

Volume 02, Issue 02, 2024 ISSN (E): 2993-2149

# UTERINE MYOMA (XKT-10:D26) AND MODERN APPROACH TO ITS DIAGNOSIS AND TREATMENT

### Allamuratova Ulguzi Djumaevna

Uzbekistan, Termez branch of Tashkent Medical Academy

#### Khurmatova Dilorom Adashevna

Uzbekistan, Termez branch of Tashkent Medical Academy candidate of medical sciences,

#### Normurodova Shakhnoza Ghaforovna

Surkhandarya Branch of the Republican Specialized Scientific and Applied Medical Center
"Mother and Child Health"

#### Tursunpolatov, Islam Kholtoji o'g'li

Uzbekistan, Obstetrician-gynecologist, private clinic "Aqtash", Termiz district

#### Mirzaev Mirzahid Yakubovich,

Uzbekistan, student, Termez branch of Tashkent Medical Academy

#### **ABSTRACT**

This article provides an analysis of uterine quality tumor, i.e. uterine myoma coexistence with other extragenital diseases in women, meeting with various gynecological diseases of genital organs, and its complications. One of the modern diagnostic methods in the prevention and prognosis of uterine fibroids in women is the method of determining oncomarkers in blood serum. **Key words and phrases**: body weight index (BMI), uterine fibroids, oncomarkers SA–125, SEA, colposcopy, hysterocervicoscopy, laparoscopic occlusion, focused ultrasound ablation with MRI.

#### The urgency of the problem.

Uterine fibroids are benign tumors that develop from the smooth muscle fibers of its body and neck under the influence of the hormone progesterone. It is one of the most common tumors of the reproductive system.

70% of diseases of the genital system are fibroids.

Conditions that lead to the development of fibroids include:

very early onset of the menstrual cycle;

absence of childbirth in a woman's anamnesis;

giving birth when a woman is older;

smoking;

overweight;

taking oral contraceptives;

long stay of the spiral in the uterus;

multiple abortions and multiple hysterectomy.

The number of women with benign tumors of the genitals, including uterine fibroids, is increasing. For early diagnosis of uterine fibroids, women should undergo regular targeted medical



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examinations. In many cases, complications of uterine myoma and late diagnosis lead to problems in its surgical treatment and prolongation of the rehabilitation period.

Today, in the practice of gynecological surgery, we can obtain important conclusions about the prognosis of uterine fibroids and benign tumors of the ovary through modern examination methods – non–invasive analysis. Depending on the PSA–125 oncomarker titer, we can think about the transformation into a bad–quality tumor and the level of carcinogenicity. The purpose of the investigation is to study the early diagnosis, treatment and prognosis of uterine myoma.

### Inspection materials and methods.

As an examination material, the medical histories of 25 women with uterine fibroids from a total of 300 female patients who were treated in April 2023 in the gynecology department of the private clinic "Aqtash", Termiz district, Surkhondarya region, were directly studied. First of all, the problem to be analyzed was planned, and then the conclusions of the results of the general medical clinical examination were identified. Results were obtained on the basis of a retrospective analysis of the conducted investigations based on specific criteria. The gynecological patients of the examined group were selected according to the time criterion and diagnosed with other extragenital diseases that may be associated with uterine fibroids.

General clinical, clinical—biochemical, blood coagulation system and immunological analyzes were performed for the diagnosis of uterine myoma. Among them, anthropometric parameters, body mass index, blood group and Rhesus factor, HIV infection in blood serum, wound, viral hepatitis V (VG "V") and viral hepatitis "C" markers were determined. Electrocardiogram of the heart, internal parenchymatosis, and ultrasound examinations of the genital organs were conducted among the instrumental examinations. All examination results are individually attached to patients' inpatient medical histories.

As an oncological marker of genital organs, complete ovarian cancer oncomarker–NE–4, ovarian carbohydrate antigen SA–125, cervical adenocarcinoma (XKT–10:S53) antigen were determined from all women.

Life and gynecological anamnesis of selected female patients were collected during the examination process. Before and after surgery, daily hemodynamic parameters were checked and recorded in the dynamic observation sheet. Female patients with extragenital disease were prepared for surgery in the pre–surgical period. Before the operation, hemotransfusion, iron preparations, hypoglycemic agents, symptomatic therapy and vaginal sanitation were carried out based on the doctor's instructions. In the last period after the operation, infusion, antibacterial therapy, analgesics, antiaggregants and aseptic dressings were applied to the local wound area. For the purpose of rehabilitation, anteanemic and hormonal pills were given orally and medical advice was given for a re–examination in one month. Patients with problems were treated in collaboration with cardiologists, endocrinologists, therapists and surgeons. The final diagnosis and its complications are indicated in the case histories, a written extract from the case history is given, and the patients' information is entered into the electronic database. At the end of the investigation, the results obtained were statistically processed.

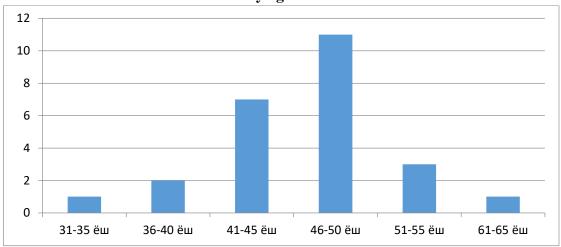
#### Obtained results and analysis.

The obtained results were concluded as follows. When looking at the age structure of 25 selected female patients: 1–4% of women aged 31–35, 2–8% of 36–40–year–olds, 7–28% of 41–45–year–olds, 11–44% of 46–50–year–olds , 51–55–year–olds–3–12%, and 61–65–year–old women made up 1–4%.

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We can see the intensive rate of uterine fibroids among patients according to age from the table below. Therefore, from this table, the occurrence of fibroids in women is more likely to coincide with the climactic period.

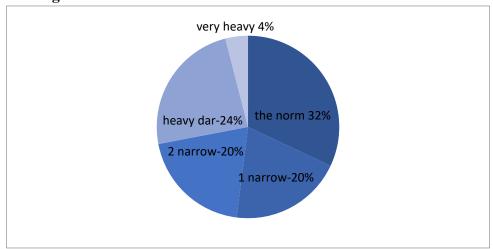
Table 1. The incidence of fibroids in women by age



P.S. In the table "ëiii" means "years".

According to the body weight index, 8 people with normal TVI (18-25) - 32%, 5 people with 1st degree obesity - 20% (TVI=26-30), 5 people with 2nd degree obesity - 20% (TVI=31-35), 6 with severe obesity made up -24% (TVI=35 and above). Among the severely obese patients, one woman with a TVI of -51.4, i.e., a woman with a height of 156 cm and a weight of 125 kg, underwent a gynecological surgery for uterine fibroids. In women with high TVI, the preparatory phase before surgery was prolonged. Body weight deficiency – 1 person – 4% was noted, and this woman had primary infertility for five years.

Table 2 Finding uterine fibroids on TVI

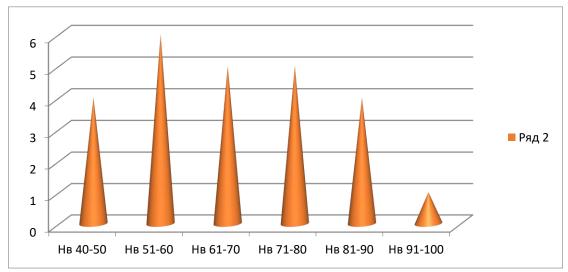


Severe anemia Nv-40-50 g\l 4-16%, 51-60 g\l 6-24%, 61-70 g\l 5-20%, 71-80 g\l 5 people 20%, 81 –90 g\l was detected in 4–16% of cases and above 91 in 1–4% of cases. Anemia occurred

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in connection with uterine bleeding. As it can be seen from this table, in posthemorrhagic complications of uterine myoma, hemoglobin level below 70g/l leads to severe anemia.

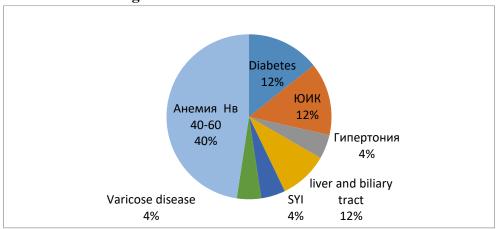
Table 3. Indicators of severity of posthemorrhagic anemia



Various extragenital diseases were also present among the patients. They are as follows: diabetes -3 patients -12%, ischemic heart disease -3 patients -12%, hypertension 1-4%, liver and biliary tract pathology 3-12%, urinary tract infection 1-4%, varicose disease 1 It was found in 4% of patients.

Table 4.

Concomitant extragenital diseases



In the genital organs, ovarian cysts are 3–12%, cervical cysts are 1–4%, adenomyosis is 2–8%, endometritis is 1–4%, endocervicitis is 1–4%, cervical myoma is 1–4%, and primary infertility is 1–4%. %, the presence of an intrauterine device is 1–4%, and an undiagnosed low–grade tumor on the cervix was diagnosed in 1 woman and accounted for 4%.

The following results were obtained from general surgery performed on 25 patients. In 24–96% of women, SMA anesthesia was performed under local anesthesia and gynecological surgery was performed. 1 of them was taken for histological examination from a woman with SA–125 oncomarker and sent to the regional oncological dispensary for examination and operative treatment based on a referral. Conservative myomectomy was performed in 1 primary infertile

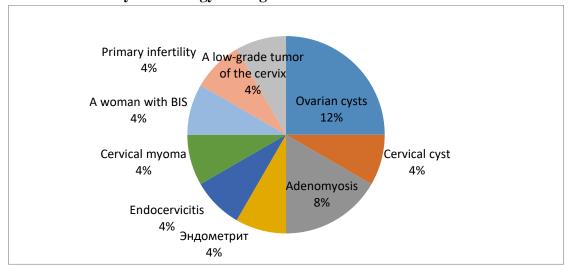


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woman. Removal of myoma from the cervix 1-4%, total hysterectomy and cystectomy -3-12%, hysterectomy and salpingolysis -3 women -12%, cyst removal from the cervix -1-4%.

Table 5.

Coexistence of myoma with gynecological diseases



In ultrasound examinations, the echo manifestations of uterine fibroids were of different pathomorphological forms. Including: myomatous nodules with sizes of 3–6 uterine fibroids, from the minimum size of 0.5 cm to the maximum of 9.0–10 cm. According to the localization, nodes located in the lower part of the cervix, subserous and submucosa were identified. 15–60% of women had multinodular 20–50 mm myomatous form of subserous uterine myoma.

The most noteworthy aspect of the clinical course of uterine myoma is its main symptom, such as pain and vaginal bleeding, observed in all women. It has been observed that myoma is combined with age—related, extragenital and genital diseases.

In our observations, 4 female patients with complicated gynecological anamnesis, whose hemoglobin level was 40–50 g/l and who were diagnosed with post–hemorrhagic anemia, underwent blood and blood substitute plasma and hematotransfusion from the same group during the preoperative preparation and were taken to surgery. In particular, during the preoperative process, diabetes mellitus was present in 3 patients, ischemic heart disease was present in 3 patients, hypertension was present in 1 patient, and varicose disease and obesity were very severe (total –13 patients –52%) in the gynecology department of a private clinic, caused it to increase by 11 places/day, exceeding the average of 8 days. The total number of days spent in the department is 200 days, including 1 patient – 6 days, 11 patients – 7 days, 7 patients – 8 days, 2 patients – 9 days, 1 patient – 10 days, and 3 patients – 11 days in intensive care and operative treatment procedures were carried out. There were no cases of purulent septic complications or death after surgery in the analyzed patients.

This table shows the results of oncomarkers detected in the laboratory department of the private clinic "Aqtosh".

Oncomarker analysis of the laboratory department of the clinic "Aqtosh" belonging to the private enterprise "Gulnigor shifo-med". 04.04.2023.

Patient XXXXXXX (patient F.I.O. not provided)

Age: Born in 1997.

№	Indications	Patient	Normal
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1.	NE-4 protein (ovarian cancer marker)	_	0-150нг/мл
2.	SEA is an oncomarker of internal organs	24.3	0–10нг/мл
3.	SA-125 is an ovarian and testicular cancer	68.6	0–35нг/мл
	oncomarker		
4.	Cervical cancer oncomarker (adenocarcinoma	1.04	0.16–1.5мкг/л
	oncomarker)		
5.	Oncomarker of breast cancer	_	0-37 Е/мл

#### **Identification of oncomarkers.**

In recent years, oncomarkers have been identified in biological fluids in order to detect uterine fibroids, ovarian tumors, and low–grade tumors in genital organs. This method can also be used for the purpose of comparative diagnosis (differential diagnosis SA–19–9) of good–quality tumors of the uterus from its poor–quality tumors.

Ya.V.Boxman (1989) defined a tumor marker as any type of protein substance that appears in an oncological patient and represents the degree of tumor spread and regression after treatment. SA–125 oncomarker is a standard oncomarker of ovarian non–mucinous epithelial carcinoma, with a blood concentration of 0–30 IU/ml. In addition to uterine myoma, this oncomarker is also a marker of endometriosis, ovarian cancer, during pregnancy and menstruation, ovarian inflammation, ovarian hyperstimulation syndrome, tumors of various localizations, and complications after surgery. It is a diagnostic criterion for cancer of the uterus and endometrium, breast and pancreas. Therefore, the study of the SA–125 oncomarker alone can give up to 39.9% false–positive results. There are opinions suggesting that an increase in the concentration of the oncomarker SA–125 in the blood serum is associated with an increase in the ectopic tissue mass.

As a result of investigations, concentration of oncomarker SA 125 increased in expressed forms of endometriosis, less in less expressed form of the disease and normal indicators. It has been assumed that local inflammatory reactions in the focus of endometriosis can cause a lot of transfer of this marker into the blood.

The female patient in our analysis had serum SA-125 of 68.6 U\ml and SEA (REA) of 24.3 ng\ml. This oncomarker is normally equal to 0-10 mg/ml. (Indicator of private clinic laboratory)

The experiment proved the secretion of oncomarkers RR14 and SA 125 into the peritoneal fluid in peritoneal endometriosis. Also, in deep pathological infiltrative processes in the focus of inflammation, oncomarkers pass into the blood serum.

In 3–12% of operated patients in our analysis, salpingolysis was performed after abdominal scarring (endometriosis) complications.

#### Conclusions revealed as a result of the analysis.

In our research and analysis, it was found that benign tumors of the uterus are most common in the active fertile age and in the pre-menopausal period (35–50 years). Women with excess body weight have a higher percentage of uterine fibroids. High TVI has been implicated as an indirect factor in the development of uterine fibroids, along with metabolic diseases such as obesity, ischemic heart disease, and diabetes. Preoperative and postoperative care for women with diabetes



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and IUD and posthemorrhagic anemia had higher than average rates of bed days. One female patient with oncomarker CEA and CA-125 was sent to the regional oncology dispensary for diagnosis (according to TNM and FIGO system) and specialized treatment.

All FYoA over 35 years of age should be screened for early detection of cervical cancer.

The presence of concomitant extragenital diseases and diseases of the genital organs in women with uterine fibroids lengthened the gynecological surgery process and the subsequent period, and caused the need for additional diagnostic methods and treatment measures. (See table #4 and #5.) In conclusion, the use of colposcopy and hysterocervicoscopy methods in the early diagnosis of uterine fibroids, other diseases of the genital organs, and especially cervical cancer, is one of the modern methods. In addition to conservative and radical gynecological surgical methods, laparoscopic occlusion of the uterine artery and focused ultrasound ablation with MRI control are the most modern methods of treatment for uterine fibroids. The essence of the laparoscopic occlusion method of the uterine artery is that vascular occlusion is performed with a special embolization device (chastitsa) of the myoma blood vessel through the branch of the uterine artery. This process leads to the drying up of a small myoma (leiomyoma) in the uterus, replaced by fibrous tissue and the disappearance of clinical symptoms.

MRI-guided focused ultrasound ablation is the practice of distant tumor ablation with focused ultrasound under magnetic resonance imaging guidance. In this case, the tissue in the ultrasound focus is burned for several seconds until thermal necrosis occurs. During the operation, the nonfocal tissue is left intact. Focused ultrasound beam with MRI provides real-time real-time navigation, visualization, thermometry, and results control. It is a non-invasive targeted surgical procedure that destroys the tumor structure.

While these state-of-the-art methods have the advantage of preserving the uterus, the disadvantage is their cost and the problem of restoring the function of the reproductive system in women, which requires future research.

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