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Prasad Punam, Muskan Muskan

MENSTRUAL CYCLE DISTURBANCES: NON-GYNECOLOGICAL REASONS

Tutor: PhD, assisant. Zhukovskaya S.V.
Department of Obstetrics and Gynecology
Belarusian State Medical University, Minsk

Menstrual cycle disturbances, such as cycle irregularity, heavy menstrual bleeding, dysmenorrhea are generally associated with a broad spectrum of potential reasons, stress being one of the most prominent ones.

According to Randa J. Jalloul, “stress - whether emotional, nutritional, or physical, - can cause disrupted hormone production” therefore influencing normal menstrual cycle regulation.

According to statistical data published in 2019, 14.2% of women aged 19–54 years reported having irregular menstruation, while the prevalence of irregular menstruation varies from 5% to 35.6% depending on age, occupation, and the country of residence. Concurrent pathologies, such as infectious diseases, have a significant impact on menstrual cycle, as well. A recent article published in 2022, states that of the 210 respondents, more than half (54%) reported changes in their menstrual cycles. These included changes in menstrual cycle length (50%), the duration of menses (34%), and changes in premenstrual symptoms (50%). Respondents with high perceived stress scale (PSS) scores during COVID were more likely to experience a longer duration of menses ($p < 0.001$) and heavier bleeding during menses ($p = 0.028$) compared with those with moderate COVID PSS scores.

Medical students generally face higher levels of stress associated with high requirements during their studies, high levels of perfectionism and anxiety, which presents as an additional risk factor for menstrual cycle disturbances among female medical students.

To illustrate that, a cross-sectional study was conducted among female medical students between September and October 2021 at King Abdulaziz University in Jeddah, Saudi Arabia. Thus, 450 female medical students from second to sixth year were selected through stratified random sampling. A validated online questionnaire collected data about demographics, menstrual irregularities during exams, type of irregularities, menstrual history, family history of menstrual irregularities, premenstrual symptoms, medication use, medical and family consultations, and absenteeism. A total of 48.2% of participants had menstrual irregularities during exams. The most common irregularity was dysmenorrhea (70.9%), followed by a lengthened cycle (45.6%), and heavy bleeding (41.9%). A total of 93% of medical students suffered from premenstrual symptoms and 60.4% used medication such as herbal medication and home remedies to relieve menstrual irregularities, and 12.1% of the students missed classes due to menstrual irregularities. A non-significant relationship was found between menstrual irregularities during exams and students' demographics, academic year, and age at menarche, while oligomenorrhea, a heavier than normal bleed, a longer than normal cycle, and missing classes due to menstrual irregularities were significantly higher among single students as opposed to married students.

Vitamin D fluctuations also affect menstrual cycle: so, a relationship was demonstrated between the frequency of menstrual disorders and low levels of vitamin D. This problem is especially relevant for foreign students residing in Belarus during autumn and winter when insolation levels are lower than necessary. Supplementation is necessary in women with low levels of vitamin D in order to compensate for this deficiency and to assess its effect in regulating menstrual disorders.

Therefore, menstrual cycle disturbances of non-gynecological origin play a significant part in general female well-being. And, as a result, a holistic approach should be undertaken which could include stress levels minimization, vitamin D supplementation, balanced nutrition and adequate physical activity.