SUBSPECIALTY CONSULT

Dysmenorrhea and Irregular Uterine Bleeding

Dysmenorrhea and menorrhagia beyond the norm often overlap in adolescents and can occur in up to 15% of these young women.

The normal time period from breast development (thelarche) and development of pubic hair to menses in young girls is about 2 years. A longer time course is cause for investigation.

BY SAIFUDDIN T. MAMA, M.D., M.P.H.

The maturation of the hypothalamic-pituitary-ovarian axis occurs over approximately 5 years. After initiation of menses (menarche), some adolescents have anovulatory cycles, i.e., no luteinizing hormone surge with subsequent lack of ovulation and dysfunctional estrogen effect on the uterine endometrial lining. This can present with irregular bleeding that can be very heavy when the endometrial lining sheds in an unsynchronized manner. If no other cause for this bleeding is established (for example, endocrine, anatomic, or underlying chronic disease), then it is considered dysfunctional uterine bleeding (DUB).

In the same time period of 5 years from menarche, an estimated 15%-30% of young women will have primary dysmenorrhea strong enough to require pain medication, including nonsteroidal anti-inflammatory drugs (NSAIDs).

The vast majority of young adolescent girls experience some pain with their periods, ranging from discomfort to pain requiring medication to being unable to go to school.

When the pain is severe, these patients either miss school or just make it through the school day, but their attention and performance suffer. These girls with significant pain need more assistance because their dysmenorrhea may not subside for several years, and a referral to a subspecialist is warranted.

In terms of differential diagnosis, menstrual pain (dysmenorrhea) is a crampy, focal phenomenon in the mid-lower quadrant, sometimes with radiation to the back and the lower extremities. It starts with the onset of menses. If the pain precedes menses, it may be endometriosis and not primary dysmenorrhea, although there is an overlap in the pain symptoms between these two entities. A nonleading question to ask is whether the patient experiences pain before, during, or after her cycle.

A gastrointestinal etiology is more likely if the pain is nonfocal and present in all four quadrants. Ruling out other GI etiologies, particularly constipation, is important. A trial of Miralax over 2-3 weeks with a cessation in the pain easily confirms constipation as the underlying cause. Constipation is very common in children and adolescents, and the pain is not related to the menstrual cycle.

Dysmenorrhea is a clinical diagnosis. Laboratory tests for this condition are not needed. Instead, a good history, detailed description of the pain, and ultrasound examination (transabdominal, not transvaginal) aid the differential diagnosis. Ultrasound is reassuring, as it can show normal uterine development and no ovarian masses, including no benign childhood ovarian tumors. Rarely is a pelvic examination necessary.

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Pediatricians are instrumental in terms of educating patients, encouraging these patients to keep a detailed menstrual and pain diary, and advocating appropriate use of NSAIDs. However, if the diagnosis and management of teenagers with dysmenorrhea are outside your comfort zone, or your focus is primarily on younger children, you can refer the patient to a pediatric and adolescent gynecologist or other adolescent medicine specialist.

One problem for these patients is the use of Tylenol, which does not work on the elevated prostaglandins in primary dysmenorrhea. Instead, recommend an NSAID such as ibuprofen (Motrin, Advil), naproxen (Naprosyn), or mefenamic acid (Ponstel).

If pain relief is inadequate, switch classes of NSAIDs instead of switching between drugs in the same class.

Birth control pills are another option for controlling painful periods. For most girls with menses painful enough to impair their activities of daily living, birth control pills are a huge benefit. Oral contraceptives for 1-2 years for irregular bleeding and dysmenorrhea can make a big difference, and then you can try a trial period without them. Prescription of birth control pills requires a lot of education, particularly because these young patients need to be compliant. Create a routine for them—such as suggesting their pills be stored in a secure location with their toothbrush.

Parents also need to be vested in this approach, and some will be resistant. I recommend that you discuss birth control pills as a strategy to control pain and bleeding when the parents and the patient are both present. Educate parents that birth control pills will not give their daughters breast cancer or cause them to become sexually active. Any generic monophasic oral contraceptive with 30 mcg of estradiol can be used.

If you add birth control pills to NSAIDs, 95% of patients experience no pain or bearable pain. It can take up to 6 months for maximum relief, however, and these teenagers need to keep a menstrual and pain diary to track and appreciate the improvements over time.

Heating pads can be a comforting, nonpharmacologic strategy for managing dysmenorrhea. Some girls who use them report taking fewer NSAIDs. There also is some literature on the benefits of acupuncture, but it is not always practical in the United States.

DUB is a diagnosis of exclusion. In your differential diagnosis, rule out thyroid dysfunction, prolactinoma (a rare brain tumor), or any underlying chronic diseases (such as lupus) that affect the menstrual cycle. If you suspect anatomic abnormalities, a transabdominal ultrasound examination is indicated. You also have to consider polycystic ovarian syndrome (PCOS), because teenagers with this syndrome can present with irregular bleeding.

Laboratory tests for DUB are thyroid function, prolactin, and markers for PCOS. These assays include free and total testosterone, sex hormone–binding globulin, and androstenedione.

Most pediatricians know this, but if the first menses (menarche) is very heavy, you have to think of a bleeding disorder. This is an important diagnostic sign that additional work-up is warranted, and early intervention may be possible. If there is a bleeding disorder, early diagnosis could mean a lesser chance of hemorrhage during childbirth. Awareness among pediatricians is important because young girls rarely see gynecologists.

Classic DUB is related to menstrual cycle irregularities. There is a cohort of eggs recruited in the first half of the cycle (follicular phase). One follicle emerges that will rupture and release the egg at midcycle after luteinizing hormone levels spike in the body. If this sequence does not occur, the menstrual cycle is affected. The endometrial lining has proliferated under the effect of estrogen, and unsynchronized shedding with irregular bleeding occurs.

Again, you can take control of the menstrual cycle with birth control pills. ■

DR. MAMA *is a pediatric and adolescent ob.gyn. at Cooper University Hospital in Camden, N.J. He said he had no relevant financial disclosures.*