

# Complicated Course of Cystous and Tumor-Like Ovarian Formations in Adolescents

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**Abstract** The article presents the data of our own studies of patients with cystic and tumor-like formations of the ovaries in a complicated course of the disease. Difficulties in the differential diagnosis of this pathology leads to diagnostic and tactical errors, which further leads to dysfunction of the reproductive organs and irreversible consequences in the reproductive health of patients in case of untimely treatment. A comprehensive study of the features of the course of cystic and tumor-like ovarian formations, the development of diagnostic criteria, will help determine the tactics of timely treatment of this pathology, which in turn will affect the prognosis of the disease, and will also contribute to solving this problem in women of different age periods.

**Keywords** Cysts, Tumor-like, Apoplexy, Torsion, Ovaries

## 1. Introduction

The share of ovarian tumors accounts for about 6-11% of all neoplasms in the structure of the female genital area, and over the past ten years there has been a growth trend of up to 9-25%. Benign tumors and tumor-like formations of the ovaries in patients of reproductive age occur in 19-25% of cases, and in the structure of urgent pathology - from 8.5 to 27.3%. The leading place among them is occupied by tumor-like neoplasms of the ovaries (50-60% of cases). Pathology from the ovaries very often leads to emergency conditions that deserve special attention. The share of acute gynecological diseases accounts for up to 26% of the total number of hospital patients [2,3,4,5].

Cystic ovarian formations are an urgent problem in medicine, given the high incidence of this pathology in women (in 7.8% of patients of reproductive age and 2.5–18.0% of postmenopausal patients) [1,6,7]. Difficulties in differential diagnosis and, consequently, a large percentage of diagnostic and tactical errors leading to dysfunction of the reproductive organs and irreversible consequences in the reproductive health of patients in case of delay in treatment [8,13,16].

This problem is of high scientific interest and requires a separate study to improve the diagnosis, which, in turn, will contribute to the positive results of treatment and long-term prognosis of these pathologies.

## 2. Purpose of the Study

To study the features of the complicated course of cystic and tumor-like ovarian formations.

## 3. Materials and Methods of Research

The study included retrospective data of 167 patients who were treated at the clinic of the Samarkand State Medical Institute No. 2 for the period from 2000 to 2021 inclusive. Case histories, data from operating journals and outpatient cards, the results of additional and laboratory research methods were studied. The obtained data were subjected to computer quantitative analysis in Microsoft Office, Excel, etc.

## 4. Results of the Study

In our study, data from 167 patients diagnosed with cystic and tumor-like ovarian formations were analyzed. Ovarian apoplexy from the entire group of patients was 47.3%, cystic changes 45.5% of which in 21% were accompanied by such complications as cyst torsion and necrosis, 4.2% were cystomas and ovarian tumors 3%. In patients, ovarian apoplexy occurred against the background of cyst rupture or in combination with cystic changes in the ovaries. One of the frequent complications is rupture and torsion of ovarian cysts. In childhood and adolescence, rupture and torsion of the peduncle of an ovarian cyst is much more common, mainly in young women under 20 than in adult women. In turn, this is due to the anatomical features of the internal genital organs, physiological characteristics, as well as a more mobile lifestyle inherent in this age category. In addition, the

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Received: Jul. 11, 2023; Accepted: Jul. 29, 2023; Published: Aug. 12, 2023

Published online at <http://journal.sapub.org/ajmms>

developed complication is often the only reason for the detection of an ovarian tumor, and the delay in the time of surgical intervention, due to the difficulty of differential diagnosis with surgical diseases, increases the risk of irreversible necrotic changes in the tissue and complete removal of the appendages on the affected side [12,18]. According to the data obtained, in patients with ovarian apoplexy, rupture of cystic formations was 89.3%, which was confirmed histologically. Considering the age aspect, this pathology was observed from 11 to 18 years old, most cases were 69.6% at the age of 14-16 years. According to different authors, ovarian apoplexy occurs, as a rule, in women aged 20–35 years [2], but in our study, this pathology was observed almost in equal proportion with cystic changes and was associated with cystic changes. When analyzing the data of patients with cystic changes in the ovaries, which, according to our data, account for 45.5% of this pathology, in 21% of cases it was accompanied by complications: torsion of the cyst stem in 53.3% and torsion of the cyst stem with necrosis in 46.7%. In the age aspect, the largest number of cases was observed in 14-18 years old - 63.3%.

The most striking clinical picture can be seen only in the case of complications of cystic and tumor-like ovarian formations. The main complications include torsion of the tumor stem, rupture of the capsule, suppuration, hemorrhage into the capsule, and the following symptoms are very often observed, such as sudden pain in the lower abdomen, muscle tension in the anterior abdominal wall, positive peritoneal symptoms, nausea, vomiting, slight increase body temperature. This symptom complex resembles the clinic of an acute abdomen, which in turn makes it difficult to accurately diagnose this pathology [12].

In our study (Table 1), the main complaints of patients at the time of admission to the hospital were identified, the most pronounced symptoms prevail in the complicated course of cystic and tumor-like ovarian formations. This symptomatology was manifested by the clinic of an acute

abdomen, which, in turn, led to the difficulty of diagnosis, and in most cases proceeded under the guise of a clinic of acute appendicitis.

In the uncomplicated course of tumors and tumor-like formations of the ovaries (42.7%), as a rule, pelvic pain, menstrual irregularities and / or an increase in the size of the abdomen were noted from complaints. The pain was manifested as low-intensity and aching, and strong, paroxysmal. It was most often localized in the lower abdomen above the womb and in the ilio-inguinal region with irradiation to the lumbar region; from the anamnesis, it intensified during physical exertion, active movements during games or in physical education classes. With large volumes of formations, there was a violation of urination and defecation (2.9%).

The question of the diversity of the clinical course of ovarian tumors in girls and adolescents remains debatable, since there are no pathognomonic symptoms for this pathology [8]. Accordingly, timely diagnosis presents significant difficulties.

Differential diagnosis for ruptures and torsion of ovarian cysts is carried out with acute appendicitis, appendicular infiltrate, gastroenteritis, intestinal obstruction, renal colic, and other acute pathologies. According to the literature, despite the developed programs of differential diagnosis, only 1/4 of patients are correctly and timely diagnosed, which requires urgent surgical treatment, and the earlier the operation is performed, the more likely it is to preserve the reproductive organs [11,12,13,14,15,16,17].

In connection with the foregoing, it can be assumed that a comprehensive study of the characteristics of the course of cystic and tumor-like formations of the ovaries, the development of diagnostic criteria, will help determine the tactics of timely treatment of this pathology, which in turn will affect the prognosis of the disease, will also contribute to solving this problem in women of different age periods.

**Table 1.** Complaints of patients with cystic and tumor-like formations of the ovaries

Complaints	Result	No complications (73)		with complicated course (94)	
		Abs.	%	Abs.	%
Pain	Right in the lower abdomen	19	26	57	60,6
	Left in the lower abdomen	7	9,6	0	0,0
	Lower abdomen	47	64,4	37	39,4
	Strong	19	26	62	65,9
	Moderate	45	61,6	32	34,1
	Weak	9	12,4	0	0,0
Nausea	Yes	28	38,3	84	89,4
	No	45	61,7	10	10,6
Vomit	Yes	15	20,5	49	52,2
	No	58	79,5	45	47,8
Increase in body temperature	Yes	6	8,3	37	39,3
	No	67	91,7	57	60,7
The presence of a palpable mass		8	10,9	0	0

## 5. Conclusions

Thus, cystic and tumor-like formations of the ovaries are an urgent problem. Late correct diagnosis causes the development of complications of cystic and tumor-like ovarian formations, which is due to diagnostic difficulties associated with the absence of characteristic complaints and the complexity of gynecological examination, especially in childhood, and leads to late diagnosis, lack of correct and timely treatment and, as a result, to the occurrence of complications, often negatively affecting reproductive function in the future.

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