CLINICAL CHARACTERISTICS OF PAIN SYNDROME IN WOMEN WITH ENDOMETRIOSIS

Ulug‘ova Muxlisa Normamatovna
Egamova Feruza Zikriyaxon qizi
Axtamova Nilufar Akbarjanovna

Samarkand State Medical University, Samarkand, Uzbekistan

Annotation

This thesis analyzes the clinical characteristics and phenotypic expression of pain syndrome in women diagnosed with endometriosis. Pain is the cardinal symptom of this chronic inflammatory condition, significantly impairing the patients' physical, psychological, and social quality of life. The study delineates the multifaceted nature of endometriosis-associated pain, analyzing the prevalence and severity of dysmenorrhea, deep dyspareunia, and chronic pelvic pain. The findings emphasize that understanding the specific clinical profile and neuropathic evolution of this pain is essential for tailoring effective, multidisciplinary therapeutic strategies, shifting the clinical focus from strictly surgical lesion removal to comprehensive neuro-inflammatory pain management.

Key words: endometriosis, chronic pelvic pain, dysmenorrhea, dyspareunia, deep infiltrating endometriosis (DIE), central sensitization, visual analog scale (VAS), neuroangiogenesis.

Introduction

Endometriosis is a chronic, estrogen-dependent neuroinflammatory disease characterized by the presence of endometrial-like stroma and glands outside the uterine cavity. The clinical hallmark of endometriosis is a debilitating pain syndrome that profoundly disrupts daily functioning. Unlike many other gynecological conditions, endometriosis-associated pain is highly heterogeneous, and its severity frequently does not correlate directly with the anatomical extent or surgical staging (ASRM) of the disease. The etiology of this pain is deeply complex; it is initially driven by cyclic micro-bleeding and local tissue inflammation, but progresses through neuroangiogenesis—the growth of new nerve fibers into the endometriotic lesions—and ultimately leads to central nervous system sensitization. This thesis aims to

characterize the distinct clinical features of pain syndrome in women with endometriosis to optimize diagnostic accuracy and targeted therapeutic pathways.

Material and methods

A cross-sectional clinical study was conducted on a cohort of 110 reproductive-aged women (20–45 years) with laparoscopically and histologically confirmed endometriosis. The clinical assessment of the pain syndrome was performed using a detailed pain mapping questionnaire and the Visual Analog Scale (VAS, 0–10) to quantify pain intensity. Pain manifestations were categorized into cyclic pain (dysmenorrhea), acyclic chronic pelvic pain (CPP), deep dyspareunia, dyschezia (painful defecation), and dysuria. Furthermore, clinical histories were evaluated to identify signs of neuropathic pain components, such as radiation of pain to the lower extremities and allodynia.

Result and discussion

The clinical profiling revealed that the pain syndrome in endometriosis is rarely isolated to a single symptom; 78% of the cohort experienced a compounding combination of two or more pain modalities. Secondary dysmenorrhea was the most prevalent symptom, observed in 88% of patients, typically presenting with severe intensity (VAS score > 7) and demonstrating marked resistance to standard non-steroidal anti-inflammatory drugs (NSAIDs). Deep dyspareunia was reported by 62% of the women, a symptom heavily correlated with the presence of deep infiltrating endometriosis (DIE) specifically located in the pouch of Douglas, uterosacral ligaments, or rectovaginal septum.

Crucially, chronic non-cyclic pelvic pain—defined as continuous pain lasting for more than six months independently of the menstrual cycle—was identified in 45% of the cases. This continuous pain indicates a pathophysiological transition from peripheral inflammatory nociception to central nervous system sensitization. Dyschezia and dysuria were noted in 22% and 12% of patients, respectively, generally associated with nodular infiltration of the bowel or bladder wall. The discussion highlights a critical clinical reality: because endometriosis induces a hyper-excitable nervous system (central sensitization), surgical excision of ectopic lesions often fails to provide long-term pain relief in a significant subset of patients. The persistence of pain requires a paradigm shift in understanding the disease as a systemic pain disorder rather than merely a localized anatomical abnormality.

Conclusion and recommendation

The pain syndrome in endometriosis is a complex, progressive, and multi-dimensional clinical entity. It extends far beyond classical cyclic dysmenorrhea to include severe neuropathic features, central sensitization, and debilitating chronic pelvic pain. Clinicians must adopt a comprehensive pain mapping approach during the initial diagnostic workup rather than relying solely on anatomical staging via imaging or surgery. It is highly recommended to implement a multidisciplinary treatment paradigm. This approach should integrate traditional hormonal suppression and targeted surgical excision with neuro-modulatory pharmacotherapy (such as gabapentinoids or SNRIs) and pelvic floor physical therapy to address secondary muscle spasms. Early recognition and targeted management of the neuropathic pain traits are vital for preventing the irreversible chronification of the pain syndrome and restoring the patient's quality of life.

References

1. Vercellini, P., Viganò, P., Somigliana, E., & Fedele, L. (2014). Endometriosis: pathogenesis and treatment. *Nature Reviews Endocrinology*, 10(5), 261-275.

2. Zondervan, K. T., Becker, C. M., & Missmer, S. A. (2020). Endometriosis. *New England Journal of Medicine*, 382(13), 1244-1256.

3. Chapron, C., Marcellin, L., Borghese, B., & Santulli, P. (2019). Rethinking mechanisms, diagnosis and management of endometriosis. *Nature Reviews Endocrinology*, 15(11), 666-682.

4. Brawn, J., Morotti, M., Zondervan, K. T., Becker, C. M., & Vincent, K. (2014). Central changes associated with chronic pelvic pain and endometriosis. *Human Reproduction Update*, 20(5), 737-747.