CLINICAL PROFILE OF CHRONIC PELVIC PAIN IN WOMEN OF REPRODUCTIVE AGE WITH CHRONIC ENDOMETRITIS

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Relevance. Chronic pelvic pain (CPP) affects between 5.7% and 26.6% of women, depending on the definition and the population studied (American College of Obstetricians and Gynecologists [ACOG], 2020; Latthe et al., 2006). Surveys from the United States, New Zealand and Australia show that many women with CPP never receive a diagnosis, that only a minority seek medical advice, and that the pain disrupts work, sleep and sexual life (Grace & Zondervan, 2004; Mathias et al., 1996; Pitts et al., 2008). Chronic endometritis is one of the inflammatory conditions behind CPP, yet its clinical picture is often vague, and patients tend to come late. Knowing which women are affected, what the pain is like and what accompanies it helps to plan examination and treatment.

Aim. To describe the clinical features, anamnestic factors, comorbidity and impact on daily life of chronic pelvic pain in women of reproductive age with chronic endometritis.

Materials and methods. We prospectively examined 80 women aged 18–40 years with chronic endometritis and pelvic pain lasting at least six months who attended the gynaecology department of the multidisciplinary clinic of Samarkand State Medical University in 2024–2025. The women were later randomized into two treatment groups of 40 (main and comparison); the data presented here refer to the examination before treatment. Pain intensity was rated on a 10-point visual analogue scale (VAS): 1–3 points mild, 4–6 moderate and 7–10 severe. We analysed the type of pain, its duration before the first visit to a gynaecologist, anamnestic factors, social characteristics, comorbid conditions and the areas of daily life affected by pain. All women underwent a standard examination: history, general and bimanual examination, complete blood count with ESR, C-reactive protein, urinalysis, serum biochemistry, microscopy and culture of vaginal and cervical discharge, transvaginal ultrasound and colposcopy. Estradiol, progesterone, prolactin and cortisol were measured by ELISA in morning blood samples taken on days 21–23 of the menstrual cycle, and quality of life was

assessed with the SF-36 questionnaire. Associations between VAS scores and clinical and laboratory variables were assessed with Pearson's correlation coefficient (r), and differences were considered significant at $p < 0.05$.

Results and discussion. Most patients were between 26 and 40 years old. The largest age band was 31–35 years (30.0%), followed by 26–30 years (27.5%) and 36–40 years (26.2%), while women aged 18–25 made up 16.3%. The age structure of the two groups was the same ($p > 0.05$). More than half of the women lived in towns (57.5%), 61.2% were employed and 38.8% had higher education, so the condition was not confined to any one social group.

Cyclic pain related to menstruation was the most common pattern (42.5%). Constant pain was present in 37.5% of women and pain during intercourse in 21.3%. Pain was moderate in 45.0% of patients, severe in 31.3% and mild in 23.8%, which means that three out of four women came with pain of at least moderate intensity.

Pain changed many aspects of life. Emotional state was impaired in 81.3% of women, physical activity was limited in 78.8%, capacity for work fell in 73.8%, sleep was disturbed in 67.5%, sexual life suffered in 66.3% and social activity was restricted in 56.3%. In each of these areas the proportion was somewhat higher in the main group than in the comparison group.

Women rarely sought help early. Only 5.0% saw a doctor within three months of pain onset and 8.75% within 4–6 months. In 68.75% of cases the pain had lasted more than a year before the first visit: 1–2 years in 30.0%, 2–3 years in 25.0% and more than three years in 13.75%. Rural women waited longer than urban women, 1.8 vs 1.3 years on average. Likely reasons include regarding pain linked to menstruation as normal, reluctance to undergo gynaecological examination, limited health literacy and poorer access to specialist care outside the cities.

The leading anamnestic factors were psychoemotional stress (60.0%), a history of chronic genital infection (51.3%) and previous caesarean section (45.0%). Abortion was reported by 36.3% of women, early onset of sexual activity by 25.0% and three or more births by 20.0%. Chronic cervicitis was the most frequent comorbidity (38.8%), followed by anaemia (30.0%), cervical ectropion (27.5%), cystic changes of the ovaries (23.8%), autonomic (vegetative-vascular) dystonia (21.2%), endometrial polyps (16.2%), chronic cystitis (15.0%) and thyroid dysfunction (12.5%). Chronic cervicitis may act as a reservoir of infection and favour recurrence of endometritis, and anaemia may lower tolerance of pain; both therefore need treatment alongside the main disease.

In both groups VAS scores correlated with stress level ($r = 0.689$ and 0.612), serum cortisol ($r = 0.654$ and 0.582) and duration of disease ($r = 0.561$ and 0.473; $p < 0.001$). They correlated inversely with progesterone ($r = −0.486$ and $−0.401$), estradiol ($r = −0.418$ and $−0.366$) and, most strongly, with the quality-of-life score ($r = −0.764$

and −0.691; $p < 0.001$). The association with age was weak ($r = 0.312$ and 0.251). Taken together, these findings link pain intensity to the stress response, the hormonal background and the length of the disease rather than to age.

Our observations agree with population data. ACOG (2020) lists chronic pelvic inflammatory disease and chronic endometritis among the gynaecological conditions associated with CPP, and community surveys show the same reluctance to seek help that we saw: in Australia only about a third of women with pelvic pain had consulted a health professional (Pitts et al., 2008), and in New Zealand almost half of the women with CPP remained undiagnosed (Grace & Zondervan, 2004). The heavy toll on work and daily activity in our sample is in line with the reduced health-related quality of life and lost working time described in the United States (Mathias et al., 1996).

The link between pain and cortisol needs careful interpretation. Heim et al. (1998) found low basal and stimulated cortisol in women with CPP, many of whom had no organic pathology at laparoscopy. Our patients, by contrast, had a defined inflammatory cause, and in them higher pain scores went together with higher cortisol and stress levels. The type and duration of pain may therefore shape the stress response in different ways. Because the correlations were measured at one time point, they show an association, not its direction: stress may amplify pain perception, and persistent pain may itself sustain the stress response.

The inverse correlation of pain with estradiol and progesterone, measured in the luteal phase, suggests that hormonal imbalance is part of the clinical picture in these women, although our data do not allow us to say whether it is a cause or a consequence of chronic inflammation. The practical message is that pain in chronic endometritis cannot be judged by its intensity alone. A multidisciplinary, stepwise approach that takes account of comorbid conditions and psychological factors is recommended for CPP in general (Lamvu et al., 2021), and our findings support applying it to this group as well: anaemia should be corrected, chronic cervicitis treated, the psychoemotional state assessed, and pain intensity and quality of life recorded before and after treatment so that the effect can be measured.

Conclusions. 1. In women with chronic endometritis, chronic pelvic pain occurs mainly between 26 and 40 years of age; it is usually cyclic or constant and of moderate to severe intensity.

2. The pain impairs emotional state, physical activity and capacity for work in three-quarters or more of patients, and its intensity is closely and inversely related to quality of life.

3. Two-thirds of women see a doctor only after more than a year of pain. Stress, previous genital infection and caesarean section are the most frequent anamnestic factors, and chronic cervicitis and anaemia the most frequent comorbidities.

4. These patients need a comprehensive examination that covers comorbid conditions, psychoemotional state and hormonal status, and earlier referral to a gynaecologist, particularly from rural areas.

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