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Patient with urethral pain syndrome: psychological portrait

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The article discusses the psychological characteristics of the patient with chronic pelvic pain syndrome, in particular with its component – urethral pain syndrome. The main specific personality traits inherent in such a patient are highlighted; the factors of development of chronic pelvic pain syndrome are determined, including psychological. Doctors were given recommendations for the management of such patients, in particular, the use of psychological scales and questionnaires directed at identifying markers and specific features.

Keywords: chronic pelvic pain syndrome; urethral pain syndrome; depressive states; psychological characteristics of the individual; anxiety.

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Пациентка с уретральным болевым синдромом: психологический портрет

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В статье рассмотрены психологические особенности пациентки с синдромом хронической тазовой боли, в частности с его компонентой — уретральным болевым синдромом. Выделены основные специфические черты личности, присущие такой пациентке, определены факторы риска развития уретрального болевого синдрома, в том числе и психологические. Даны рекомендации врачам по ведению таких больных, в частности, использование психологических шкал и опросников, направленных на определение маркеров специфичных черт.

Ключевые слова: синдром хронической тазовой боли; уретральный болевой синдром; депрессивные состояния; психологические особенности личности; тревога.

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ЭКО • ВЕКТОР

INTRODUCTION

The most common cause for women seeking medical help is believed to be dysuria, with urethritis and/or urethral syndrome in 40% of cases [1]. Moreover, according to the US National Institutes of Health, one-third of women with chronic pelvic pain syndrome (CPPS) have urethral pain syndrome (UPS) [2, 3].

Studies regarding CPPS in women, in which organic disorders are not registered, are limited. Chronic pelvic pain is debilitating and can be accompanied by adverse cognitive, emotional, behavioral, and sexual impairments, which further affects quality of life. Pain is often secondary in this case; hence, psychological factors are the primary concern. Therefore, in recent studies, the emphasis started to change to the need for a multidisciplinary approach for the treatment of pelvic pain and psychotherapeutic support in therapy, with the possibility of providing more effective assistance to CPPS female patients.

CPPS is relatively associated with "nonspecific back pain," introduced into medical practice to identify the condition in patients with acute or chronic back pain in the absence of notable underlying causes. In Russian medical practice, such patients, after ruling out somatic pathology, are referred to a neurologist or chiropractor, who do not always clearly understand the principles of diagnostics and therapy (especially pharmacotherapy) of this condition, as evidenced in practice [4]. Thus, the main problem in effective treatment of CPPS in Russia is the absence of establishing clear causes of chronic pelvic pain, resulting in the principles of successful patient management not being developed [5].

Urethral pain syndrome (UPS) is a component of CPPS, and the European Association of Urology defines it as the occurrence of chronic or recurrent intermittent pain, lasting more than 6 months, perceived in the urethra, in the absence of proven infection or other obvious local pathology, often associated with negative cognitive, behavioral, sexual, or emotional consequences [6] and symptoms suggestive of lower urinary tract, sexual, intestinal, or gynecological dysfunction [7].

This syndrome is not specific for women; it is occurs in both women and men. In women, bladder and urethral pain is more often noted, and in men, penile, prostatic, and scrotal pain are more common [8].

According to the classification of the International Association for the Study of Pain (IASP, 2019), in terms of the mechanism of chronic pelvic pain occurrence, the possible causes include vascular lesions, persistent inflammation, and impaired innervation of organs due to mechanical compression in the pelvic region; however, the cause is often unclear [9].

Pain in the urethra with unchanged urinalysis results and the absence of other clinical manifestations and somatically explainable causes seem complicated and unresolved because the exact pathogenetic mechanisms remain not fully understood. Additionally, there are no clear recommendations for the prevention and treatment of UPS; thus, currently, symptomatic therapy is considered the only effective form of medical care, namely, the constant intake of strong painkillers, antidepressants, and anticonvulsants [10].

Pain reduces the patients' quality of life and negatively affect personality, forcing patients to think about the presence of any damage or disease. Furthermore, cognitive processes and emotional sufferings of the patient contribute to the development or recurrence of pain. Researchers reveal that psychological and social factors are risk factors for the development of chronic pain from acute pain, influencing the degree of habituation to pain and the patient's adherence to the treatment [11].

Several international studies emphasized on the influence of the mental characteristics of patients, as well as their perception of their disease and their attitude to it, the severity and persistence of pain, and the severity of their condition in CPPS. Each patient has mental characteristics which represent the norm. In the clinical classification UPOINT, which is based on phenotyping, a psychosocial domain is highlighted, which requires clarification of the patient's history of detrimental events, significant losses, as well as adaptation to stress loads, and the presence of depression [12].

In the early 2000s, American researchers concluded that about 15%–30% of all consultations in primary care services were performed for symptoms that cannot be explained from a medical point of view [13]. Moreover, the number of such cases correlates linearly with the number of depressive and anxiety disorders in history; however, numerous physical symptoms or anxiety about the disease could not be explained solely by concomitant anxiety or depression. Therefore, the researchers considered the following as risk factors for the development of unexplained physical symptoms: gender (the risk is 2.5 times higher in women than in men), sexual abuse, and history of abusive treatment.

An inverse correlation was noted between age and the duration of CPPS symptoms. A follow-up study showed that a history of anxiety disorder was associated with a double risk of developing unexplained physical symptoms, and depression at the time of examination was associated with ongoing medically unexplained physical symptoms [14].

The initial link in the onset of chronic pain is represented by local dystrophic, metabolic, hemodynamic, and functional changes in the peripheral nerve endings and ganglions of the sympathetic nervous system [15]. These disorders are accompanied by an increase in the frequency and intensity of pathological afferent impulses. Local disorders are amplified by an increase in

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excitability of the spinal cord structures and pathological changes in the central nervous system, in which even ordinary impulses from the pelvic organs begin to be perceived as painful. In this case, the signaling function of pain is lost, and this condition starts to affect the quality of life of patients, adversely affecting all aspects of their life. A significant mechanism of the occurrence of chronic pain is central sensitization which was first described by C. Woolf in 1983 [16]. Persistent constant pain causes the emergence of mental conditions such as anxiety and depression, changes in the patient's personality, and negative impacts on family life and affects social functioning.

Savidge and Slade in 1997 [17], when conducting a meta-analysis of clinical studies involving female patients with CPPS, revealed that the psychological perception of pain of women whose pain etiology was not determined differs from the perception of pain of women whose cause of pain has been identified. It was established that the stress in such patients depends on the nature, severity, and individual perception of the pain syndrome. It turned out that the severity of anxiety, the level of depression, and sexual problems were approximately the same in both groups of patients, and therefore, these conditions must be considered when creating a treatment program.

Since 2010, in CPPS studies, attention has increasingly been displaced toward the targeted diagnostics of concomitant mental illnesses such as depression, anxiety, and somatoform disorders, as well as symptomatic substance abuse. The patient's history of a traumatic experience (physical or sexual abuse, including in childhood), which preceded the disease, was considered as a root cause of the onset of psychopathology and found to play a role in the development of CPPS and UPS, in particular. According to researchers, this approach helps in understanding the disease better and optimizes existing approaches to its therapy [16].

Most previous studies reveal the direct correlation between depression and anxiety disorders in CPPS patients. Various somatoform disorders in the group of patients with this disease are actively assumed, which emphasizes the significant role of psychological characteristics accompanying CPPS. According to several authors, in 37% of patients, psychological and mental characteristics were classified, and a higher incidence of comorbid mental and psychological disorders was revealed throughout life [18].

Despite such a large number of works on the stated problems in other countries, urologists deal with CPPS in both men and women; therefore, recommendations for the diagnostics and treatment of chronic pelvic pain have been developed by the European Association of Urology [9]. These guidelines include a description of the current understanding of pathophysiology and psychosocial aspects and classification, diagnostics, and symptomatic treatment. It is assumed that in the absence of a clear etiology, CPPS can be interpreted as a complex of neuromuscular and psychosocial disorders similar to chronic regional pain syndrome (e.g., sympathetic reflex dystrophy) or functional somatic pain syndrome (e.g., irritable bowel syndrome, chronic fatigue syndrome) [4]. According to anamnesis, hormonal disorders, inflammatory diseases, and surgical interventions on the pelvic organs, which could result in dysfunction of the urethra and vagina muscles, were detected in 70.9% of the UPS patients studied, as demonstrated in Ref. [17]. Additionally, it is functional disorders that are known to cause pain [18].

Based on the recent results of international and Russian studies, an approximate psychological profile of a male/female patient with CPPS can be drawn up, which comprises chronic stress reaction as a result of prolonged pain syndrome (≥6 months), severe anxiety, and possible depressive conditions, which result in decreased libido and dyspareunia. All this leads to maladaptation of patients and a decrease in the efficiency of the treatment prescribed.

MATERIALS AND METHODS

Our study was aimed at the following:

1. Determination of the average psychological profile of female patients with UPS as a component of CPPS.

2. Identification of risk factors contributing to the development of UPS in women.

The study objectives were as follows:

1. Identification of the general psychological characteristics of the personality of UPS/CPPS patients.

2. Determination of the general social status of the subjects.

3. Establishment of the severity of pain in UPS/CPPS.

4. Determination of the subjective level of quality of life of UPS/CPPS patients.

This was a cohort, prospective, and single-center study. The study group included 119 women aged 18–65 years. It included 78 patients with established UPS (UPS group), without clinical manifestations of the inflammatory process in the lower urinary tract. The second group of patients (n = 41) with similar complaints but with clinical manifestations of the inflammatory process in the lower urinary tract were identified as the comparative group (inflammation group). The inclusion criteria for the study were the clinical symptoms of chronic UPS; the presence of recurrent episodic pain localized in the urethra, lasting more than 6 months; the absence of data on the inflammatory process; and age 18 years and older. Conversely, the exclusion criteria were age up to 18 years, pregnancy, breastfeeding, and factors that obviously affect the onset of pain syndrome,

namely, the inflammatory processes in the lower urinary tract, tumors of the pelvic organs, and radiation damage to the pelvic organs.

During the research, we used the following methods: a standardized multifactorial personality research method adapted by Sobchik (SMPRM) [19], nonspecific questionnaire for assessing the quality of life (SF 36), visual analog scale of pain (VAS), and the author's questionnaire aimed at determining the social and psychological status of patients.

SMPRM was offered to the subjects at the initial stage of the diagnosis establishment, and the SF 36 questionnaire and VAS were presented during entry and exit control to assess the efficiency of treatment and determine significant differences between the two groups of patients.

To analyze the psychological profile of the patient with UPS/CPPS presented in this work, we performed statistical processing of the material obtained from 16 patients of the CPPS group who had complete data of the questionnaires presented and from 41 patients from the inflammation group (with acute pain in presence of an acute inflammatory process in urethra; control group).

Statistical processing was performed using the SPSS Statistics v. 21. Comparative frequency analysis of characteristics of samples from groups of patients was conducted based on two-sample Fisher's φ-test (phi) with angular transformation. Correlation analysis was performed using Spearman's *r*-coefficient (r-Spearman's).

RESULTS AND DISCUSSION

According to the data obtained during the analysis of the author's questionnaire administered to the UPS group patients, the following results were obtained: 64% of respondents were emotionally labile, 30% noted that they experienced constant stress, 36% are in a state of increased anxiety, and 14% of respondents did not sleep well. Furthermore, 21% emphasized the depressive state that arose due to pain; however, only 14% of respondents visited a psychotherapist, although 79% of patients were seen by a neurologist.

As for the subjective assessment of working conditions, 38.5% of the subjects regarded them as moderately severe, 23.1% rated the working conditions as difficult, and 7.7% regarded them as easy. Additionally, 30.8% of respondents had work in a standing position, and 23.1% performed it in a sitting position. The range of occupations among the subjects was heterogeneous; therefore, the allocation of any one specific type of activity for such patients did not seem significantly possible.

When analyzing the data obtained using the visual analog scale of pain (VAS), the following results were revealed: 30% of patients noted the nature of the pain as more than severe, and the same number of patients noted that the pain was severe. Moreover, 15.4% of the respondents considered the pain unbearable, and only 7.7% noted that the pain they experienced can be considered moderately unbearable.

As for the comparison of VAS results in patients with acute inflammation and the UPS patients, even though the inflammation was acute, such patients rarely tended to assess this pain as severe, moderate, or unbearable (Fig. 1). This may be because acute pain is easier to control than chronic pain. The latter can affect the subjective perception of the patient's own state, contributes to the development of chronic stress, and can even lead to depressive states.

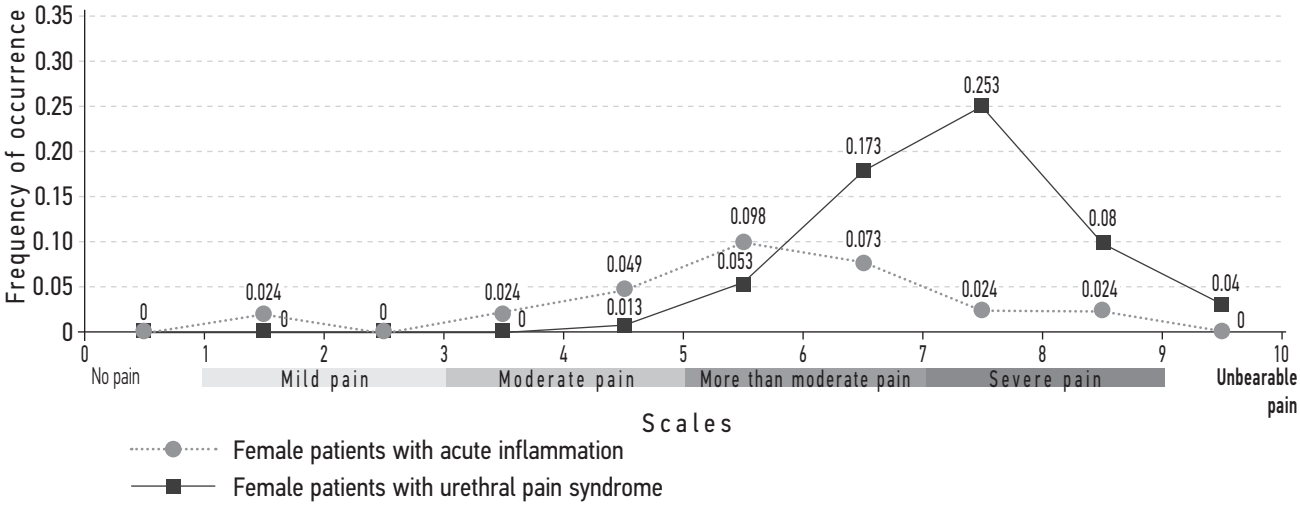

Fig. 1. Comparison in VAS results
Рис. 1. Сравнение результатов по ВАШ

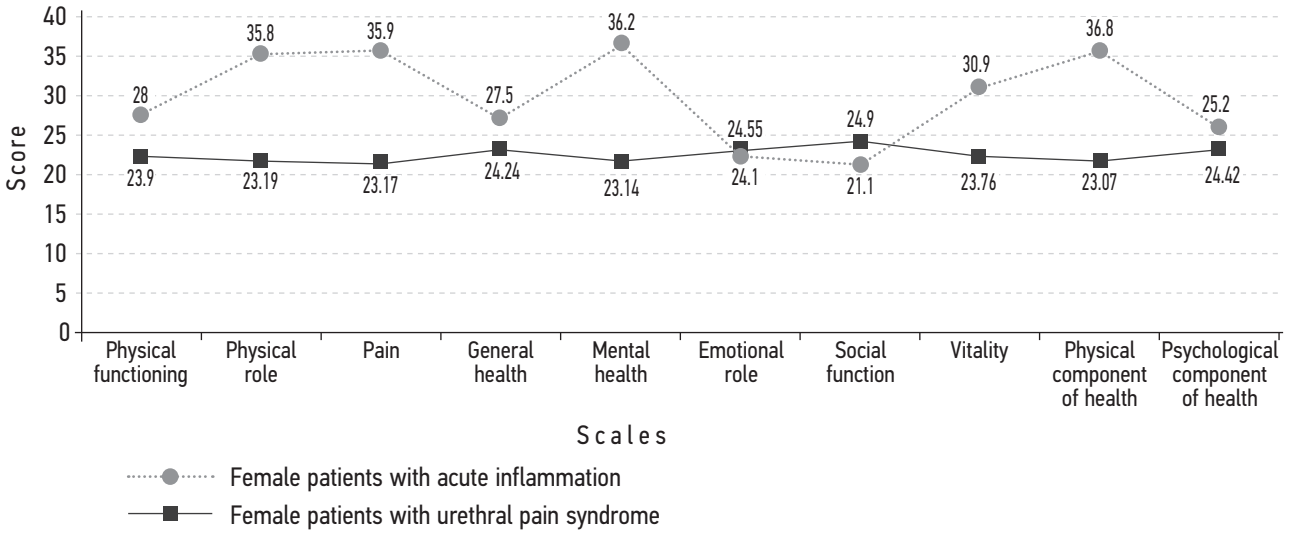

Fig. 2. Comparative analysis of SF-36 results
Рис. 2. Сравнительный анализ результатов по SF-36

The results of the SF 36 method are presented in Fig. 2. The averaged profile of a female patient with UPS turned out to be flat; it demonstrates low indicators for all the studied indicators of quality of life, and the spread in indicators was insignificant.

It is noteworthy that the profile of a patient with acute inflammation is characterized by significant variability in the values of the signs under study. The difference is especially noticeable in indicators such as "physical role," "pain," "mental health," "vitality," and "physical component of health," which were higher in a patient with acute inflammation than in a UPS patient. It can be concluded that in general, the quality of life in patients with acute inflammation was subjectively higher (Fig. 2).

These differences were statistically confirmed using the Mann–Whitney *U*-test between "physical role," "pain," and "vitality" ($p \leq 0.05$). This means that a UPS patient as a result of the disease is more limited in daily activities, feels tired, and exhausted and that the pain experienced reduces activity significantly.

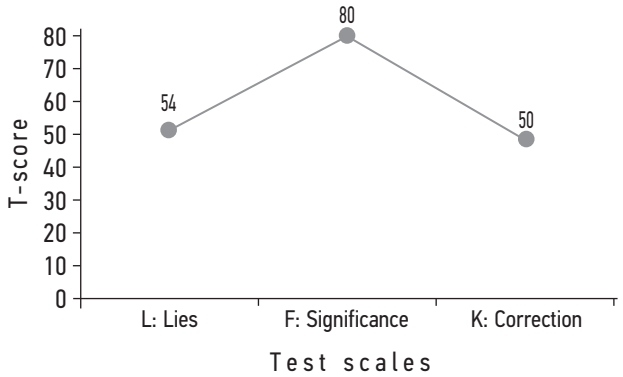

Fig. 3. Average scores on the following validity scales: L, F and K
Рис. 3. Средние баллы по проверочным шкалам «Ложь», «Достоверность» и «Коррекция»

At the same time, if the results of assessing the *psychological health component* of female patients in both groups are approximately equally low (decreased vital activity, increased fatigue, predominating low mood, depressive states, and anxious experiences), then the results of assessing the *physical health component* of a UPS patient and patients with acute inflammation are totally opposite, as the former believe that they are more limited by the disease in everyday life (limited physical activity, self-care, work, daily activities), which was also statistically significantly confirmed ($p \leq 0.05$).

According to the SMPRM test scales, the averaged personality profile turned out to be variable with maladjustment elements. Moreover, this profile can indicate the presence of pronounced stress (Fig. 3).

There is a tendency to exaggerate existing problems, high self-criticism, the desire to emphasize the defects of own nature, and excessive excitement, and decreased performance is present, which is most probably related to the current disease state.

A low score on the criticality scale, combined with a high score on the reliability scale, evidences the frankness of the subjects. In addition, there is no attitude of subjects for the testing procedure. Contrastingly, such a painful, frank, and stressful condition at the same time fits into the general profile and can be determined by the influence of CPPS.

Regarding the results obtained on the main scales, the presentation is as follows (Fig. 4).

Analysis of the data obtained on the main scales:

1. *Scale of overcontrol* (74): The data obtained on the current scale indicate a tendency to social passivity, obedience, and poor self-control in interpersonal conflicts. Excessive emotional tension results in difficult

adaptation, which is manifested by increased concentration on deviations from the norm both in terms of interpersonal relations, where such people can be irritated by irresponsibility and insufficient morality of the actions of others, in their opinion, and in the sphere of well-being, where excessive attention to the functions of their own body can develop into hypochondriasis.

2. *Scale of pessimism* (75): A passive personal position is determined, combined with a high level of awareness of existing problems from the perspective of dissatisfaction and a pessimistic assessment of own prospects and a tendency to speculation, inertia in decision-making, a pronounced depth of feelings, an analytical mindset, skepticism, self-criticism, and some lack of confidence in oneself and own capabilities. In case of stress, there is a tendency to stop reactions, that is, to blocking activity, or guided behavior, and subordination to the leading personality. High rates on this scale clearly correlate with a disease that disrupts the normal course of life and long-term plans.

3. *Demonstration scale* (67): The average indicators on the scale indicate normal resistance to environmental influences and sufficient responsiveness to the social microclimate problems.

4. *Scale of impulsivity* (67): A person with such indicators differs in average search activity in a motivational orientation. The inclination to take risks is reduced, with low levels of aspirations. However, there may be several impulsive behaviors.

5. *Scale of masculinity-femininity* (69): There is a tendency toward emancipation, independence, and some disengagement expressed in a pragmatic attitude toward sexual intercourse.

6. *Scale of rigidity* (67): There is a tendency toward an inflexible system in the approach to solving various life problems, a slow change in mood, a gradual accumulation of affect, concretion of thinking, excessive particularization and pedantism, and persistent and active imposing own views and values to others, which causes frequent conflicts with others, resentment, and even vindictiveness.

7. *Scale of anxiety* (70): This is characterized by excessive anxiety for any reason, indecision and fearfulness in decision-making, and constant doubts about the correctness of the decision and the goals set. Such a person is characterized by a tendency to recheck thoroughly her actions and the work performed, an increased sense of guilt for the slightest failures and mistakes, suspiciousness, self-doubt, a mandatory focus on the opinion of the community (group), and adherence to generally accepted norms. She is prone to altruistic manifestations, actions at the maximum level of her capabilities, only to earn the approval of those around her. Such points on this scale indicate the predominance of a passive and suffering position, doubts in herself and the situation stability, high sensitivity and subservience to environmental influences, and increased sensitivity to danger. The motivation for avoiding failure and dependence on the majority opinion is prevailing. Despite the seeming sacrifice and submissiveness, such a person is excessively focused on her torments, which manifests her egocentrism, which can irritate more smooth-tempered people. All this inevitably influences relationships both at work and in the family (an anxious wife, a restless and insecure employee, a smother mother).

8. *Scale of individualism* (75): High indicators on this scale indicate increased sensitivity combined with emotional coldness and alienation in interpersonal relationships. There is certain selectivity in contacts, prominent subjectivism in assessing people and the phenomena of life, and independence of views. Such a person has an insufficiently formed realistic platform based on everyday experience and is more focused on subjectivism.

9. *Scale of optimism* (56): There is a decrease in the level of optimism, love of life, and activity. In combination with the peak on scale 2, the resulting profile reflects a particularly deep depressive mood pattern. A tendency to increase in the scale 4 may indicate a tendency to suicide (S-risk).

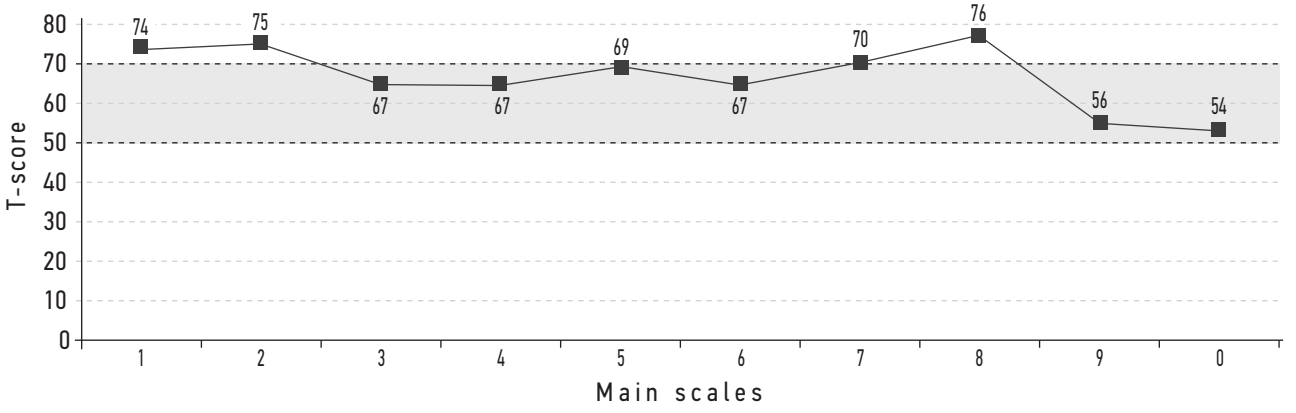

Fig. 4. Psychological status of a patient with chronic pelvic pain syndrome according to the MMPI content scales
Рис. 4. Психологический статус пациентки с синдромом хронической тазовой боли по основным шкалам СМИЛ

0. *The scale of social introversion* (54): Sociability within the normative values.

Correlation analysis of the data obtained using the MMPI method showed a direct relationship between the indicators of such basic scales as "Passivity"–"Demonstration" ($r = 0.754$; $p \leq 0.05$) and "Passivity"–"Anxiety" ($r = 0.798$; $p \leq 0.05$). It can be concluded that the passive life stance of a UPS patient is determined by the desire to attract as little attention to herself as possible, thereby contributing to a decrease in the anxiety, which we described above as typical for such a patient.

Moreover, a directly proportional correlation was noted between the indices of the scales "Impulsivity"–"Rigidity" ($r = 0.759$; $p \leq 0.05$) and "Impulsivity"–"Individualism" ($r = 0.814$; $p \leq 0.05$). This indicates that the low level of aspiration of such a patient is directly related to the lack of flexibility and low level of acceptance of changes. Such a patient has a reduced adaptive potential for changing living conditions or working conditions. At such moments, emotional detachment, coldness, and unsociability increase.

A direct relationship between the indicators of the scales "Individualism"–"Rigidity" ($r = 0.785$; $p \leq 0.05$) and "Individualism"–"Anxiety" ($r = 0.764$; $p \leq 0.05$) indicate that increased subjectivity, which is typical for a UPS patient, induces an increase in the level of anxiety and nervousness; however, the low level of flexibility and adaptability does not reduce anxiety.

We present the medical history of a UPS female patient of reproductive age.

Female patient B, 31 years old, complained of burning sensation and pain in the urethra. She has supernutrition and a regular physique and was on maternity leave. Her youngest child is 2 years old.

The patient considers herself ill for 11 years. She was treated by gynecologists (bacterial vaginitis) and urologists. According to the patient no abnormalities were found in urine tests; however, treatment was conducted due to cystitis. She received long-term antibacterial treatment. A year ago, cystoscopy revealed a presentation of the epithelium metaplasia in the bladder neck. That time she began to feel a constant dull pain in the urethra. Any physical activity is accompanied by lower back pain and increased burning sensation in the urethra. Anamnesis revealed that she grew and developed within strict limits of her parents. The girl was required to show high academic performance at school; however, she did not succeed in it. She was afraid of her parents. She notes broken sleep during childhood and adolescence. At school, there were frequent conflicts with peers; as a result, she experienced stress and often cried. Her sexual life started at 17 years old. She got married at the age of 20. With the onset of regular sexual activity, the above complaints appeared. For 10 years, she has been receiving the antidepressant Reksetin on a regular basis and is monitored by a psychotherapist; she titrates the dose of the drug if panic attacks occur. She notes pronounced discomfort during sexual activity and tries to limit the amount of sexual intercourse. She has two children. She had childbirth at the age of 24 years old. In 2018, she underwent cesarean section. Ultrasound between pregnancies revealed endometriosis; therefore, she received hormonal treatment. After giving birth, she gained 30 kg and believed that it was a side effect of Reksetin. She frequently, almost monthly over the past year, has labial herpes.

In April 2017, MRI revealed a presentation of degenerative-dystrophic changes in the lumbosacral region and the coccygeal spine, Schmorl's nodules at the Th12–L2 level. In 2020, during the course of long-term antibiotic therapy, vaginal candidiasis and ureaplasmosis were detected (*Candida* spp. $10^{5,9}$; *Ureaplasma urealyticum* $10^{5,3}$). The patient received treatment from a gynecologist. Lavage of the husband's urinary tract was performed. General urine analysis (January 2020) revealed leukocytes 0–1 in the field of view and erythrocytes 0–1 in the field of view. There is no bacterial growth in urine culture. In August 2020, cystoscopy revealed single small bullous formations in the region of the bladder neck. Pelvic ultrasound revealed no evidence of endometriosis.

Physical examination on a gynecological chair revealed that the urethra was in a typical place, and the O'Donel Hirschhorn test showed no evidence of urethrahymenal adhesions, and the urethra was not open. On palpation of the urethra, there was pain in the middle third and in the projection of the bladder neck. There was no data on the myofascial component when examining the walls of the vagina. Further inpatient examination and treatment of UPS was proposed.

Based on the results of the given case history, it can be concluded that the patient corresponded to the identified averaged psychological profile. In particular, she noted increased anxiety, a depression tendency and suppression of her emotions, and pronounced stress. The motivation for avoiding failure is clearly expressed; she is prone to dependence on authoritative people (parents). The quality of life is reduced.

Thorough examination of the patient and determination of his psychological status at the time of visiting the doctor serve as the basis for the subsequent treatment program. A complete examination should include not only the collection of complaints and anamnesis of patients and clinical and instrumental studies but also the use of a variety of standardized and validated scales and questionnaires. This approach enables to analyze the degree of damage to organs or systems and also assess the impact of the defect on the patient's vital activity, level of his functional capabilities, and current psychological status. This is due to the fact that restrictions on

activities of daily living, social activity, and psychological changes resulting from the disease cannot be measured in kilograms, centimeters, millimoles per liter, and other international units that are used to measure the pathological process severity. The use of questionnaires and scales enable to delve deeper into the patient's history and to reveal what cannot be determined in laboratory studies. We believe that the inclusion of this psychodiagnostic toolkit in the patient examination program enables to work out more thoroughly the algorithm for their further routing, to determine exactly which specialist they should be referred to (urologist, neurologist, gynecologist, psychologist, or psychotherapist). This reduces significantly the risk of misdiagnosis and increases the patient's chances of recovery.

As a result of the analysis, it can be concluded that the UPS/CPPS patient is prone to suppressing spontaneous easiness, restraining active self-actualization, and unnecessarily suppressing aggressiveness, obedience, and lack of independence of thought. Such a person makes high demands on herself and others in terms of compliance with the ethic criteria of society, and avoiding failure becomes the leading motive. She is not prone to risky behavior and is capable of refusing to implement immediate needs for strategic plans. Most often, such a person is codependent in contacts with an authoritarian person. Regarding sexual life, she tends to treat her partner simply as a means of satisfying sexual needs and seeks to do without sexual intercourse. There is a tendency toward resentment and rigidity of thinking. Most often, a patient with such a profile is not self-confident, takes a passive-compassionate position of the victim, and is exceedingly fixed on her torment. This profile is characterized by excessive subjectivity and egocentricity, a depressive mood, and decreased optimism, love of life, and activity. She tends to manifest suicidal risk. At the same time, this person is not prone to limit herself in communicating with others. As a result of the prolonged painful effects, such a patient is inclined to assess the quality of her life as low in all spheres; as daily activity is significantly limited by physical condition, she has decreased activity and increased fatigue and the psychological component of her health is low.

Analysis of the patient's medical history showed that the patient was treated for a long time with an erroneous diagnosis of cystitis. Unreasonable intake of antibacterial drugs caused the development of vaginal dysbiosis; in particular, it caused decrease in the body's resistance to infectious and viral agents (during the last year, the patient had monthly herpes infection). Cystoscopy revealed scanty changes in the bladder neck with unchanged urine tests, which may be associated with a viral infection and impaired microcirculation and lymph flow in the area of the bladder floor adjacent to the anterior vaginal wall.

That is, the inflammatory processes of gynecological localization could become a premorbid background for the development of UPS in this patient. This can be due to the fact presented in the works of Naboka et al. [20] that in female patients with urinary tract infection, microbial interactions of the urinary system organs with neighboring biotopes (intestines and vagina) were revealed. The significant correlation coefficients, obtained by the authors, between different taxa of the microbiota in the three biotopes under study prove the connection between these loci and the presence of the microbiota translocation effect. It is known that chronicity of any inflammatory process is based on transient dysfunction of the immune system, including functional insufficiency of the phagocytic link [21]. It has been revealed that the infectious agent is able to persist inside the macrophage. Macrophages serve as effectors of chronic inflammation with a predominance of the proliferative-sclerosing component [22]. It was previously shown that pathological processes in such UPS patients lead to reorganization of the components of the connective tissue stroma, namely, the presence of fibrosis processes in the urethral wall and around it, in which its cause remains unclear. Fibrosis of subepithelial structures was recorded in 48.2% of cases; atrophic changes in the urethral epithelium were revealed in 20.5%; and in chronic inflammation, these were in 55.5% and 40.6% of cases, respectively. Moreover, trophic disorders revealed by cross-polarization optical coherence tomography (CP OCT) in female patients with UPS were detected both in the urethra and in the cervix [23].

In the case of the presented patient, the development of pain syndrome in the area of the urethra and its progression was apparently associated with the gynecological pathology persisting in presence of prolonged antibacterial treatment, hormonal imbalance, and metabolic disorders, which resulted in aggravation of the psycho-emotional state. This patient management revealed latent iatrogeny which entailed a growing wave of problems both in the family and in the social sphere.

Another significant psychological component is the patient's personality traits which affect the course of the somatic disease and its outcome. In this regard, the use of scales and questionnaires to determine the presence of psychological characteristics and psychopathological disorders in a patient, which are used as specific markers for patients of this profile, is adequate for specialists in various fields [24].

Thus, the article aimed to motivate an outpatient urologist to use the algorithm in examination of such patients with a referral to a psychotherapist. This requires a simple, small test/questionnaire adapted to the conditions of the visit, which would enable the clinician to identify psychological problems, for example,

the Index of Psychological General Well-being (H. Dupuy et al. 1984) or the Hospital Anxiety and Depression Scale (HADS, A.S. Zigmond, R.P. Snaith, 1983) to identify affective and emotional disorders that influence self-reported well-being [25].

CONCLUSIONS

It was revealed that in UPS/CPPS female patients, psychological factors play a significant role in the nature of the disease formation, namely, certain psychological characteristics of the personality, subjective assessment of the quality of life, and the aspects of the disease course are largely determined by her subjective perception.

The psychological risk factors for UPS/CPPS include excessive demands on herself and others, tendency to suppress emotions, pronounced motivation to avoid failure, chronic stress, expressed anxiety, dependence on authority, and passive life stance. These can contribute to the development of personality maladjustment and health disorders, as well as the development of CPPS, in particular UPS, in case of gynecological disease progression.

Therefore, the algorithm for choosing therapy for UPS should include psychological or psychotherapeutic support for patients to correct personal characteristics. For prevention of the early development of CPPS, and UPS in particular, a focused training for specialists (psychotherapists; psychologists in universities, schools, etc.) is required.

ADDITIONAL INFORMATION

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