Journal of Surgery and Trauma 2024; 12(4):127-128
jsurgery.bums.ac.ir

LETTER To EDITOR

Role of Chronic Stress in Abnormal Uterine Bleeding Leading to Hysterectomy

Marzieh Bagherinia[1], Farzaneh Safajou[2]✉, Zahra Amouzeshi[3]

[1] *Clinical Research Development Center, Motazedi Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran*

[2] *Department of Midwifery, Qaen Faculty of Medical Sciences, Birjand University of Medical Sciences, Birjand, Iran*

[3] *Department of Nursing, School of Nursing and Midwifery, Birjand University of Medical Sciences, Birjand, Iran*

Received: December 05, 2024 ***Revised: December 09, 2024*** ***Accepted: December 13, 2024***

[Downloaded from jsurgery.bums.ac.ir on 2026-11-17]

[DOI: 10.61186/jsurgtrauma.12.4.127]

Dear Editor

Abnormal uterine bleeding (AUB) is a common gynecological condition that significantly impacts women's quality of life and often necessitates surgical intervention, including hysterectomy (1). While AUB is multifactorial in origin, emerging evidence suggests that chronic stress may play a critical role in its pathogenesis and progression (2). This letter highlights the potential link between chronic stress and AUB, emphasizing the need for further research to explore this association and its implications for clinical management.

Chronic stress, characterized by prolonged activation of the hypothalamic-pituitary-adrenal (HPA) axis, has been implicated in various reproductive health disorders. Stress-induced hormonal dysregulation, particularly elevated cortisol levels, can disrupt the delicate balance of reproductive hormones, leading to menstrual irregularities and AUB (3, 4). Additionally, chronic stress is associated with systemic inflammation and immune dysregulation, which may exacerbate endometrial dysfunction and contribute to abnormal bleeding patterns (5, 6).

Several studies have explored the relationship between psychological stress and gynecological conditions. For instance, a study by Dubol et al. (2021) found that women with high perceived stress levels were more likely to report heavy menstrual bleeding and require medical intervention (7). Similarly, a prospective cohort by Vitale et al. (2022) demonstrated that stress and anxiety were significant predictors of AUB in premenopausal women (8). These findings suggest that chronic stress may not only contribute to the onset of AUB but also increase the likelihood of severe bleeding episodes that necessitate surgical management, including hysterectomy.

Despite these insights, the mechanisms underlying the stress-AUB relationship remain poorly understood. Potential pathways include stress-induced alterations in ovarian function, endometrial receptivity, and vascular integrity (9). Furthermore, the role of stress in exacerbating comorbidities such as obesity, polycystic ovary syndrome (PCOS) (10), and endometriosis—known risk factors for AUB—warrants further investigation (11).

The clinical implications of this association are profound. If chronic stress is indeed a significant contributor to AUB, integrating stress management strategies into gynecological care could reduce the need for invasive interventions like hysterectomy.

@2024 Journal of Surgery and Trauma
Tel: +985632381214
Fax: +985632440488
Po Box 97175-379
Email: jsurgery@bums.ac.ir

✉**Correspondence to:**
Farzaneh Safajou, Department of Midwifery, Qaen Faculty of Medical Sciences, Birjand University of Medical Sciences, Birjand, Iran
Telephone Number: +989153624543
Email fsafajou@bums.ac.ir

Cognitive-behavioral therapy (CBT), mindfulness-based stress reduction (MBSR), and other psychosocial interventions have shown promise in improving menstrual health and reducing stress-related symptoms (12, 13). However, more robust clinical trials are needed to evaluate their efficacy in preventing or managing AUB.

According to the latest recommendations, it is generally advisable to pursue medical treatment as the first line of therapy before considering surgical intervention. The primary objective of any treatment approach is to alleviate symptoms while carefully balancing the risks and benefits of the available options (14). Therefore, prioritizing lower-risk treatment options during preoperative shared decision-making could facilitate the identification of the most appropriate and personalized treatment strategies for premenopausal women with AUB (8).

In conclusion, the potential link between chronic stress and AUB leading to hysterectomy is an area of growing interest that warrants further exploration. Understanding the biological and psychological mechanisms underlying this relationship could pave the way for innovative, non-invasive treatment strategies. We urge researchers and clinicians to prioritize this topic in future studies, as it holds significant promise for improving women's health outcomes and reducing the burden of surgical interventions.

Conflict of Interest

The authors declare that there is no conflict of interest.

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