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Assessment of symptoms of pelvic organ prolapse using the short form of the UDI -6 questionnaire in women in Uzbekistan

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Abstract. Pelvic organ prolapse is a medical and social problem of every tenth woman in our country. Despite the high prevalence of the disease and associated symptoms of urinary incontinence, there are no specific questionnaires to assess the quality of life in this group of patients. The purpose of the study was to analyze the data of the PFID-20 (UDI-6) questionnaire and study the prevalence of pathology among Uzbek women . A high prevalence of symptoms of pelvic floor dysfunction in women of reproductive age and its relationship with childbirth has been established, which requires the development of a set of measures to prevent these disorders in women in the postpartum period. Most often, urinary incontinence was diagnosed in women of late reproductive age, 1/3 of the women studied had a severe degree of urinary incontinence.

Keywords: genital prolapse, stress urinary incontinence, PFID-20 (Pelvic Floor Distress Inventory Questionnaire) , UDI-6 (Urinary Distress Inventory - UDI - 6)

Pelvic organ prolapse (POP) of varying severity is an urgent medical and social problem, significantly reducing the quality of life of this category of patients. [3]. POP is a common benign condition in women that can cause vaginal protrusion and pressure, urinary dysfunction, defecation dysfunction, and sexual dysfunction [6,8,9]. Women with POP have a 12.6% lifetime risk of undergoing surgery [7]. Despite the

high prevalence of PTO and associated symptoms of urinary incontinence (UI) in our country, there are no specific validated questionnaires to assess the quality of life in this group of patients [4]. This is a complex dynamic process that has a long asymptomatic period and always has a progressive course [1].

The aim of our study was to analyze the data of the PFID-20 questionnaire and using this questionnaire to study the prevalence of urinary incontinence among women of the Uzbek population.

Study Design: We used a prospective cross-sectional study with an analytic approach. An anonymous survey of the studied women was carried out by means of a survey using questionnaire PFID-20 in social networks telegram and instagram . The questionnaires were filled in by the women themselves after signing the informed voluntary consent. The study was approved by the Tashkent Medical Academy.

Research methods: to determine the prevalence of urinary incontinence among women living in Uzbekistan, we used a special questionnaire PFDI-20 - Pelvic floor Distress Inventory Questionnaire . Questionnaire PFDI-20 (Pelvic floor Distress Inventory Questionnaire) can be used both by the patient at home before visiting the doctor, and directly at the appointment, to assess the symptoms of pelvic organ prolapse and bladder and bowel dysfunction. The form is the most common, reliable and valid for a specific questionnaire for pelvic dysfunction symptoms in the last 3 months . Statistical analysis was carried out using the Statistica system for Windows version 10.

Results of the study: An anonymous survey of 486 women aged 19 to 77 years (mean age 34.8 ± 1.3 years) was conducted within one week using the PFDI-20 questionnaire (Pelvic floor Distress Inventory Questionnaire). The questionnaire was created and distributed using the [https:// prolaps - survey domain . uz /](https://prolaps-survey.domain.uz/), a secure web-based platform for creating and managing surveys and online databases, and was distributed via telegram and Instagram channels for respondents. In our study, eight questions were included and the body mass index of the respondents was assessed. The questionnaire is presented in the table (Table 1).

The PFDI-20 is divided into 3 groups of questions regarding the symptoms of pelvic organ prolapse: 1) POPDI-6 (Pelvic Organ Prolapse Distress Inventory - POPDI-6) - a register of disorders caused by pelvic organ prolapse, consists of 6 questions on the assessment of the symptoms of pelvic organ prolapse; 2) CRAD-8 (Colorectal Anal Distress Inventory - CRAD-8) - a registry of disorders from the lower gastrointestinal tract, consists of 8 questions that assess symptoms associated with impaired defecation; 3) UDI-6 (Urinary Distress Inventory - UDI-6) - a registry of urination disorders, allows you to evaluate the symptoms associated with urination disorders [2]. Key (interpretation): The PFDI-20 questionnaire contains 20 questions and has a maximum score of 300, indicating the worst symptoms of pelvic organ prolapse. When calculating the points, the arithmetic mean is calculated in each group of questions (scatter from 0 to 4), the value is multiplied by 25, while the spread of indicators is 0 - 100 points. Missing responses are regarded as the

arithmetic mean for the given questionnaire. At the same time, depending on the number of points, the degree of severity of violations is differentiated.

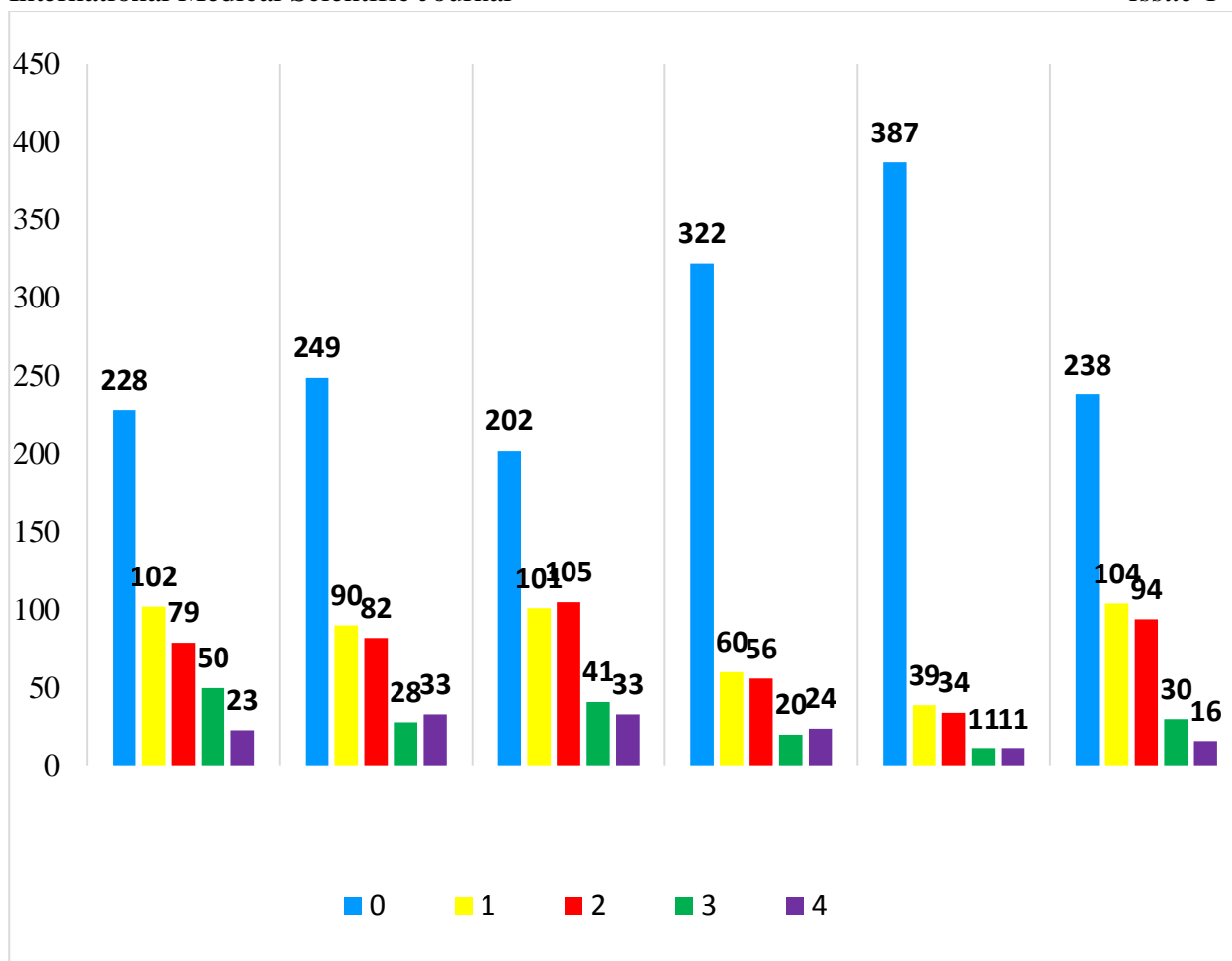
Table 1. Assessment of symptoms in study women using the UDI -6 questionnaire (Urinary Distress Inventory - UDI -6), %

Question	Yes	No
Have you been pregnant?	92.3	7.7
Did you have independent births?	78.4	21.6
Do you have respiratory problems accompanied by a chronic persistent cough?	19, 8	80.2
Have you had a hysterectomy (surgical removal of the uterus)?	3.1	96.9
Do you have high blood pressure?	66.6	33.4
Do you have diabetes?	3.7	96.3
Have you had a birth with a large newborn body weight?	48.7	51.3
Have you had repeated prolapse of the walls of the vagina and uterus after surgical treatment?	7.1	92.9

The period after childbirth in the studied women was 5.3 years (± 0.6 months). All symptoms were scored as follows: 0 - no (never experienced), 1 - not at all (but experienced before), 2 - rarely, 3 - often, 4 - constantly (always), summed up and multiplied by 25. The total scores for this questionnaire - from 0 to 300. Patients characterized the questions of the questionnaires as understandable and clearly formulated. Difficulties with filling did not arise in any of the patients.

Inclusion criteria: presence of pelvic organ prolapse and/or stress urinary incontinence, age over 18 years, no pregnancy, ability to understand and answer questionnaires.

Exclusion criteria: absence of pelvic organ prolapse and/or stress urinary incontinence, age less than 18 years, inability to understand and answer questionnaires, mental illness and cognitive impairment, severe physical illness.



Prevalence of symptoms in study women using the UDI -6 questionnaire, (n = 486)

According to the results of our questionnaire, it turned out that women with the pathology of urinary incontinence suffer the most with an average reproductive age of 25-35 years. Of the 486 examined, 28.8% had severe urinary incontinence, while moderate incontinence occurred in 37% of cases ($p > 0.01$). A history of childbirth occurred in 95.9% (one - in 13.6%, two or more - in 82.3%), there was no history of childbirth - in 4.1% of women ($p > 0.001$). To date, a review of the data on the relationship between obesity and pelvic organ prolapse is timely and relevant, as the prevalence of obesity is increasing worldwide, and this is an important risk factor that should be considered when counseling women about the treatment of prolapse symptoms and surgical outcomes.

Given that elevated BMI is the most likely mechanism for the development of POP in obese women, it leads to an increase in intra-abdominal pressure, causing weakening of the muscles and fasciae of the pelvic floor. In our study, excess body weight was detected in 37.3% of the respondents, while obesity was detected in 24.2%. In our study, a normal mass index was found only in 37.4%, while underweight was found in 4.7% of the respondents ($p > 0.01$). These indicators show that it is necessary to promote the right lifestyle to prevent the development of various diseases.

Our electronic risk factor questionnaire created the 9 most important risk factors for the development of pelvic organ prolapse. All women volunteered to participate in our study. The questionnaire is presented in the table. 92.3% of the respondents answered positively to the question of pregnancy in history, while 7.7% did not have a pregnancy. Knowing the role of natural childbirth in the development of pelvic organ prolapse, 78.4% answered this question of natural childbirth and 21.6% answered that they had no history of childbirth. According to the literature, respiratory problems accompanied by chronic cough increase intra-abdominal pressure, thereby negatively affecting the pelvic floor muscles. The women surveyed by us answered that 19.8%, i.e. $\frac{1}{4}$ of all, had this risk factor. Women who have had surgery for pelvic organ prolapse are more likely to report a history of hard work. Analysis of surgical treatment showed that a history of hysterectomy was in 3.1%, while re-descent of the walls of the vagina and uterus after surgical treatment was in 7.1%. The existing literature suggests that the presence of hypertension and diabetes mellitus harms the pelvic floor, with 66.6% reporting hypertension and 3.7% diabetes. The role of fetal weight at birth is undoubted. During the survey, we found that 48.7% of the respondents had births with a fetus weighing 4000 grams or more ($p > 0.001$).

Conclusions: Summarizing our findings, the use of a specific drug in clinical practice questionnaire a PFID-20 (UDI-6) allowed us to assess the prevalence of the degree of stress urinary incontinence among women in the Uzbek population. The identification of women with urinary incontinence can be made easier by the introduction of electronic questionnaires, and timely correction will improve the physical, social, professional and psychological aspects of women. A high prevalence of symptoms of pelvic floor dysfunction in women of reproductive age and its relationship with childbirth has been established, which requires the development of a set of measures to prevent these disorders in women in the postpartum period. In the course of the study, it was found that the PFDI 20 Electronic Questionnaire (UDI-6) made it possible to assess the prevalence and frequency of urinary incontinence. Most often, urinary incontinence was diagnosed in women of late reproductive age, 1/3 of the women studied had a severe degree of urinary incontinence. Thus, the proposed electronic questionnaire is a concise and reliable questionnaire that can be used for epidemiological studies, as well as in everyday clinical practice. It is an ideal research tool for early identification of women at risk for pelvic organ prolapse.

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