is contraindicated in pregnancy and in patients with hypersensitivity to ibrexafungerp.

WARNINGS AND PRECAUTIONS

Based on findings from animal studies, BREXAFEMME use is contraindicated in pregnancy because it may cause fetal harm. In animal reproduction studies, ibrexafungerp administered orally to pregnant rabbits during organogenesis was associated with fetal malformations including absent forelimb(s), absent hindpaw, absent ear pinna, and thoracogastroschisis at dose exposures greater or equal to approximately 5 times the human exposure at the RHD.

Prior to initiating treatment with BREXAFEMME, verify the pregnancy status in females of reproductive potential. Advise females of reproductive potential to use effective contraception during treatment with BREXAFEMME and for 4 days after the last dose.

ADVERSE REACTIONS

The most frequent adverse reactions (≥ 2%) reported with BREXAFEMME in clinical trials of vulvovaginal candidiasis treatment were diarrhea (16.7%), nausea (11.9%), abdominal pain (11.4%), dizziness (3.3%), and vomiting (2.0%). There were no serious adverse reactions and 2 out of 545 (0.4%) patients discontinued treatment with BREXAFEMME due to vomiting (1) and dizziness (1).

The following adverse reactions occurred in < 2% of patients receiving BREXAFEMME: dysmenorrhea, flatulence, back pain, elevated transaminases, vaginal bleeding, rash/hypersensitivity reaction.

DRUG INTERACTIONS

Ibrexafungerp is a substrate of CYP3A4. Drugs that inhibit or induce CYP3A may alter the plasma concentrations of ibrexafungerp and affect the safety and efficacy of BREXAFEMME. Avoid concomitant administration of BREXAFEMME with strong and moderate CYP3A inducers and reduce the BREXAFEMME dosage with strong CYP3A inhibitors (see Dosage and Administration above).

USE IN SPECIFIC POPULATIONS

Pregnancy

Based on findings from animal studies, BREXAFEMME use is contraindicated in pregnancy because it may cause fetal harm. In pregnant rabbits, oral ibrexafungerp administered during organogenesis was associated with rare malformations including absent forelimb(s), absent hindpaw, absent ear pinna, and thoracogastroschisis at dose exposures greater or equal to approximately 5 times the human exposure at the RHD. Oral ibrexafungerp administered to pregnant rats during organogenesis was not associated with fetal toxicity or increased fetal malformations at a dose exposure approximately 5 times the human exposure at the RHD. Available data on BREXAFEMME use in pregnant women are insufficient to draw conclusions about any drug-associated risks of major birth defects, miscarriage, or other adverse maternal or fetal outcomes.

There is a pregnancy safety study for BREXAFEMME. If BREXAFEMME is inadvertently administered during pregnancy or if pregnancy is detected within 4 days after a patient receives BREXAFEMME, pregnant women exposed to BREXAFEMME and healthcare providers should report pregnancies to SCYNEXIS, Inc. at 1-888-982-SCYX (7299).

Lactation

There are no data on the presence of ibrexafungerp in either human or animal milk, the effects on the breast-fed infant, or the effects on milk production.

Females and Males of Reproductive Potential

Based on animal data, BREXAFEMME may cause fetal harm when administered to a pregnant female. Verify the pregnancy status in females of reproductive potential prior to initiating treatment with BREXAFEMME. Advise females of reproductive potential to use effective contraception during treatment with BREXAFEMME and for 4 days after the last dose.

Pediatric Use

The safety and effectiveness of BREXAFEMME for treatment of VVC have been established in post-menarchal pediatric females. Use of BREXAFEMME in post-menarchal pediatric patients is supported by evidence from adequate and well-controlled studies of BREXAFEMME in adult non-pregnant women with VVC. Use of BREXAFEMME in post-menarchal pediatric patients is supported by evidence from adequate and well-controlled studies of BREXAFEMME in adult non-pregnant women with VVC.

The safety and effectiveness of BREXAFEMME have not been established in pre-menarchal pediatric females.

Geriatric Use

Clinical studies with ibrexafungerp did not include sufficient numbers of subjects aged 65 and older to determine whether they respond differently from younger subjects. No clinically meaningful differences in the pharmacokinetics of ibrexafungerp were observed in geriatric patients compared to younger adults.

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Are race, ethnicity, menopausal status linked to GI symptoms?

by BOB KRONEMYER

Being non-Hispanic (NH) Asian is a significant influencing factor for the number of gastrointestinal (GI) symptoms experienced and their severity scores, according to a study of 4 major racial/ethnic groups of midlife women in the United States. The study in Menopause also found that premenopausal status is the strongest influencing factor for the numbers of GI symptoms among all 4 participating groups: Hispanic, NH White, NH Black, and NH Asian patients.1

Principal investigator Eun-Ok Im, PhD, MPH, senior associate dean of research and innovation at Nell Hodgson Woodruff School of Nursing at Emory University in Atlanta, Georgia, was inspired to undertake the study based on her own menopausal transition with some GI symptoms. “I suspected that menopausal transition could influence GI symptoms differently, due to cultural differences like variations in diet and defecation behaviors with hormonal changes,” Im said.

The study is a secondary analysis of data of 1051 women from 2 internet studies on midlife women’s health issues that were completed in 2013. Those studies consisted of 12 questions on sociodemographic and health/menopausal factors and the GI Index for Midlife Women.

“Asian women tended to have lower numbers of lower severity scores of GI symptoms compared with other racial/ethnic groups,” Im told Contemporary OB/GYN. “I suspected that [Asian patients] might have more GI symptoms considering their highly seasoned foods, but was not sure about hormonal influences. For example, Asian women are less likely to experience menopausal symptoms, according to the current literature, and certain hormonal differences among various racial/ethnic groups during the menopausal transition have been reported. Yet, I think these findings need to be carefully interpreted, considering Asians’ cultural hesitance in reporting symptoms in general and menopausal symptoms in specific.”

The study concluded that premenopausal status was the only significant risk factor influencing GI symptoms, after controlling for other variables like background characteristics and disease status. “Premenopausal women had the largest number and severity of GI symptoms, except among Asian women,” Im said. “My guess is that GI symptoms could increase with advancing age, as is the case with other symptoms that show a similar pattern: sleep complaints, vaginal dryness, and cognitive symptoms.”

The findings need to be carefully interpreted because of several limitations of the study as a secondary analysis, according to Im.

Clinicians also need to ponder multiple influencing factors that might differently affect GI symptoms in racial/ethnic minority patients, including psychological issues like depression and symptom perception, Im said.

Factors like cultural dietary patterns and habits, and defecation practices, might also influence GI symptoms during the menopausal transition. “Of course, more studies are needed to confirm these findings on GI symptoms during the menopausal transition because little is known about it in the literature,” Im said. “Moreover, further in-depth studies are needed on the cultural factors that might differently influence racial/ethnic minority women’s GI symptoms during the menopausal transition.”

Additional studies encompassing other diverse groups are also warranted, according to Im. “Our next study aims to develop and pilot-test a web app-based information and coaching/support program that could help midlife women in their menopausal transition recognize and manage GI symptoms, after further analyzing who would be the risk groups to target,” Im said.

REFERENCE
1. Im EO, Kim G, Choi M, Chee W. Gastrointestinal symptoms in four major racial/ethnic groups of midlife women: race/ethnicity and menopausal status. Menopause. Published online December 6, 2021. doi:10.1097/GME.0000000000001898
Adnexal torsion requires careful diagnosis, management

by STEPHANIE M. CIZEK, MD

Torsion of adnexal structures (including torsion of the ovary, fallopian tube, or both) is the fifth most common gynecologic emergency.1 It can occur at any age, although it is more likely in individuals 10 years and older, with an average being age 30 years.1-3 It is the sixth most common pediatric surgical emergency and is estimated to affect 5 of every 100,000 individuals aged 1 to 20 years; 16% of pediatric torsion cases will occur prior to age 1 year.1 It can also occur in pregnant women, women post hysterectomy, and postmenopausal women.

Why talk about torsion?
Both pediatric and adult patients are at risk for delayed or missed diagnosis of torsion. The main presenting symptoms of adnexal torsion are abdominal pain and nausea. Torsion pain is classically intermittent, leaving some patients clinically well appearing in between pain episodes. Imaging, particularly the presence of vascular flow to the adnexa, can provide false reassurance that torsion is not present. Providers may erroneously ascribe torsion pain to a “ruptured cyst” or “hemorrhagic cyst.” Finally, particularly in the pediatric and adolescent population, gynecologic etiologies of pain are often not considered.

How do patients with torsion present?
The presence of symptoms such as diarrhea, dysuria, abnormal vaginal discharge, and vulvovaginal pain/itching are not typical for torsion (Table 1).1,4,5 In neonates, torsion typically presents with nonspecific symptoms such as inconsolability or feeding intolerance, and the infant may have an abdominal mass on examination.1

Vomiting may be a good positive predictor of torsion. In a study of pediatric torsion, 83% of premenarchal patients and 100% of postmenarchal patients with a confirmed surgical diagnosis of

STEPHANIE M. CIZEK, MD, completed a fellowship in pediatric and adolescent gynecology and is now a clinical assistant professor in the Department of Obstetrics and Gynecology at Stanford School of Medicine in California.

Adnexal Torsion with Multiple Twists
(Printed with permission from Paula Hillard, MD, and Elsevier.)
torsion presented with vomiting as well as abdominal pain.4

In all patients, a pelvic exam should be performed judiciously and is not necessary to diagnose torsion (Table 2).1 Pelvic exams may be most informative for sexually active patients to help distinguish pelvic inflammatory disease (which can also present as adnexal tenderness) from torsion (typically pain is worst in 1 adnexum and a mass may be palpable). In young or premenarchal patients, an external exam is needed if vulvar pathology or imperforate hymen are suspected (Box).

What imaging tests should be done?
Pelvic ultrasound: Ultrasound is first line in the diagnosis of torsion and should be performed urgently in the emergency department setting when torsion is considered.2,6 Although transvaginal pelvic ultrasound results in better imaging of the adnexa, transabdominal ultrasound is typically used in the pediatric and adolescent presexually active population. A full bladder for transabdominal ultrasound may be difficult in patients with developmental delay or in young children.

CT and MRI: These may be good second-line diagnostic tools; however, both have limited differences in sensitivity/specificity compared with ultrasound, may delay evaluation, and may incur higher cost.2,6 CT is less preferred in pediatric patients because it involves ionizing radiation.

In a 2020 review, the addition of color Doppler imaging to ultrasound slightly improved both sensitivity and specificity but was not statistically significant.6 The presence of Doppler arterial and/or venous flow does not rule out a diagnosis of torsion, because patients with normal vascular flow per imaging may still have torsion (up to 60% in one study) (Table 4).2,7,8

Pediatric and adolescent patients are more likely to have torsion in the absence of an ovarian cyst (up to 46%) compared with adults.2 In the absence of an adnexal mass, the only imaging finding may be volume differences from associated ovarian tissue edema of the torsed ovary or because a larger ovary itself may be a nidus

**TABLE 1. Patient History:**
**Key Points for Adnexal Torsion**

<table>
<thead>
<tr>
<th>Acute lower abdominal pain</th>
<th>Unilateral (right or left lower quadrant) Often intermittent over days (can be months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea and vomiting</td>
<td>Vomiting usually present in torsion</td>
</tr>
<tr>
<td>Menstrual history (last menstrual period, typical cycle length/pain)</td>
<td>Severe dysmenorrhea can also present as pain/vomiting Hemorrhagic corpus luteum usually later in menstrual cycle, may grow large if anovulatory cycling</td>
</tr>
<tr>
<td>Sexual history</td>
<td>Rule out STI/PID Determine whether emergency contraception is needed</td>
</tr>
</tbody>
</table>

**TABLE 2. Patient Exam:**
**Key Points for Adnexal Torsion**

<table>
<thead>
<tr>
<th>Vital signs</th>
<th>Often normal Mild temperature elevations possible; fever uncommon Tachycardia, hypertension possible during acute pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain</td>
<td>May have minimal pain in intermittent phase between acute pain episodes</td>
</tr>
<tr>
<td>Pelvic exam</td>
<td>If indicated, assess other etiologies such as PID</td>
</tr>
</tbody>
</table>

**Clinically Indicated Pelvic Exams**
(Bimanual/speculum) in emergency department

**Sexually active with...**
- Abnormal discharge
- Concern for vaginal trauma, mass, foreign body
- Pelvic or abdominal pain without other clear etiology
- Forensic exam for abuse

**Everyone, regardless of age or coitarche status:**
- Needs to consent to any genital exam
- Consider whether exam under sedation ± vaginoscopy is more appropriate
for torsion. Volume differences are common and in torsion are typically notably significant (at least 2.5 times greater volume in the torsed ovary). Providers should use caution against overinterpreting volume differences in the setting of an adnexal mass: If there is a cyst, there is naturally a volume difference between the ovaries.

How is torsion managed?
Surgery is the gold standard. The definitive diagnosis and the management of adnexal torsion is done with urgent surgery, typically using laparoscopy. Approximately 50% of patients taken to the operating room because of concern for torsion will have torsion found intraoperatively.

There is no duration of symptoms that reliably predicts ovarian viability. In one study with a median time of 16 hours from symptom onset to surgery, follow-up ultrasound showed normal follicular development in 91% of previously torsed ovaries. In another study, patients with viable-appearing ovaries had a median time from presentation to diagnosis of 12 hours, and a median time from symptom onset to presentation of 3 days. The lymphatic and venous obstructions are thought to occur prior to arterial blood flow obstruction, and some “loose” or “partial” torsion cases may have intermittent arterial blood flow, making it difficult to correlate pain onset with timing of true tissue ischemia. In a comparison of ovarian to testicular torsion, patients with suspected ovarian torsion waited 2.5 times as long for diagnostic imaging and 2.7 times as long to be taken to the operating room, and the salvage rate for the affected gonad was 14% for ovarian torsion and 30% for testicular torsion.

Nonsurgical management: The benefit of urgent surgical management when torsion is suspected is salvage of viable tubal and/or ovarian tissue, and improvement in patient pain. In select situations, such as a patient who is a poor surgical candidate, then after careful informed consent and shared decision-making discussion, medical management of pain without surgery (or with delayed, planned surgery) may be considered or even recommended. There is strong support for retaining torsed ovaries in situ even in the setting of gross signs of necrosis. Even an ovary

TABLE 3. Laboratory Evaluation for Adnexal Torsion

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy test</td>
<td>Rule out obstetric causes of pain</td>
</tr>
<tr>
<td>COVID-19 test</td>
<td>Facilitate urgent surgery</td>
</tr>
<tr>
<td>Complete blood count</td>
<td>Often mild leukocytosis; significant leukocytosis less common</td>
</tr>
<tr>
<td></td>
<td>If ruptured cyst on differential, hemoglobin/hematocrit to assess blood loss</td>
</tr>
<tr>
<td>Urinalysis</td>
<td>Rule out urinary tract infection as cause of pain</td>
</tr>
<tr>
<td>Serum tumor markers</td>
<td>If concern for malignancy</td>
</tr>
<tr>
<td>STI testing</td>
<td>As indicated for sexually active patients</td>
</tr>
</tbody>
</table>

STI, sexually transmitted infection.

TABLE 4. Imaging Findings Concerning for Adnexal Torsion

<table>
<thead>
<tr>
<th>Findings</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adnexal mass</td>
<td>Risk of torsion increases if adnexal mass &gt; 5 cm is present</td>
</tr>
<tr>
<td></td>
<td>Pediatric/adolescent patients are more likely to torsed without a mass</td>
</tr>
<tr>
<td>Ovarian stromal edema</td>
<td>Venous occlusion leads to congestion of ovarian tissue</td>
</tr>
<tr>
<td>Peripheralization of ovarian follicles</td>
<td>Ovarian cortex, which contains follicles, is stretched around edematous stromal tissue</td>
</tr>
<tr>
<td>Ovarian volume difference</td>
<td>May be the only finding in patients without an adnexal mass</td>
</tr>
<tr>
<td>Diminished vascular flow on Doppler imaging</td>
<td>Interpret with caution because presence or absence of flow is nondiagnostic</td>
</tr>
<tr>
<td>“Whirlpool sign” or “swirl sign”</td>
<td>Visible presence of twisted adnexal vessels Highly specific but uncommonly detected</td>
</tr>
</tbody>
</table>

STI, sexually transmitted infection.
appearing necrotic may continue to function, as measured by follicular development on ultrasound. Concerns regarding the increased risk of venous thromboembolism with detorsion or infection if necrotic tissue is left in situ have not been substantiated. Concern for malignancy is also often cited as a cause for oophorectomy, particularly in the pediatric population because at least 10% of pediatric ovarian masses are thought to be malignant. However, a recent large study found only a 1.8% malignancy rate among pediatric patients with ovarian torsion. A large multicenter study found that patients 10 years and younger (particularly those < 3 years old), those with public insurance, and those with chronic medical conditions were all more likely to undergo oophorectomy at the time of torsion, suggesting that many factors may play into surgical decision-making.

Can oophoropexy prevent recurrence of torsion?
Recurrence is thought to be approximately 5% to 6%. Patients who initially had torsion of a normal ovary have the highest rates of recurrence (15% vs 3% in one study examining recurrence of idiopathic torsion vs torsion in the presence of an adnexal mass).

Oophoropexy: The role of oophoropexy in preventing recurrence of torsion is controversial. Oophoropexy aims to reduce the risk of torsion either by fixing the ovary to a structure in the pelvis or shortening the utero-ovarian ligament. There are scant data comparing different oophoropexy techniques, which makes interpretation of efficacy data difficult. Recurrent torsion rates after oophoropexy are estimated to be between 9% and 17%. Because recurrence is highest in torsion of a normal ovary, this population, along with other patients at higher risk (those with bilateral torsion, recurrent torsion, prior oophorectomy, or anatomic risk factors such as long infundibulopelvic ligaments) may potentially benefit most from oophoropexy.

Conclusion
A swift and accurate diagnosis of torsion requires a high index of suspicion, effective communication, and continuing education of all specialties involved. Gynecology and emergency department providers should keep torsion high on the differential and understand that imaging does not provide definitive evidence against torsion. Operating room staff and anesthesiologists should be aware of the urgent nature of torsion and the intermittent nature of symptoms that may make a patient appear less “urgent” for surgery. Overall, it is recommended that all providers keep torsion high on their differential.

TABLE 5.

Key Points in Management of Adnexal Torsion

Oophorectomy is rarely required.
- Even for an ovary with concern for gross necrosis, there are no known risks to leaving the ovary in situ, and these ovaries may still be functional.

Salpingectomy may be considered.
- In contrast to preservation of an ovary with concern for gross necrosis, there may be risks to leaving an extensively damaged fallopian tube in situ (ectopic pregnancy, decreased fertility); removal of a fallopian tube involved in torsion is considered on a case-by-case basis.

Paratubal cyst torsion
- More common in pediatric/adolescent populations but can occur any age
- If ovary not involved in torsion, it may look normal on imaging.
- Drainage without cystectomy risks recurrence

Consider delaying cystectomy.
- May be the only finding in patients without an adnexal mass
- Cystectomy at the time of detorsion is ideal:
  - If surgical planes are compromised due to tissue hemorrhage/edema during acute torsion, consider detorsion alone, followed by imaging/return for second surgery if needed, rather than unnecessary oophorectomy.
  - Consider surgical risks/candidacy/benefits of ovarian preservation (may differ if patient is age 45 years vs 15 years)

For References Visit
contemporaryobgyn.net/ovarian-torsion
Understanding abnormal uterine bleeding in adolescents

by OLUYEMISI A. ADEYEMI-FOWODE, MD, FACOG; AND EMILY P. A. BRANDER, MD, FRCSC

Introduction
Abnormal uterine bleeding (AUB) can be acute or chronic and refers to bleeding from the uterine corpus that is abnormal in volume, regularity, and/or timing.1 Acute AUB is defined as an episode of heavy bleeding that is of sufficient quantity to require immediate intervention to prevent further blood loss.1 For most individuals, chronic AUB is present for 6 months. Heavy menstrual bleeding (HMB) refers to excessive menstrual blood loss that interferes with a woman’s physical, social, emotional, or material quantity of life.2 In adolescents, a typical menstrual cycle ranges from 21 to 45 days, lasts 7 days or less, and requires 3 to 6 pads or tampons per day because of soilage (more may be used for hygiene purposes).3 There are many causes that push a menstrual pattern outside these boundaries. The most common cause of AUB in adolescents is anovulation due to immaturity of the hypothalamic-pituitary-ovarian (HPO) axis. It can take up to 3 years after menarche for the HPO axis to mature.4 Within those years, investigation is warranted if menses occurs more frequently than 21 days; less frequently than 45 days; or occurs 90 days apart, even for 1 cycle; lasts more than 7 days; requires frequent sanitary product changes (soaking more than 1 every 1-2 hours); or is heavy and associated with a history of excessive bruising or a family history of bleeding disorder (BD).3

The American College of Obstetricians and Gynecologists (ACOG) has standardized the terminology used to classify causes of AUB with the acronym PALM-COEIN, categorizing the etiology of AUB as structural or nonstructural (Figure 1).4,5 Most women with BD report HMB as the most common manifestation of their disorder, and approximately half of adolescent girls with BDs present with HMB at menarche, with 12% requiring hospitalization due to anemia.2,8 Approximately 44% of adolescents who present with HMB may have an underlying coagulopathy.9 Von Willebrand disease was not reported in this case.
(VWD), the most commonly inherited BD, affects 1% of the population, and is estimated to affect approximately 36% of patients with HMB.8

HISTORY

History and physical examination are essential for appropriate laboratory and imaging tests. Specific questions are helpful when obtaining a history from adolescents. Adolescents may not be able to describe their menstruation accurately, so using a pictorial blood assessment chart may be helpful in this case, though this tool has not been validated in the adolescent population.10 If a BD is suspected, screening tools can be incorporated into the history taking (Figure 2). Patients who screen positive should be further evaluated for a BD. It is best to ask permission and have the guardian leave the room temporarily and assure confidentiality before asking sensitive questions about lifestyle choices, sexual activity, and safety.

PHYSICAL EXAMINATION

Besides evaluating all systems, special attention should be paid to the pelvic examination to discern whether the bleeding is from the uterus or another area of the genital tract, such as a cervical/vaginal or hymenal laceration. In adolescents with HMB, a speculum and/or bimanual exam is typically not required and may not be feasible. If the source of bleeding is unclear and the patient can tolerate it, a speculum and/or bimanual exam should be performed. If they are unable to tolerate it, traction on the labia majora in a down and out fashion will expose the hymen and often the lower third of the vagina (Figure 3). If bleeding is heavy and the patient is unstable, an exam under anesthesia is warranted to determine the source of bleeding.

LABORATORY TESTING

AUB due to anovulation, although common, is a diagnosis of exclusion. It is imperative to rule out pregnancy early in the assessment of any reproductive-aged woman, including the adolescent. An assessment of anemia and coagulation tests should be included. In cases of severe anemia, profuse bleeding, or hemodynamic instability, a blood type and crossmatch are advisable in preparation for blood transfusion. Testing for specific BDs such as VWD should be included if indicated. Second-tier confirmatory BD testing should be done in collaboration with a hematologist. Ideally, all tests of hormones and coagulation function should be drawn before any treatment commences.

Endometrial tissue sampling in the adolescent population is typically not indicated, as endometrial hyperplasia or malignancy in this age group is rare. A history of unopposed estrogen exposure, such as obesity or polycystic ovarian syndrome (PCOS), coupled with failed medical management can inform this decision. Prior to tissue sampling, evaluating endometrial stripe thickness and assessing for the presence of a hematometra is useful.

IMAGING

Structural causes for AUB in adolescents are uncommon, and thus imaging studies are often low yield.11 However, a patient who is not responding appropriately to treatment should have imaging performed. Ordering a pelvic ultrasound is up to the clinician’s judgment and must take into consideration the patient’s age, availability of equipment, and route of image capture (eg, transabdominal vs transvaginal). The transvaginal route is preferred to assess female reproductive structures, but the transabdominal route may be more appropriate in adolescents.2,6

FIGURE 1. Causes of Abnormal Uterine Bleeding: Expanded to Include Key Causes of Anovulation in Adolescents8

Abnormal uterine bleeding
- Heavy menstrual bleeding (AUB-HMB)
- Intermenstrual bleeding (AUB/IMB)

PALM – Structural causes
- Polyp (AUB-P)
- Adenomyosis (AUB-A)
- Leiomyoma (AUB-L)
- Submucosal leiomyoma (AUB-LSM)
- Other leiomyoma (AUB-LO)
- Malignancy and hyperplasia (AUB-M)

COEIN – Nonstructural causes
- Coagulopathy (AUB-C)
- Ovulatory dysfunction (AUB-O)
- Endometrial (AUB-E)
- Iatrogenic (AUB-I)
- Not yet classified (AUB-N)

Differential diagnosis for anovulation in adolescents

PAL – Physiologic
- Pregnancy
- Adolescence
- Lactation

OPTIMAL-H – Pathologic
- Ovarian failure, premature
- Primary pituitary disease
- Thyroid disease
- Iatrogenic (eg, secondary to radiation or chemotherapy)
- Medications
- Hyperandrogenic anovulation, (eg, polycystic ovary syndrome, congenital adrenal hyperplasia)
- HyperproLactinemia
- Hypothalamic dysfunction (eg, secondary to anorexia nervosa)
The objectives of managing AUB are to control the current bleeding episode and to reduce blood loss in subsequent cycles. This goal can be achieved by medical or surgical means. In adolescents, medical management is preferred, given the presumed desire for future fertility.

**Medical management**

1. **Management setting**
   - When a patient has active profuse heavy bleeding (requiring > 1 pad per hour, as well as vital signs with evidence of hypovolemia or orthostatic hypotension) and/or severe symptomatic anemia (hemoglobin < 8 g/dL), inpatient therapy is warranted. Admission to an intensive care setting should be considered in the following scenarios: brisk bleeding; anemia that risks cardiovascular compromise (stroke or myocardial infarction); signs of systemic instability, such as tachycardia or hypotension; or underlying medical conditions.
   - When the bleeding is slow, the anemia is not severe, and the patient is asymptomatic and has no comorbidities, outpatient therapy is appropriate, with strict bleeding precautions given.

2. **Volume expansion**
   - In acute AUB, hypovolemia and anemia should be addressed in concert. Treatment should begin with the judicious use of intravenous (IV) crystalloids. Transfusion of packed red blood cells (PRBCs) should be performed only if indicated. Guidelines from critical care associations advocate that transfusion of PRBCs be reserved for patients with active bleeding and hemoglobin levels less than or equal to 7. Automatic administration of blood products to young women with anemia should be avoided. This will not only reduce the incurrent risks of transfusion reactions but also the risk of alloimmunization and hemolytic disease of the fetus and newborn in any future pregnancies. IV fluid and transfusion rates should be based on weight, and a pediatric intensivist or hematologist should be involved in child-sized patients. Initiation of oral or IV iron therapy is also recommended after an acute hemorrhage. A ferritin level and prior response to iron therapy can direct the route of administration. Adverse effects of iron supplementation include gastrointestinal upset, and thus a bowel regimen should be considered.

3. **Hormone therapy**
   - **Acute—medical**
     - The mainstay of treating acute AUB is estrogen to stabilize the endometrial lining. IV conjugated estrogen or alternatively combined oral contraceptive pills (COCPs) can be used. Bleeding typically slows significantly within 12 to 72 hours of administration of either IV or COCPs, but IV formulations work faster. Contraindications to estrogen must be ruled out. If bleeding is not slowing, consultation with a hematologist is warranted. Dosing of estrogen can be tapered when bleeding is controlled. As estrogen can induce nausea, an antiemetic should be given 30 minutes before each dose until the estrogen is tapered.
     - High doses of COCPs and oral progestin therapy are clinically equivalent for controlling HMB in the adult population. High-dose oral progestins can be used as an alternative and are indicated when estrogen is contraindicated or if a patient cannot tolerate the estrogen-induced nausea and vomiting.
     - Conventional doses of progestins in the setting of acute bleeding will likely lead to treatment failure. Thus, high-dose progestin with a taper should be utilized.

   After acute bleeding has been controlled, the goal is to maintain amenorrhea while the patient completes any investigations and normalizes their hemoglobin level and iron stores. The hormonal therapy should be continued at doses required to achieve amenorrhea for at least 4 to 6 weeks. Close
follow-up is recommended to evaluate response, taper to a maintenance dose, and determine when a withdrawal bleed can be safely planned. A withdrawal bleed is necessary to shed the disordered proliferative endometrium that led to the heavy/prolonged bleeding. This is a common cause of failed hormonal therapy with breakthrough bleeding. Endometrial shedding leads to shedding of the endometrium to the level of the basalis, resulting in a better chance for success of maintenance therapy with hormonal options or to observe for normalization of cycles. Most hormonal options used for acute AUB can be used as maintenance therapy at lower doses.

b. Chronic—medical
In the office setting, a patient can present with prolonged AUB and signs of chronic anemia or with more recent HMB superimposed on menstrual irregularities. In the latter case, the patient may have a normal hemoglobin level despite low ferritin levels, indicating iron deficiency. The mainstay is hormonal control with concurrent iron supplementation, if necessary, to correct and prevent anemia.

c. Maintenance therapy
Long-term stabilization of the endometrium can be achieved with either COCPs or progestrone-only therapy.

i. COCPs
For adolescents, the optimal dose of estrogen in a COCP is at least 30 µg. Studies reveal lower rate of bone mass accrual in adolescents using lower-dose pills (<30 µg) compared with those using pills with at least 30 µg of estrogen. In addition, lower-dose pills can increase risk of breakthrough bleeding (BTB). In patients with AUB caused by PCOS, COCPs will decrease hyperandrogenism more effectively than progestins alone. Young patients can have difficulty adhering to daily medicines, so options with longer half-lives, such as the contraceptive patch or vaginal ring, can be considered. COCPs also come in chewable formulations, which is helpful in very young patients or patients who have difficulty swallowing pills.

ii. Progesterone-only options
Progesterone-only options for maintenance include pills, injectable depot-medroxyprogesterone acetate (DMPA), and long-acting reversible contraceptives (LARCs). However, any progestrone-only treatment has the risk of unscheduled BTB. Adolescents should be warned of this potential adverse effect to improve adherence. DMPA has potential adverse effects of weight gain and decreased bone mineral density (BMD). The decreased BMD is typically mild and substantially reversible upon discontinuation, but adolescence is a time of bone density accrual, so this should be taken into consideration when prescribing DMPA. Fears about its deleterious effects on bone health in adolescents led to a black box warning from the FDA in 2004. ACOG has since released a response urging that "the effect of DMPA on BMD...should not prevent practitioners from prescribing DMPA or continuing use beyond 2 years." The risk of unintended pregnancy should be weighed before discontinuing an effective therapy.

Because adherence can be an issue in this population, LARCs, such as a contraceptive implant or the 52-mg levonorgestrel-releasing intrauterine device (IUD), can be considered. During treatment of HMB, LARCs can be concomitantly used from contraception. Both methods can cause unscheduled bleeding, but the implant tends to cause more BTB and is not recommended first line for those patients with a proven BD. IUDs are safe therapies to control AUB in adolescents and have high patient-satisfaction ratings.

4. Nonhormone therapy
Antifibrinolytics, such as IV or oral tranexamic acid (TXA), can also be used emergently for treatment of acute AUB, but they can also be used as cyclic monotherapy every month or in combination with hormone therapy in cases of chronic HMB. In patients with BDs, hormonal management alone might not be sufficient to control bleeding. There have been theoretical concerns for increased clotting risk with combined use of hormonal and antifibrinolytic medicines, but there is currently not...
A 16-year-old girl with a history of obesity is referred to the gynecology clinic for complaints of irregular and heavy menstrual bleeding. She reports menarche at age 14, irregular menses occurring every 2 to 5 months that last 7 to 14 days. Her current menses started 12 days ago and remains heavy. She is also complaining of increasing weight gain despite exercise, acne on her face and back, and hair growing on her chin and lower back. She is afebrile, her body mass index (BMI) is 35 (99th percentile for weight), her pulse is 90 bpm, her blood pressure is 125/61 mm/Hg, her respiratory rate is 14 breaths per minute, and her oxygen saturation is 99% on room air. Examination reveals hirsutism and acne on her face and lower back. On external genitalia exam, mild clitoromegaly is noted. Her pad, which has been in place for 5 hours, is 40% soaked. Laboratory results from the referring provider are notable for hemoglobin level of 8.2 ng/gL and ferritin level of 5 ng/mL.

enough evidence to support this. In addition to IV route, liquid and tablet formulations of TXA are available.

Patients with BDs related to platelet dysfunction should be counseled to avoid all nonsteroidal anti-inflammatories, especially when treating menstrual cramps, as these can further impair platelet function and result in heavier bleeding.

5. Surgical management

Surgical intervention is considered in the rare cases of persistent heavy bleeding with a lack of response to medical therapy or when severe heavy bleeding warrants an examination under anesthesia. This is because uterine surgery has a risk of adversely affecting the young patient’s future fertility. Intrauterine balloons designed for obstetric use in adults are not appropriately sized for adolescents. Instead, a foley catheter should be used. There are reports demonstrating the use of a foley catheter balloon that can be easily inserted through the cervix and inflated for tamponade effect. Suction evacuation of the uterus can be considered if an ultrasonography identifies a clot, decidual cast, hematometra, or with failure of medical therapy. Sharp curettage can result in increased bleeding in patients with a BD.

Interventions, such as endometrial ablation, uterine artery embolization, and hysterectomy, are considered last resort measures, given the presumed desire for future fertility in adolescents.

CASE 1 CONCLUSIONS

This case demonstrates the acute hemorrhage that can occur immediately with menarche, which may be an underlying BD rather than an anovulatory bleeding pattern. Work-up should include a blood count (type and screen), a bleeding panel (investigation of thyroid function), and coagulation factors and tests for VWD. A urine β-hCG test should be done to rule out pregnancy. A pelvic ultrasound can be considered, but is less likely to reveal a structural cause of AUB in adolescents. With severe anemia and ongoing bleeding, admission or outpatient therapy is a first decision point. The patient’s treatment should consist of IV fluids, a blood transfusion in a monitored setting, and IV estrogen. This should stop the bleeding in 24 to 48 hours. IV or oral TXA can also be initiated on presentation. The patient can then be transitioned to oral therapy, typically with a COCP with a tapered dose. If the patient cannot have estrogen, acute therapy should include high-dose oral progestins with a slow taper.

After 4 to 6 weeks of hormonally induced amenorrhea, the patient is evaluated. If her anemia has recovered sufficiently, a withdrawal bleed can be considered before initiating maintenance therapy to decrease the risk of unscheduled bleeding. Treatment of iron deficiency should be initiated and continued as an outpatient. In these cases, involvement of hematology is beneficial, especially as most BDs require repeat and in-depth testing to diagnose.

CASE 2 CONCLUSIONS

This case suggests an anovulatory bleeding pattern. In addition to workup for acute bleeding as outlined in the prior case, PCOS screening should be included, given history and physical exam findings. PCOS is a diagnosis of exclusion, including a 17-OHP test to rule out congenital adrenal hyperplasia and excessive dehydroepiandrosterone sulfate production to exclude an adrenal hyperandrogenism. A pelvic ultrasound can be obtained if testosterone levels are very elevated, which is suggestive of an androgen-secreting tumor. Pelvic ultrasounds have a limited role in diagnosing PCOS in adolescents, as polycystic ovarian morphology can be physiologic in this population.

Treatment of acute menstrual bleeding can begin before transitioning to maintenance. For suspected PCOS, combined hormonal therapy helps decrease symptoms of hyperandrogenism. With a hemoglobin level above 7.0, a blood transfusion is not indicated, but iron supplementation should be given. Given the patient’s BMI, in addition to hormonal therapy to control bleeding, lifestyle modification counseling is indicated.

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§Significant increases in sleep with EQUELLE (P=0.013 vs baseline). As compared to 16 minutes more with placebo (P=NS vs baseline).
||In patients with >9 vasomotor symptoms at baseline (P=0.012 vs placebo).

Provider bias in contraceptive counseling

by LINDSEY CARR, ASSOCIATE EDITOR

Provider bias—stereotyped, prejudiced assumptions about patients and their “best interests”—can limit patient autonomy and informed decision-making, amplify distrust, and deter individuals from seeking care. Such bias is often amplified when patients are young, have low income, and/or are Black, Indigenous, and people of color (BIPOC).

A study in Contraception highlights how provider bias manifests in patient-provider interactions and influences contraceptive counseling. Results showed that clinicians often viewed a patient’s race/ethnicity, socioeconomic status, and age as primary challenges when providing contraceptive counseling.

Data were based on individual interviews with 15 clinicians in South Carolina, all of whom worked in obstetrics and gynecology and provided long-acting reversible contraception (LARC) methods to Medicaid beneficiaries. The state has a nearly 35% BIPOC population and a poverty rate above the national rate, with 20% of residents insured through Medicaid. The interviews explored clinicians’ demographic backgrounds, medical training, current positions, patient population(s), opinions on LARC methods, and contraceptive counseling approaches. All 15 participants identified as cisgender and White, including 1 man and 14 women. Eleven were physicians and 4 were nurses—3 nurse practitioners and 1 registered nurse. Of all participants, 3 were residents and the remaining 12 had 5 or more years of postresidency experience. Eight participants were 40 years or older, 5 were in their early 30s, and 2 were in their late 20s.

When asked about working with diverse patient populations, many clinicians referred to “cultural differences” as a primary challenge. They also described difficulty in providing contraceptive counseling to adolescents and patients with “negative attitudes” or resistance to LARC use.

In 2 cases, clinicians ascribed their difficulties to patients’ race/ethnicity, with a nurse saying, “They just don’t want to listen.” Another clinician cited patients’ low socioeconomic status as the reason for nonadherence to LARC: “My patients with less education and lower socioeconomic status can just be challenging in a way that it’s more difficult for them to be adherent.” In their frustration with patients’ “culture,” ambivalence, distrust of medical expertise, and lack of self-efficacy and contraceptive adherence, clinicians implied that, unlike their patients, they know what is best.

The interviewer asked participants to describe a typical contraceptive-related conversation and include recent examples, to which clinicians of-
ten responded by sharing interactions with adolescent patients. In one response, a patient expressed concern after seeing a YouTube video about a local girl whose intrauterine device was incorrectly placed and dislodged, eventually going through her cervix and uterus, causing sepsis and admission to an intensive care unit, where she ultimately underwent amputation. The respondent said, “17-year-old African American female, of course. Nothing ever happens exactly like that.” This statement implies that young BIPOC patients are uniquely susceptible to implausible scenarios and serious complications.

Another clinician referred to her adolescent patients. “Most of the time...they are being led by the ear of their parents,” she began. “I'm all for patient choice, but there's also no cure for stupid. We support teenagers and then there are times when we support parents, when the teenager can't make good decisions for themselves.”

Another clinician implied that patients’ concerns about hormonal contraception are irrational, citing “ethnic components” as the primary cause. “It’s most frustrating when I hear, ‘I don’t want any hormones in me or anything foreign in me.’ [That is] the hardest part, because to me, I’m thinking, ‘Well, [they’re] the same hormones that you have in your body circulating anyway. It’s nothing...I think some people have their mind made up already when you start counseling them, and it’s sometimes not worth it to...push through that just for the sake of getting your point across, because I think sometimes there are ethnic components to it.”

According to investigators, the study indicates that clinicians may not consider patients’ refusal to use contraceptive methods like LARC as an assertion of agency and autonomy. Their counseling approaches did not assess or respect patients’ needs, preferences, safety concerns, or suspicions. As for counseling adolescent patients, many clinicians reinforced an imbalance of power and used their status as adults and medical experts to promote contraceptive use.

“While person-centered contraceptive counseling and shared decision-making have received significant attention, fostering clinicians’ structural competency is an important step medicine could systematically undertake to rectify provider bias,” the authors wrote. “Contraceptive counseling informed by structural competency—that centers patients’ preferences and autonomy, regardless of clinicians’ beliefs about patients’ ‘best interests’—is better situated to realize the aims of reproductive justice for all pregnancy-capable people,” they concluded.

REFERENCE

Prenatal genetic data sharing and privacy risks

by MORGAN PETRONELLI, ASSISTANT MANAGING EDITOR

An oral abstract presentation at the Society for Maternal-Fetal Medicine’s 42nd Annual Pregnancy Meeting explored cell-free (cf) DNA testing and participants’ knowledge and willingness of genetic data sharing.1

“There has been a dramatic increase in DNA-based aneuploidy screening, and this has been driven by cfDNA testing. In fact, cfDNA use in pregnancy has increased by 15% per year, with this testing being called ‘the most rapidly adopted genetic test in history.’ All of this is made possible by the fact that it is offered by lots of hospital-based and commercially based laboratories,” said Christian M. Parobek, MD, PhD, presenter and coauthor of the abstract. Parobek is a resident at Women & Infants Hospital of Rhode Island and Brown University’s Alpert Medical School in Providence.

With the rise in cfDNA testing, some issues have emerged, including privacy risks. Because genetic data are identifiable, Parobek said, DNA-based prenatal genetic data may contain unintended insights into the current or future health of the patient and fetus. He said although this hasn’t yet happened, these insights could lead to confidentiality or insurability problems.

“This matters because it means if genetic prenatal data were to fall into the wrong hands, it could pose a hazard to the pregnant patient and also to the fetus,” Parobek said.

However, if this were to happen, federal legislature is in place to protect against some forms of discrimination. The Genetic Information Nondiscrimination Act helps protect patients from health insurance and employment discrimination, but it does not protect against discrimination from life, disability, or long-term care insurers.

In their randomized control trial (NCT04420858), Parobek and his coauthors sought to determine whether pregnant patients who had previously gone through cfDNA were cognizant that their genetic data may be shared. They also assessed whether video education about GINA affected these patients’ attitudes toward data sharing.

The study enrolled English-speaking participants with singleton pregnancies who also underwent cfDNA testing. A total of 160 of participants were randomized 1:1 into the control intervention arm, with the control arm participants viewing an infographic about cfDNA and intervention arm participants viewing the same infographic in addition to a video about GINA.

Investigators found a majority of both arms were either uncertain about or thought that cfDNA testing companies could not share their prenatal genetic data for research purposes. Additionally, video education about GINA caused participants to incorrectly believe their genetic data would not be shared for research (29% vs 40%, \( P = .03 \)).

Despite this, video education did not increase the participants’ willingness to share their genetic data. Ultimately, the study found most participants were uninformed that their prenatal genetic data may be used for nonclinical purposes.

“While video education did not alter willingness to share genetic data, it did lead patients to believe falsely that their data would not be shared for research,” the authors wrote. “New strategies are needed to improve pregnant patients’ understanding of genetic privacy.”

REFERENCE

Advances in the Testing for
Premature Rupture of Membranes

In the recent KCast video series featured on Contemporary OB/GYN®, Dr. Berghella and Dr. Roman-Camargo, discuss current guidelines, recommendations, and new research on the diagnosis, management, and prevention of premature rupture of amniotic membranes (PROM), highlighting the latest available diagnostic testing methods for clinical use.

In the US, preterm PROM complicates approximately 2 to 3% of all pregnancies, whereas term PROM occurs in approximately 8%. Listen in to learn more about the leading initiatives of diagnosis and testing to reduce preterm births.

Watch Now

Vincenzo Berghella, MD
Director, Division of Maternal-Fetal Medicine
Thomas Jefferson University Hospital
Philadelphia, PA

Amanda Roman-Camargo, MD
Assistant Professor, Division of Maternal-Fetal Medicine
Thomas Jefferson University Hospital
Philadelphia, PA

Supported by QIAGEN
Panel discusses ways to support transgender, gender-expansive patients in reproductive health care

by LINDSEY CARR, ASSOCIATE EDITOR

During a roundtable at the Society for Maternal-Fetal Medicine’s 42nd Annual Pregnancy Meeting, held virtually, participants engaged in 2 case-based discussions highlighting opportunities for practitioners to improve the care and reproductive health experiences of individuals with diverse sexual and gender identities in various settings. Roundtable leader Justin Brandt, MD, was joined by Trystan Reese; Kacey Eichelberger, MD; and Melissa Wong, MD, MHDS. Reese is an author, transgender man, and LGBTQ+ advocate.

Wong presented the first case:
You are the residency program director at the start of the new academic year. One of the volunteer private practice physicians with whom your residents rotate for 1 month has asked to speak with you regarding your intern Sam, a transgender woman. The physician states that she is very supportive of Sam, but her staff have expressed concerns about having the resources to chaperone during physical examinations (which they do for male residents). In addition, she says her patients seem uncomfortable, so she wonders whether Sam’s remaining weeks could be spent shadowing another physician. How do you respond to this?

“Sam is a transgender woman and has unique needs in the health care system, as a clinician and as a provider. It’s very important to support people of diverse gender identities when they are in medical care, so that patients can look to their doctors and...see themselves reflected in those [individuals] and have greater trust and support. How can we be more supportive of Sam first before we talk about how we can address the concerns of [the physician]?” asked Brandt, assistant professor in the Division of Maternal-Fetal Medicine at Rutgers Robert Wood Johnson Medical School, Rutgers University, New Brunswick, New Jersey.

A first-year residency intern shared her perspective: “In my program, we have to have a chaperone for every single resident who sees a patient. I would be uncomfortable having my identity perhaps outed to patients...by having a dichotomy of male residents needing a chaperone whereas female residents do not. That would be the first place I would want to start.”

Reflecting on current policies and practices may lead to positive change, Reese...
said: “We have an opportunity when a trans [individual] comes into a space to say, ‘Oh, why are we doing it this way?’ Often, if it doesn’t serve 1 [individual], it’s not serving a lot of [individuals].”

“I’m wondering whether [the physician] is actually using her staff as an excuse for her own discomfort,” another participant said. “It seems like one of the important conversations with [the physician] is about recognition and acceptance of diversity of all kinds, and whether it’s transgender, race, ethnicity, age, or size, as a private practice physician in a teaching group, she would need to put that in perspective.”

The idea that the physician may be harboring unintentional bias is not uncommon, according to Reese. “When I work with providers for whom this is true, it’s not conscious. She likely doesn’t know she is [most likely] projecting her own discomfort about having this [individual] on her team, and she is seeing concerns where there aren’t any.

“I so loathe to compare a transgender experience to other experiences of marginalization, because they’re all obviously extremely different,” Reese said. “But sometimes, using the power of empathy can help you see that there are some pretty clear, specific, and effective ways of grappling with challenges.”

The second case, presented by Eichelberger, chair of the Department of Obstetrics and Gynecology at the University of South Carolina School of Medicine Greenville/Prisma Health- Upstate, Greenville, South Carolina, touched on the issue of inclusive language: “pregnant women” or “pregnant people.” The case illustrated a worry that, in moving toward inclusion, we are losing some aspects of medical accuracy and specificity.

During departmental grand rounds on COVID-19 vaccinations in pregnancy, the invited speaker consistently uses the expressions “pregnant people” and “pregnant person.” During the Q&A session, a thoughtful member of your faculty thanks her for her presentation and expertise, and then notes the following: “I’ve been practicing as an obstetrician-gynecologist for 25 years and truly love my patients, including 2 trans men whom I’ve been fortunate enough to take care of. That said, I’m becoming more alarmed about the erasing of the use of the word ‘women’ in our field. I just feel like we fought so hard to get where we are as a women’s health specialist—why can we not say ‘pregnant women’ anymore without being accused of being noninclusive? It feels like ‘woman’ is becoming almost a bad word these days, and I just don’t like it.” How do you respond to this?

“In the obstetric world, it doesn’t just come with taking the ‘woman’ name out of pregnancy. It comes with education and knowledge and images of inclusivity,” a participant said.

Another roundtable participant said, “We have sometimes seen the alternative of ‘women and others’ and ‘women and other individuals’ needing obstetric care. I like that it’s more specific and it addresses the concerns presented in this case. But we’re literally using the word ‘other,’ which seems to be exactly what we’re trying to avoid.”

One participant posed the question of fear, and through a conversation she had with another practitioner, discovered that the issue may be deeper seated. “What do you think is going to be lost? What is your worst fear?” Ultimately, it boiled down to a deeply seated issue—gender-based trauma.

“It was really about the ways that men have seeped into every aspect of places that have felt safe for women and have taken it over and taken credit for it and [women being] spoken over.”

“For so long, only 1 group has had to be uncomfortable. Only the marginalized group,” said Wong, assistant professor of maternal-fetal medicine at Cedars-Sinai Medical Center, Los Angeles, California. “It’s OK for us to be uncomfortable.”

REFERENCE

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Delayed diagnosis of a bowel injury at laparoscopy

How important are the experts?

A gravida 2, para 2 patient, age 46 years, presented with left-sided pelvic pain of acute onset. An office ultrasound revealed a 6-cm left ovarian cyst. The patient had a prior right salpingooophorectomy via laparotomy for an ovarian cyst. The patient underwent surgery 2 days later.

A Veress needle was used for insufflation, with a closed technique used for primary access. There were omental and bowel adhesions to the anterior abdominal wall in the left lower quadrant. A suprapubic trocar was placed under direct vision. Bleeding was noted from this incision, which was controlled after removing the trocar with coagulation. Another incision was made below the first incision, and trocar insertion was accomplished without difficulty. The adhesions were sharply transected with laparoscopic scissors. Because the cyst appeared to be simple, it was elected to aspirate the cyst, retrieving clear fluid. The intraperitoneal pressure was reduced with no bleeding identified. The trocars were removed with the incisions closed in the usual fashion.

Six days after surgery, the patient presented to the emergency department with severe abdominal pain and bloating. She noted watery bowel movements and minimal appetite. Her temperature was 101.8°F, with diffuse abdominal tenderness and few bowel sounds. A CT scan showed intraperitoneal air, interpreted as a bowel injury. The patient was taken to emergent surgery by her primary gynecologist and a general surgeon, and an ileal injury was identified. The injury site was resected with a primary repair. The patient was hospitalized for 5 days for treatment of early sepsis. She fully recovered and returned to work 4 months after this surgery. The plaintiff filed a lawsuit for not recognizing the bowel injury, resulting in additional surgery, prolonged hospitalization, and prolonged recovery.

At trial, the plaintiff’s expert testified that the bowel injury occurred with insertion of the suprapubic trocar, injuring the bowel that was adherent to the anterior abdominal wall. Further, a Hasson technique should have been used for initial access, and if performed, this injury would not have occurred.

The defense expert stated that the technique to access the abdominal cavity was properly performed and within the standard of care. Further, the Hasson technique has been found to reduce incidence of vascular injury but not intestinal injury. The defense presented a visual reconstruction, demonstrating that the secondary trocar could not have caused the injury because, even if inserted completely, it would not reach the adhesions.

The plaintiff’s attorney asked the defense expert whether he had an opinion on the cause of the injury. The defense objected, asserting that their expert was testifying to rebut the plaintiff witness’ testimony, not to the causation of the injury, which would require speculation. The objection was sustained. The jury returned a verdict for the defense.

Shwayder is an adjunct professor at the University of Florida at the Gainesville Medical Center. He is a graduate of the University of Colorado School of Medicine and the University of Denver College of Law. As a nationally and internationally recognized expert in gynecology ultrasound and minimally invasive surgery, he actively consults on legal matters in medicine, including liability in ultrasound and gynecologic surgery, as well as issues surrounding privileging and insurance fraud.
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Legal
In preparing the defense, a separate expert was retained. This expert concluded that the cause of the bowel injury was a thermal injury resulting from the use of electrosurgery during the scissor dissection of the adhesions, with thermal effect evident on the bowel. Further, later in the surgical video, bipolar coagulation was used on the affected bowel. During deposition, the plaintiff’s expert failed to recognize this finding, focusing only on a presumed bowel injury during insertion of the secondary trocar. The consulting expert educated the defense attorney about the frequency of bowel injuries, causation, and the timing of diagnosing bowel injuries following laparoscopy. During deposition and trial, the defense attorney carefully avoided additional questions regarding causation, thus confining the plaintiff’s opinion to a bowel injury caused by direct trauma. As such, the defense attorney could retain an expert to rebut the plaintiff’s assertion. Had the plaintiff retained a more credible and compulsive expert, the result in this case may have been much different.

Medical
Indications
The indication for surgery was a 6-cm left ovarian cyst, presumably causing the patient’s pain. The ovarian cyst was a simple, unilocular cyst. Such cysts are universally benign, most resolving spontaneously (50%–70%). Those that persist have a low likelihood of malignancy. Appropriate diagnosis often avoids surgery altogether. The International Ovarian Tumor Analysis group developed simple rules to assess the malignant potential of ovarian masses, which determined the current cyst was benign. When the risk of malignancy is indeterminate, applying the Assessment of Different Neoplasias model determines the patient-specific risk of malignancy, or, alternatively, one can refer the patient to an expert sonologist. Further, the Ovarian-Adnexal Imaging-Reporting-Data System (O-RADS) model developed a scoring system designating masses as normal, almost certainly benign, low risk, intermediate risk, or high risk for malignancy. O-RADS also recommends follow-up for premenopausal and postmenopausal patients. Applying such models reduces surgical intervention, with the resultant risk of surgical complications. The use of expert sonologists and applying such models reduces the number of surgeries for malignancy from 9.1 per malignancy, as seen in the United States, to 2.3 per malignancy in specialized oncology centers in Europe. (Other European centers had a rate of 5.9 surgeries per malignancy.)

Bowel Injury at Laparoscopy
Bowel injuries occur in less than 1% of laparoscopic procedures, occurring more frequently during operative laparoscopy and by less experienced surgeons. Most injuries (54.9%) occurred during peritoneal access. An International Society for Gynecologic Endoscopy survey found that bowel injury was less frequent among experienced surgeons, yet the risk of injury during abdominal access was unrelated to experience. Electrosurgical injuries were the next most common cause (28.7%). A significant portion (40%) of bowel injuries are not recognized intraoperatively. The median time to diagnosis is 3 days, varying between 1 and 13 days. Electrosurgical injuries to the small bowel present sooner than large bowel injuries, on average 4.8 days vs 10.4 days, respectively. The most common presenting symptoms include peritonitis, abdominal pain, fever, and abdominal distension. Of interest, leukocytosis and elevated C-reactive protein are found in only 10.5% of patients. Prompt diagnosis is critical, as all deaths after bowel injury were in patients with delayed diagnosis, with a mortality rate of 1 in 31. In this case, although the bowel injury was not recognized intraoperatively, emergency department evaluation and diagnosis were promptly made, and immediate surgical treatment performed, thus mitigating more devastating consequences.

For References, Visit contemporaryobgyn.net/view/delayed-diagnosis-bowel-injury
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