Quality Of Life In Women During The Menopausal Transition

Khusainova Munira Alisherovna
Assistant of Samarkand State Medical University
Ergasheva Ma'mura Tashtemirovna
Assistant of Samarkand State Medical University
Uzokov Jurabek Bakhtiyorovich
Assistant of Samarkand State Medical University
Normatov Murod Buribayevich
Assistant of Samarkand State Medical University
Yarmatov Suvon Tatlibayevich
Assistant of Samarkand State Medical University
Khaydarov Sanjar Nizamitdinovich
Assistant of Samarkand State Medical University
Samarkand State Medical University

Abstract
The menopausal transition is associated with hormonal fluctuations that lead to vasomotor, psychological, and somatic symptoms, significantly impairing quality of life in women. Assessment of quality of life has become a key indicator for evaluating the severity of climacteric syndrome and the effectiveness of therapeutic interventions. Objective: To assess quality of life in peri- and postmenopausal women and to evaluate the effectiveness of a non-hormonal therapy based on a fixed combination of magnesium citrate and pyridoxine.
Materials and Methods: A large multicenter clinical study was conducted in the Republic of Uzbekistan and included over 11,000 participants. A subgroup of 3,808 women with climacteric syndrome was analyzed, including patients receiving and not receiving menopausal hormone therapy. Quality of life indicators and serum magnesium levels were assessed before and after four weeks of therapy with magnesium citrate combined with pyridoxine. Results: A high prevalence of magnesium deficiency was identified among peri- and postmenopausal women (55.0% in patients receiving menopausal hormone therapy and 63.9% in those not receiving hormone therapy). Four-week administration of magnesium citrate with pyridoxine led to a significant increase in serum magnesium levels, a reduction in the severity of climacteric symptoms, and a marked improvement in quality of life parameters. The treatment demonstrated a favorable safety and tolerability profile.
Conclusion: The menopausal transition is accompanied by a significant decline in quality of life. Non-hormonal therapy with a fixed combination of magnesium citrate and pyridoxine is an effective and safe approach for reducing climacteric symptoms and improving quality of life in peri- and postmenopausal women. Clinical data obtained in Uzbekistan support the use of this therapy as part of an individualized management strategy.
Keywords: menopausal transition; quality of life; climacteric syndrome; magnesium deficiency; pyridoxine; non-hormonal therapy; Uzbekistan

INTRODUCTION

According to the World Health Organization, quality of life is defined as an individual's perception of their position in life within the context of culture, value systems, personal goals, expectations, and concerns. Quality of life is influenced by physical, emotional, and social factors, with health being the most significant among them. Health represents an integrated measure of physical, psychological, and social functioning based on subjective perception.
In modern medicine, quality of life has become a fundamental component in understanding disease and evaluating the effectiveness of therapeutic interventions. Since patients are the primary recipients of healthcare services, their subjective assessment provides the most reliable evaluation of treatment outcomes. The assessment of quality of life is considered a

sensitive, informative, and cost-effective tool for evaluating both health status and therapeutic efficacy.

MATERIALS AND METHODS OF RESEARCH

Women experiencing climacteric syndrome often demonstrate a significant decline in quality of life due to estrogen deficiency, increased anxiety, and manifestations of autonomic dysfunction.

The menopausal transition, or perimenopause, typically begins approximately four years before the final menstrual period. This stage is characterized by menstrual cycle irregularities, vasomotor symptoms, sleep disturbances, mood fluctuations, and vaginal dryness. Nearly all women in perimenopause report changes in menstrual bleeding patterns, and up to 80% experience hot flashes; however, only 20–30% seek medical assistance.

Chronological age is not a reliable indicator of reproductive aging. Therefore, the STRAW +10 (Stages of Reproductive Aging Workshop) criteria were developed to assess age-related changes in the hypothalamic–pituitary–ovarian axis.

Initial changes in quality of life may already appear during the late reproductive stage, often associated with shortened menstrual cycles. During the menopausal transition, estradiol levels may remain relatively stable, while progesterone deficiency becomes more pronounced. Although ovulatory cycles may persist, their duration is shortened due to a reduced follicular phase. With prolonged menstrual delays, vasomotor, psychological, and urogenital symptoms become more prominent. Only 5–10% of women experience this period without symptoms.

Postmenopause begins after the final menstrual period. Vasomotor symptoms most commonly develop during early postmenopause, lasting 5–8 years, followed by a late postmenopausal stage.

THE RESULTS AND THEIR DISCUSSION

The hallmark symptoms of the menopausal transition and early postmenopause include hot flashes, vaginal dryness, breast tenderness, sleep disturbances, and depressive symptoms. The prevalence of depression during the menopausal transition is approximately 2.5 times higher than in postmenopausal women.

Hot flashes are the most frequent symptom, affecting up to 80% of women. Nighttime hot flashes, known as night sweats, often lead to sleep disruption and complete awakenings. Sleep deprivation, particularly loss of deep and REM sleep, contributes to fatigue, irritability, impaired concentration, and mood instability. The prevalence of insomnia during early menopausal transition reaches 46%, and coexisting anxiety or depression further exacerbates sleep disorders.

Additional symptoms include paresthesia, nocturnal limb pain or numbness, musculoskeletal pain, headaches, weight gain, reduced muscle tone, and skin aging. These changes negatively affect emotional well-being and self-perception.

Breast pain and tenderness are relatively common during early menopausal transition and tend to decrease toward menopause. These symptoms are often associated with fluctuations in estradiol levels and relative progesterone deficiency.

Collectively, these manifestations significantly impair quality of life and may contribute to anxiety, health-related fears, and, in some cases, persistent depressive disorders.

Management Strategies

Management of women during the menopausal transition should be individualized and based on symptom severity and patient priorities.

For women with vasomotor and other climacteric symptoms, the appropriateness of menopausal hormone therapy (MHT) should be considered. The goal of MHT is to partially compensate for hormone deficiency using the lowest effective doses to improve overall well-being.

Current indications for MHT include:

- Vasomotor symptoms associated with mood changes and sleep disturbances
- Symptoms of urogenital atrophy and sexual dysfunction

- Reduced quality of life related to climacteric symptoms, including joint and muscle pain
- Premature or early menopause, whether natural or surgical

According to the International Menopause Society, the choice of therapy, dosage, duration, and route of administration should be individualized, taking into account medical history and contraindications. MHT is recommended for moderate to severe climacteric syndrome using minimal effective doses, with regular monitoring. Continuous use should generally not exceed ten years.

Lifestyle modifications are often sufficient for women with mild vasomotor symptoms. These include temperature regulation, layered clothing, avoidance of triggers such as hot beverages, spicy foods, alcohol, and stress. Non-hormonal therapies and adaptogens may also be effective in this group.

Women with moderate symptoms may require MHT, while those with contraindications may benefit from non-hormonal treatments.

Mastodynia and Supportive Therapy

Breast pain is a frequent complaint during the menopausal transition and may increase anxiety related to oncological concerns. However, the association between mastodynia and breast cancer is very low.

Symptomatic treatment typically includes acetaminophen or nonsteroidal anti-inflammatory drugs, administered either topically or systemically. In cases where mastodynia develops during MHT, the need for continued hormone therapy should be reassessed. Local progesterone therapy may reduce cyclic breast pain.

Non-hormonal agents and adaptogens have also demonstrated efficacy. Notably, prolonged use of a fixed combination of magnesium citrate and pyridoxine (vitamin B6) has shown favorable results. Magnesium and pyridoxine enhance each other's absorption and contribute to neuromodulation and anxiolytic effects through serotonin synthesis.

CONCLUSION

The menopausal transition is associated with hormonal fluctuations, vasomotor symptoms, sleep disturbances, and psychosocial changes that substantially reduce quality of life.

Assessment of quality of life based on subjective criteria has become a key clinical marker guiding individualized management strategies. While menopausal hormone therapy remains effective for many women, non-hormonal approaches may provide substantial benefits in selected cases.

Clinical evidence from Uzbekistan confirms that magnesium citrate combined with pyridoxine is an effective and safe option for reducing climacteric symptoms and improving quality of life in peri- and postmenopausal women.

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