



## The Combination of Tubal Pregnancy and Gigantic Myoma in Young Reproductive Age: Case Report

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### Abstract

The clinical case of emergency hospitalization of a combination of gigantic myoma and progressive tubal pregnancy in a young 27-year-old woman with conservative myomectomy and tubectomy with preservation of the uterus was analyzed. The mass of myomatous nodes after removal was 620 grams.

**Objective:** To report a rare clinical case of a combination of progressive tubal pregnancy and uterine fibroids of giant size in a patient of young reproductive age.

**Keywords:** Young reproductive age; Gigantic myoma; Progressive tubal pregnancy; Organ-preserving surgery

### Introduction

Myoma (fibromyoma, leiomyoma, fibroma, etc.) is a hormone-dependent monoclonal benign, repeating the structural organization of the myometrium layer. In recent years, there is an earlier age period the occurrence of this pathology and the tendency to "rejuvenation" and increase of the disease. According to some data, myoma is detected in 20% to 40% of women of reproductive age [1] and in 0.5% to 6% of pregnant women [2], although it is impossible to determine its true frequency due to the fact that approximately one third of patients have uterine fibroids without clinical manifestations.

The main factors presumably playing a role in the appearance and growth of myoma are the interaction of estrogens and progesterones, the receptor apparatus of the myoma node, growth factors, cytokines, the immune system, inflammatory mediators, genome features [1,3,4].

One of the risk factors for the myoma is the presence of a genetic predisposition. According to K. Sato et al. [4], abnormal karyotypes are formed with the participation of two genes- 12q15 and 6p21 during embryonic development. The progression of the process, according to the author, occurs with the constant influence of ovarian hormones, when the tumor grows as a genetically abnormal clone of cells, originating from a primary cell that has the ability of unregulated growth. This explains the progression of the tumor after menarche, with repeated menstrual cycles.

The clinical manifestations of myoma are fairly well studied and typical. The presence of uterine fibroids in women of reproductive age is associated with a different gynecological pathology. 5% to 10% of infertility problems are related to the presence of myoma [3], although the mechanism of fertility decline has not been fully determined. Patients with myoma often complain of profuse menstruation, with the development of anemia. The presence of a tumor can lead to dysfunction of the pelvic organs - urological manifestations, pain syndrome, violation of sexual function [1,2]. However, myoma is possible without clinical symptoms of the disease.

The manifestation of myoma during pregnancy depends on the size of the myomatous nodes and their localization. Myoma can lead to impaired implantation of the fetal egg, loss of pregnancy. With the onset of gestation, with the formation of the yellow body and the placenta, the content of sex steroid hormones in the mother's bloodstream changes, which contributes to an increase in the volume of nodes. With an increase in the volume of nodes in the first trimester of pregnancy, it is

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**Figure 1 and 2:** Lower-median laparotomy. Results of revision of the pelvic organs. Uterus with myomatous nodes and progressive tubal pregnancy on the right.

possible to further develop edema of fibroids, circulatory disorders and lymphodynamics, destructive changes and necrosis of the uterine tumor.

With myoma, 2 groups of risk of complications during pregnancy are identified: low and high. The risks associated with complications of uterine pregnancy. In the available scientific literature, we did not find information about a combination of ectopic pregnancy and myoma. This prompted the authors to describe this complex clinical case.

### Case Presentation

The 27-year-old who lives in Russia is referred by the women's consultation for hospitalization in the gynecological department of the medical organization of the III level of the city of Surgut. Complaints on admission to meager bleeding from the genital tract for 12 hrs at for 8 weeks amenorrhea, from the family history of the patient's mother has myoma, otherwise the family history is not complicated. The woman herself has no somatic pathology. Menstruation from 14 years on 5 days regular, moderate, painless, Sexual life since 21 years. The sexual partner is healthy. The method of contraception is a condom. This pregnancy is the first, desired. The couple did not undergo pre-gravidic training. From gynecological diseases chronic adnexitis was noted, with hospitalization in the gynecological ward in history.

The condition on admission is satisfactory. Body mass index 24. Hemodynamics is stable. In vaginal examination, the cervix is epithelialized; the uterus is slightly enlarged, dense, and painful. In the area of the right appendages, volumetric formation of the densely elastic consistency was determined, increased to 15 cm, painless, limited in mobility, on the left - volumetric formation of tight elastic consistency increased to 6 cm. To refine the diagnosis according to the algorithm, the patient underwent laboratory studies and ultrasound.

In the laboratory examination: hemoglobin 119.0 g/l, leukocytes  $15.8 \times 10^9$ , platelets  $216.4 \times 10^9$ , the level of chorionic gonadotropin in the blood 11063.0 m IU/ml. The rest of the blood, urine, microbiological and cytological tests of female genital organs are normal.

When ultrasound examination revealed that the entire small pelvis occupies a volume formation of reduced echogenicity in the form of a conglomerate of several nodes. This formation of an irregular shape in the form of a "matryoshka", measuring 150 mm, 77 mm, 72 mm and extending to mesogastrium. In the structure of the conglomerate, the body of the uterus is partially seen. At its upper



**Figure 3:** Lower-midline laparotomy. Uterus after conservative myomectomy.

pole, an anechoic fetal egg is formed, the size of which is 32 mm, 17 mm, the chorion is located circularly, the thickness of the chorion is 6 mm, the crown-rump length – is 17 mm (corresponding to 8 weeks and 2 days), the yolk sac well not visible.

Ultrasound examination allowed revealing the myoma, to determine the number of nodes, their size and localization, structure, which is consistent with the data of numerous studies confirming the effectiveness of the diagnostic method with sensitivity in the diagnosis of myoma 96.1%, and specificity 83.3%, and also confirming the presence of a tubal right-sided progressive pregnancy.

Given the signs of progressive tubal pregnancy, the patient is delivered into the operating room. A lower-median laparotomy under general anesthesia was performed. A multiple tumor-like formation, reminiscent of the macroscopic characteristics of the myoma, was present in the wound in a whitish color. The tumor emanated from the right rib of the uterus, occupying the entire right side of the abdomen with the upper pole reaching the mesogastrium. The tumor consisted of two fused fragments ranging in size from 30 mm to 150 mm in diameter with a smooth surface. Another node of the anterior wall of the uterus, subserosal, with a size of 120 mm. In the area of the projection of a single myomatous node to the right, the right fallopian tube was thin, long with a fetal egg in the isthmic part. In the place of nidation of the fetal egg, the tube was expanded to 30 mm. Own ligament of the right ovary was pushed back by the knot; the right ovary was fixed by spikes to the posterior wall of the uterus. The right ovary had a normal color, size and consistency. The left appendages of the uterus are not changed (Figures 1 and 2).

The removal of the right uterine tube, the myomatous node



**Figure 4:** Macro-preparation. Myomatous nodes after conservative myomectomy.

proceeding from the anterior wall of the uterus, was accomplished by crossing its pedicle.

During the further stages of the operation, obstetricians and gynecologists faced the task of performing an organ-preserving operation. Capsules of myomatous nodes, located on the right rib of the uterus, were successively opened. The nodes were excised without opening the uterine cavity. The layer-by-layer suturing of the uterus was performed by two rows of vikril sutures. The integrity and mobility of the uterus were restored.

After removal of fibroids, the size of the uterus was 59 mm, 44 mm, 56 mm, and the shape was normal (Figure 3).

After the operative intervention, the abdominal cavity was drained through an additional incision in the hypogastric area to the left in order to control the quality of surgical hemostasis. The blood loss was 200 ml.

When examining the macro preparation (Figure 4), the myomatous node from the anterior wall of the uterus had a fibrous structure, was dense. The myomatous nodes, which were located on the right side of the uterus, had a fibrous structure with a softening in the central zones. The mass of myomatous nodes after removal was 620 grams.

In case of pathohistological examination in the sent material, 3 nodal formations (myomatous nodes) of large size, on the cut, former, dense, fibrous and uterine tube 60 mm, 30 mm with enlarged lumen due to the fetal egg.

**Microscopic picture:** fragments of tumor tissue, represented by multidirectional bundles of spindle-shaped cells with oval nuclei without signs of atypia and polymorphism, irregular stroma due to edema (fibroids of the uterus); fragments of the uterine tube with

thinned walls, focal hemorrhages. In the lumen of the tube, many chorionic villi with degenerative-dystrophic changes in chorionic epithelium, edema of the stroma.

In the postoperative period the patient received infusion, anti-anemic, anesthetic therapy. A course of antibacterial, non-steroidal anti-inflammatory and uterotonic therapy was prescribed; measures were taken to prevent thromboembolic complications, and physiotherapy.

**Final clinical diagnosis: Main:** Tubular pregnancy on the right, progressing (000.1), Second: Multiple uterine myoma in large sizes (D25.2); mild anemia, compensation (D50.9).

The patient was discharged on the 9th day of stay in a hospital in a satisfactory condition.

When discharging, it is recommended that the obstetrician-gynecologist be monitored at his place of residence by a doctor, effective contraception, and preparation and planning of a subsequent pregnancy not earlier than in a year of follow-up.

## Discussion

Thus, the analysis of the clinical case of a combination of progressive tubal pregnancy and giant-sized myoma has shown that risk factors for the development of myoma in young reproductive age can be a hereditary predisposition and a chronic inflammatory process in the organs of the reproductive system.

Despite the huge size of myoma and emergency hospitalization, the use of surgical organ-preserving technologies has allowed to keep the reproductive organ (uterus) in a young woman.

An analysis of this complex clinical case has shown that modern conditions for the growth of tumor pathology in the organs of the reproductive system dictate the need for regular observation of women, pre-vaginal examination and treatment of pathology.

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