

# Retrospective Analysis of Women with Pelvic Organ Prolapse

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**Abstract** The article presents data from a retrospective analysis of the history of women operated on with pelvic organ prolapse after hysterectomy at the Republican Specialized Scientific and Practical Medical Center for Maternal and Child Health. The frequency of occurrence, features of the course of the disease and the frequency of the form of genital prolapse were studied.

**Keywords** Hysterectomy, Pelvic organ prolapse, Uterine fibroids

## 1. Relevance

According to various statistical studies, the incidence of pelvic organ prolapse in postmenopausal women reaches 50%, which is especially important in the presence of comorbid pathology, affecting not only the effectiveness of surgical correction, but also the quality of life of patients [1,2,4]. Pelvic organ prolapse (POP) is one of the most common problems among the female population [2,3,6,8]. Vaginal surgery for genital prolapse using your own tissue is associated with an increased risk of recurrence and failure [5,6,7]. Correction of POP using synthetic mesh via vaginal access is associated with an increased risk of vaginal erosions, implant extrusions, and repeat surgery [9]. The use of laparoscopic sacrocolpopexy may be accompanied by the development of complications as a result of the location of a number of important anatomical landmarks in the promontorium area, especially in the presence of risk factors such as obesity and adhesions [12]. Damage to the hypogastric nerve contributes to the development of constipation, and injury to the intestinal wall or bladder during dissection occurs with a frequency of up to 10%, especially in conditions of increased body mass index [11]. Despite the variety of surgical methods for correcting genital prolapse and stress urinary incontinence, the available data are contradictory. The issue of surgical treatment of genital prolapse requires further study, taking into account an individual approach for each patient.

**Purpose of the study:** To study clinical and anamnestic data in women with pelvic organ prolapse after total hysterectomy.

## 2. Materials and Methods of the Study

A retrospective analysis was carried out at the Republican Specialized Scientific and Practical Medical Center for Maternal and Child Health for the period 2020-2023. The object of the study was women with genital prolapse who underwent hysterectomy using laparotomy (abdominal), vaginal and laparoscopic approaches due to uterine fibroids. All operations were performed for the purpose of surgical treatment of uterine fibroids. All women underwent a comprehensive clinical and laboratory examination and preparation for planned surgical treatment for uterine fibroids larger than 12 weeks. Patients with uterine fibroids underwent examination and training at the scientific advisory clinic "Family and Marriage" of the Republican Specialized Scientific and Practical Medical Center for Maternal and Child Health, after which they were hospitalized for surgical treatment in the department of operative gynecology of the Republican Specialized Scientific and Practical Medical Center for Maternal and Child Health.

Gynecological status was determined based on examination of the external genitalia, examination of the vagina and cervix using speculum, bimanual vaginal examination, and, if indicated, rectal-vaginal examination. During a bimanual examination, the position, mobility, size, consistency, shape of the uterus, localization and size of myomatous nodes, and their pain on palpation were determined. The condition of the uterine appendages, pelvic tissue, the condition of the vaginal vaults and uterosacral ligaments was determined.

The data obtained during the study were subjected to statistical processing on a Pentium-IV personal computer using the Microsoft Office Excel-2003 software package, including the use of built-in statistical processing functions. Methods of variational parametric and nonparametric statistics were used with the calculation of the arithmetic mean of the studied indicator ( $M$ ), standard deviation ( $\sigma$ ), standard error of the mean ( $m$ ), relative values (frequency, %),

the statistical significance of the obtained measurements when comparing average values was determined by the criterion Student's t test (t).

### 3. Results of the Study

The surgical histories of 172 women who underwent total hysterectomy were studied. The age of the women was from 45 to 52 years; the average age was  $49.4 \pm 1.78$  years.

The results of studying the somatic status of those examined are presented in Table 1. As can be seen from Table 1, many patients suffered from various diseases in the past. Most often, the patients indicated diseases of the urinary system.

**Table 1.** Structure of somatic diseases in the patients with genital prolapse

| Disease  | Retrospective group (n=172) |
|--|-----------------------------|
| Diseases of respiratory system:                      |                             |
| - frequent Acute respiratory viral infections (ARVI) | 64 (37.2%)                  |
| -bronchitis  | 3 (1.7%)                    |
| -bronchial asthma                                    | 2 (1.2%)                    |
| Diseases of digestive system:                        |                             |
| -gastritis   | 11 (6.4%)                   |
| -colitis   | 18 (10.5%)                  |
| -hepatitis   | 4 (4.3%)                    |
| Diseases of urinary system:                          |                             |
| -pyelonephritis                                      | 38 (22.1%)                  |
| -cystitis  | 64 (37.2%)                  |
| -Kidney stones (Nephrolithiasis)                     | -                           |
| Diseases of cardiovascular system:                   |                             |
| - hypertensive disease                               | 11 (6.4%)                   |
| -Neurocirculatory dystonia of mixed type             | 19 (11%)                    |
| - varicose veins of the lower extremities            | 35 (20.3%)                  |
| Iron-deficiency anemia                               | 53 (31%)                    |
| Diseases of endocrine system:                        |                             |
| - lipid metabolism disorder                          | 59 (34.3%)                  |
| - endemic enlargement of the thyroid gland           | 111 (64.5%)                 |
| Others   | 9 (5.2%)                    |

Analysis of the somatic status of those examined showed that every fourth patient had verified iron deficiency anemia. Moreover, with meno-metrorrhagia, there was more often iron deficiency anemia of grades II and III. The patients often had diseases of the urinary system, various gastrointestinal diseases, as well as diseases of the cardiovascular system. Among the patients, endemic enlargement of the thyroid gland was often verified. Thus, the study of the somatic status of the examined patients showed complications in the patients.

The results of studying the generative history of the examined patients are presented in Table 2.

**Table 2.** Analysis of generative function in the women with genital prolapse (abs/%)

| Data on generative function | Retrospective group (n=172) |
|-----------------------------|-----------------------------|
| Infertility I               | 9 (5.2%)                    |
| Delivery:                   |                             |
| -1-2                        | 54 (31.4%)                  |
| -3                          | 79 (46%)                    |
| -4 and more                 | 39 (22.6%)                  |
| Medical abortions:          |                             |
| -1-2                        | 56 (32.6%)                  |
| -3-4                        | 11 (6.4%)                   |
| -5 and more                 | 42 (24.4%)                  |
| Miscarriages:               |                             |
| -1-2                        | 76 (44.1%)                  |
| -3-4                        | 5 (2.9%)                    |

A retrospective analysis showed that 46% of women were multiparous (3 deliveries), 56% of cases had medical abortion and 44.1% of cases had miscarriages.

The indication for surgical treatment in patients (Table 3) was symptomatic uterine fibroids - 139 (78.1%), of which a growth symptom - 57 (32.0%) cases.

**Table 3.** Indications for surgical treatment

| № | Nosology  | Retrospective group (n=172) |      |
|---|---|-----------------------------|------|
|   |   | abs.                        | %    |
| 1 | Symptomatic uterine fibroids                      | 134                         | 77.9 |
|   | - growth symptom                                  | 46                          | 34.3 |
|   | -symptom of bleeding                              | 34                          | 25.4 |
|   | -symptom of growth and bleeding                   | 54                          | 40.3 |
| 2 | Recurrent hyperplastic process of the endometrium | 38                          | 22.1 |

Recurrent hyperplastic process was an indication for surgical treatment in 38 (22.1%) cases. The symptom of bleeding occurred in 34 (25.4%) cases. The combination of growth symptom and bleeding was diagnosed in 54 (40.3%) women.

The structure of forms of genital prolapse in operated patients is presented in Figure 1. Among all diagnosed forms of pelvic organ prolapse, mixed forms predominated (more than 47.6%). The least common form of apical prolapse was isolated, accounting for 4.1% of cases.

Scar changes in the perineum after episiotomy were detected in 94 of 172 patients in the study. The findings confirm the data of the authors [10] on the influence of obstetric injuries on the formation of pelvic organ prolapse (Table 4).

**Table 4.** Delivery injuries in women with pelvic organ prolapse

| Indicators                     | Retrospective analysis (n=172) |
|--------------------------------|--------------------------------|
| Episiotomy                     | 94 (54.6%)                     |
| Perineal injuries I-II degrees | 64 (37.2%)                     |
| Absence of delivery injuries   | 14 (8.2%)                      |

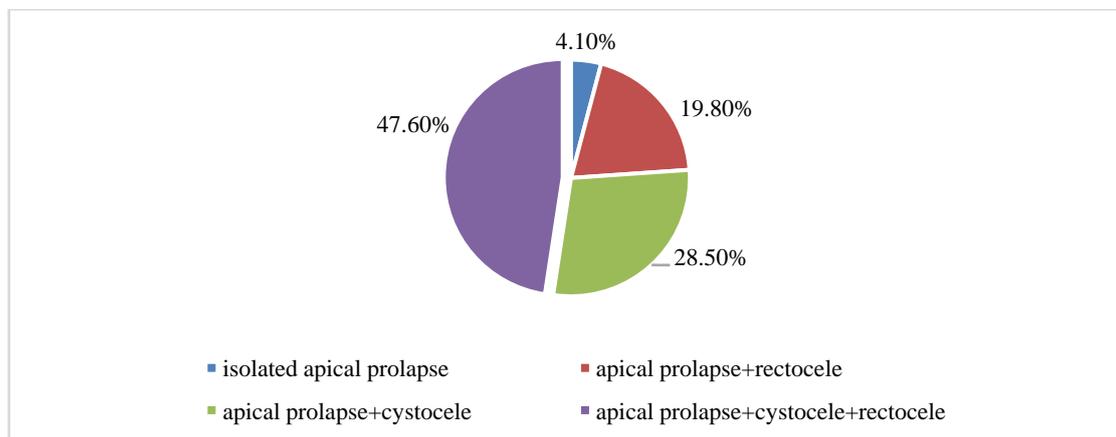


Figure 1. Structure of forms of pelvic organ prolapse, (%)

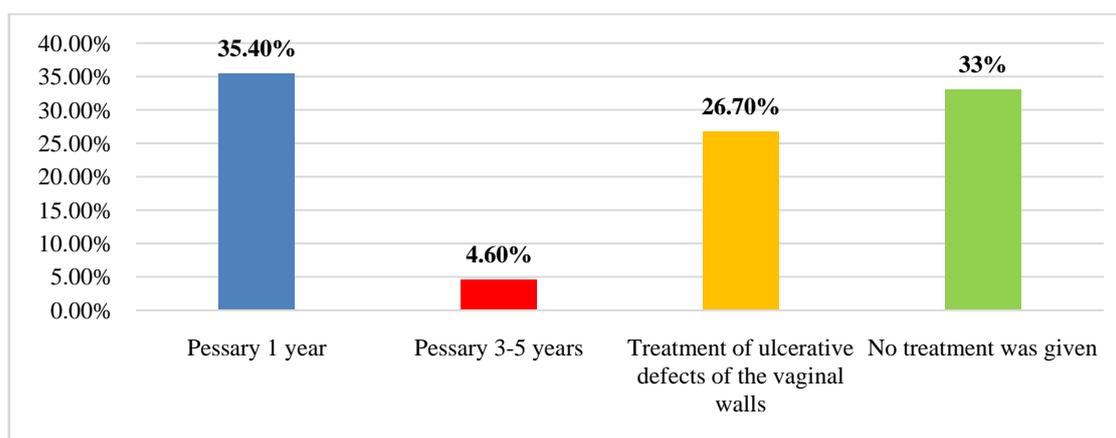


Figure 2. Conservative treatment of pelvic organ prolapse in the anamnesis (medical history of the patients)

A retrospective analysis showed that almost half of the patients did not receive conservative treatment before surgery, and their seeking medical help was associated with a significant increase in the severity of prolapse.

Due to the progression of pelvic organ prolapse and the appearance of pathological leucorrhoea (abnormal vaginal discharge), the use of gynecological pessaries was ineffective and led to the abandonment of conservative treatment methods (Figure 2).

#### 4. Conclusions

Thus, the results of examination of the patients before surgical treatment confirmed the multifactorial nature of the causes of pelvic organ prolapse and the accompanying disorders by adjacent organs. Summarizing the assessment of the general condition of hospitalized patients, when considering all the factors combined, we can conclude that pelvic organ prolapse needed to be surgically treated. Indications for surgery were determined by the diagnosis made on the basis of a comprehensive clinical and laboratory examination. The decision on the extent of surgical treatment was made individually.

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