Editorial

A Research Agenda for Adolescent Menstrual Cycles

Check for updates

Yes, I'm talking about menstrual cycles—again. I'm back on my soapbox, addressing the importance of the menstrual cycle. This time, it's prompted by an excellent review in this issue of the *Journal of Pediatric and Adolescent Gynecology* (JPAG) from Carlson and Shaw, "Development of ovulatory menstrual cycles in adolescent girls," that deserves your attention.[1] The authors summarize what we know about the anovulatory cycles that occur during the early gynecologic years—the first few years after menarche. Most adolescents ultimately develop mature ovulatory cycles, but the mechanisms that lead to this important developmental transition need further elucidation. The authors' stated goal was to highlight major gaps in knowledge to inform future research on the menstrual cycle.

A number of classic studies address the question as to when girls first achieve regular ovulatory cycles. A major problem with studying this question is how ovulatory cycles are documented, and what values are defined as indicating ovulation. Adult norms might not apply to adolescents, and the pathway to the development of ovulatory cycles might include ovulatory cycles with luteal insufficiency or a luteinized unruptured follicle. In addition, an adolescent might have a documented ovulatory cycle, followed by subsequent anovulatory cycles. Because most of the studies that we rely on to inform our knowledge of the menstrual cycle were performed before the widespread reach of the obesity epidemic, it is critical for us to have data to inform our care of current teens.

The challenges of diagnosing polycystic ovarian syndrome (PCOS) in adolescence are well known. We currently describe girls with irregular cycles, acne, hirsutism, hyperandrogenemia, and obesity as being at risk for PCOS, but they do not all have persistent anovulation.[2,3] Distinguishing adolescents whose anovulatory cycles will persist into adulthood and who will have infertility from those who will ultimately establish regular cycles could allow interventions that would help preserve fertility, and potentially decrease the risks of endometrial cancer, to say nothing of the menstrual morbidities of millions of reproductive-aged women around the world with irregular menstrual cycles.

We join Carlson and Shaw in calling for robust research to better elucidate the normal pathway through puberty, to menarche, and ultimately to regular, ovulatory menstrual cycles.[1] Such research will need to include girls of diverse ethnic backgrounds with a range of weights to more appropriately match contemporary adolescents.

The strategic plan for the National Institutes of Health Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) includes research on reproductive function in girls and women. A very exciting milestone for pediatric and adolescent gynecology (PAG) is that Dr Veronica Gomez-Lobo, Past President of the North American Society for Pediatric and Adolescent Gynecology will be joining the NICHD this year in a full-time position as Senior Clinician within the Division of Intramural Research of the NICHD. Dr Gomez-Lobo is forming a division of Pediatric and Adolescent Gynecology within NICHD—a first! Dr Gomez-Lobo will bring her PAG expertise and experience to lead this division. She has cared for many adolescents with irregular menses and PCOS, as have all of us with a PAG clinical practice. With Dr Gomez-Lobo's direction, I have no doubt that the research agenda for the Division of Pediatric and Adolescent Gynecology at the NICHD will address important science that will ultimately benefit our patients' health.

To switch gears, I'd like to call out some other noteworthy publications that appear in this issue of JPAG. As usual, there are a wide range of topics, ranging from gynecologic issues for prepubertal girls to those of adolescents. As PAG clinicians who practice gynecology, we face the recurrent challenge in surgical decision-making of making the diagnosis of ovarian torsion. This topic is addressed with a report in this issue of JPAG.[4]

As clinicians, we also look for evidence supporting our clinical practices, and gain information from a randomized controlled trial on the treatment of labial adhesions, which suggested a benefit of topical estrogen over a topical emollient, but that difference failed to reach statistical significance; we await further investigation of this clinical problem.[5]

For adolescent gynecologic problems, we are alerted to the prevalence of pelvic floor disorders, with urinary incontinence reported by 31.5% of teens surveyed.[6] I appreciated reading the report from Dr Sarah Creighton's group in the United Kingdom, who reported that at a multidisciplinary center for women with complex congenital genital anomalies, many women reported having had sexually intimate experiences before treatment for vaginal agenesis. The importance of this report is that it reinforces the concept that women with Mayer-Rokitansky-Küster-Hauser syndrome and complete androgen insensitivity syndrome are able to engage in pleasurable sexual relationships, and that vaginal dilation or surgical construction is not something that is required to "have sex."[7] The authors call for a wider focus on emotional and sexual wellness for these women, rather than presenting vaginal construction as the sole solution

1083-3188/$ - see front matter
https://doi.org/10.1016/j.jpag.2019.05.003

to “fix” the problem. I would strongly recommend that all clinicians who care for girls and women with these diagnoses read this report.

There are more articles worth reading in this issue that are pertinent to those of us who care for adolescents. We need to hear the message in the title of the article, “Understanding commercially sexually exploited youths’ facilitators and barriers toward contraceptive use: I didn’t really have a choice.”[8] We can reassure our colleagues who are not eager to insert intrauterine devices (IUDs) for adolescents that in a randomized clinical trial of IUD use for adolescents and young adults, insertion times did not differ, thus dispelling one of the barriers among clinicians to IUD use for teens.[9] We are not surprised to read that tranexamic acid is effective in decreasing heavy menstrual bleeding and increasing health-related quality of life in adolescents, but it is helpful to have data from this study to support this useful treatment for teens.[10] And finally, I cite a case report that presents an important caution against radical excision of the peritoneum for superficial peritoneal endometriosis in adolescents. Laufer and Einarsson report a patient who had undergone such surgery who was found at the time of subsequent laparoscopy to have extensive pelvic adhesions.[11] The authors call for further study before this treatment is recommended for adolescents with superficial peritoneal endometriosis.

Happy reading, and may JPAG inform your clinical care.

Paula J. Adams Hillard, MD,
Editor-in-Chief

E-mail address: JPAG-editor-in-chief@gmail.com

References

1. Carlson LJ, Shaw ND: Development of ovulatory menstrual cycles in adolescent girls. J Pediatr Adolesc Gynecol 2019; 32:249–53
2. Witchel SF, Oberfield S, Rosenfield RL, et al: The diagnosis of polycystic ovary syndrome during adolescence. Horm Res Paediatr 2015; 83:376
3. Rosenfield RL: The diagnosis of polycystic ovary syndrome in adolescents. Pediatrics 2015; 136:1154
4. Tasset J, Rosen MW, Bell S, et al: Ovarian torsion in premenarchal girls. J Pediatr Adolesc Gynecol 2019; 32:254–8
5. Dowlut-McElroy T, Higgins J, Williams KB, et al: Treatment of prepubertal labial adhesions: a randomized controlled trial. J Pediatr Adolesc Gynecol 2019; 32:259–63
6. Arbuckle JL, Parden AM, Hoover K, et al: Prevalence and awareness of pelvic floor disorders in adolescent females seeking gynecologic care. J Pediatr Adolesc Gynecol 2019; 32:288–92
7. Dear J, Creighton SM, Conway GS, et al: Sexual experience before treatment for vaginal agenesis: a retrospective review of 137 women. J Pediatr Adolesc Gynecol 2019; 32:300–4
8. Kelly MA, Bath EP, Godoy SM, et al: Understanding commercially sexually exploited youths’ facilitators and barriers toward contraceptive use: I didn’t really have a choice. J Pediatr Adolesc Gynecol 2019; 32:316–24
9. O’Flynn O’Brien KL, Akers AY, et al: Intrauterine device insertion procedure duration in adolescent and young adult women. J Pediatr Adolesc Gynecol 2019; 32:312–5
10. O’Brien SH, Saini S, Ziegler H, et al: An open-label, single-arm, efficacy study of tranexamic acid in adolescents with heavy menstrual bleeding. J Pediatr Adolesc Gynecol 2019; 32:305–11
11. Laufer MR, Einarsson JI: Surgical management of superficial peritoneal adolescent endometriosis. J Pediatr Adolesc Gynecol 2019; 32:339–41