



**JOURNAL OF ADVANCED  
SCIENTIFIC RESEARCH**

**ISSN: 0976-9595**

**Editorial Team**

**Editorial Board Members**

**Dr. Hazim Jabbar Shah Ali**

Country: University of Baghdad , Abu-Ghraib , Iraq.

*Specialization: Avian Physiology and Reproduction.*

**Dr. Khalid Nabih Zaki Rashed**

Country: Dokki, Egypt.

*Specialization: Pharmaceutical and Drug Industries.*

**Dr. Manzoor Khan Afridi**

Country: Islamabad, Pakistan.

*Specialization: Politics and International Relations.*

**Seyyed Mahdi Javazadeh**

Country: Mashhad Iran.

*Specialization: Agricultural Sciences.*

**Dr. Turapova Nargiza Ahmedovna**

Country: Uzbekistan, Tashkent State University of Oriental Studies

*Specialization: Art and Humanities, Education*

**Dr. Muataz A. Majeed**

Country: INDIA

*Specialization: Atomic Physics.*

**Dr Zakaria Fouad Fawzy Hassan**

Country: Egypt

*Specialization: Agriculture and Biological*

**Dr. Subha Ganguly**

Country: India

*Specialization: Microbiology and Veterinary Sciences.*

**Dr. KANDURI VENKATA LAKSHMI NARASIMHACHARYULU**

Country: India.

*Specialization: Mathematics.*

**Dr. Mohammad Ebrahim**

Country: Iran

*Specialization: Structural Engineering*

**Dr. Malihe Moeini**

Country: IRAN

*Specialization: Oral and Maxillofacial Radiology*

**Dr. I. Anand shaker**

Country: India.

*Specialization: Clinical Biochemistry*

**Dr. Magdy Shayboub**

Country: Taif University, Egypt

*Specialization: Artificial Intelligence*

**Kozikhodjayev Jumakhodja Hamdamkhodjayevich**

Country: Uzbekistan

*Senior Lecturer, Namangan State University*

**Dr. Ramachandran Guruprasad**

Country: National Aerospace Laboratories, Bangalore, India.

*Specialization: Library and Information Science.*

**Dr. Alaa Kareem Niamah**

Country: Iraq.

*Specialization: Biotechnology and Microbiology.*

**Dr. Abdul Aziz**

Country: Pakistan

*Specialization: General Pharmacology and Applied Pharmacology.*

**Dr. Khalmurzaeva Nadira** - Ph.D., Associate professor, Head of the Department of Japanese Philology, Tashkent State University of Oriental Studies

**Dr. Mirzakhmedova Hulkar** - Ph.D., Associate professor, Head of the Department of Iranian-Afghan Philology, Tashkent State University of Oriental Studies

**Dr. Dilip Kumar Behara**

Country: India

*Specialization: Chemical Engineering, Nanotechnology, Material Science and Solar Energy.*

**Dr. Neda Nozari**

Country: Iran

*Specialization: Obesity, Gastrointestinal Diseases.*

**Bazarov Furkhat Odilovich**

Country: Uzbekistan

Tashkent institute of finance

**Shavkatjon Joraboyev Tursunqulovich**

Country: Uzbekistan

Namangan State University

C/O Advanced Scientific Research,

8/21 Thamotharan Street,

Arisipalayam, Salem

## SYMPTOMS OF OVARIAN GRANULOSA CELL TUMORS ASSOCIATED WITH THEIR HORMONE PRODUCTION IN ADULT AND YOUNG PATIENTS IN THE ANDIZHAN REGION

**Ibragimova Mahliyo Sayidalihon rizi**

Andijan State Medical Institute Assistant, Department of Oncology

**Abstract:** After studying various types of ovarian tumors, the authors determined that granulosa cell tumors (GCT) are the most common among hormone-producing ovarian neoplasms, accounting for 2-7.5% of all ovarian tumors and 85% of all hormone-producing ovarian tumors according to various authors. In their lectures, Davydov M.I. and other scientists note that most GCTs produce steroid (estrogens, less frequently progesterones and androgens) and glycoprotein (inhibin, Müllerian inhibiting substance) hormones, leading to menstrual cycle disturbances such as hyperpolimenorrhea, amenorrhea with subsequent acyclic bloody discharge or bleeding, and the development of rejuvenation hormonal symptoms. Thanks to such a vivid clinical picture, the disease is diagnosed in 90% of patients at stage I. At the same time, there are reports in the literature of hormonally inactive GCTs, which, according to some authors, indicate a high degree of cell anaplasia in the neoplastic cells and a poor prognosis.

**Keywords:** Granulosa cell tumors of the ovary, adult-type granulosa cell tumors, juvenile-type granulosa cell tumors, follicle-stimulating hormone, luteinizing hormone, inhibin A and B, estradiol, menstrual cycle. In most cases, the clinical manifestations of the disease are due to hyperestrogenism. In children, it leads to premature sexual maturation; in women of reproductive age, it leads to ovulation delay, infertility, acyclic bloody discharge from the genital tract, or amenorrhea; in postmenopausal women, it leads to pathological "rejuvenation" and increased libido. About 25% of patients have a nonspecific symptom complex - pain syndrome, abdominal discomfort.

In women of reproductive age, it leads to ovulation delay, infertility, acyclic bloody discharge from the genital tract, or amenorrhea; in postmenopausal women, it leads to pathological "rejuvenation" and increased libido. About 25% of patients have a nonspecific symptom complex - pain syndrome, abdominal discomfort.

Morphological changes	abs.	%
Adenomatous-cystic changes	11	38%
Endometrial polyps	2	6,8%
Synchronous endometrial cancer	1	3,5%
Uterine fibroids	10	34,4 %
Myometrial hypertrophy	1	3,5 %
Internal and external endometriosis	2	6,8%
Synchronous breast cancer	1	3,5%
Endometrial atrophy 1	1	3,5%

Table 1

Table 1 compiles data from morphological examinations of target organs affected by steroid hormones produced by granulosa cell tumors of the ovary. As can

be observed, the majority of changes indicate the impact of increased doses of estrogens. For example, glandular-cystic hyperplasia was observed in 11 women, accounting for 38%, endometrial polyps were only 2, constituting 6.8%, synchronous endometrial cancer was present in 1 woman - 3.5%, uterine fibroids in 10, representing 34.4%, myometrial hypertrophy in 1 - 3.5%, internal and external endometriosis in 2, approximately 6.8%. There was also a case of increased doses of androgens affecting - endometrial atrophy in 1 patient, which was approximately 3.5%. And one case of synchronous breast cancer.

(Diagram 1)

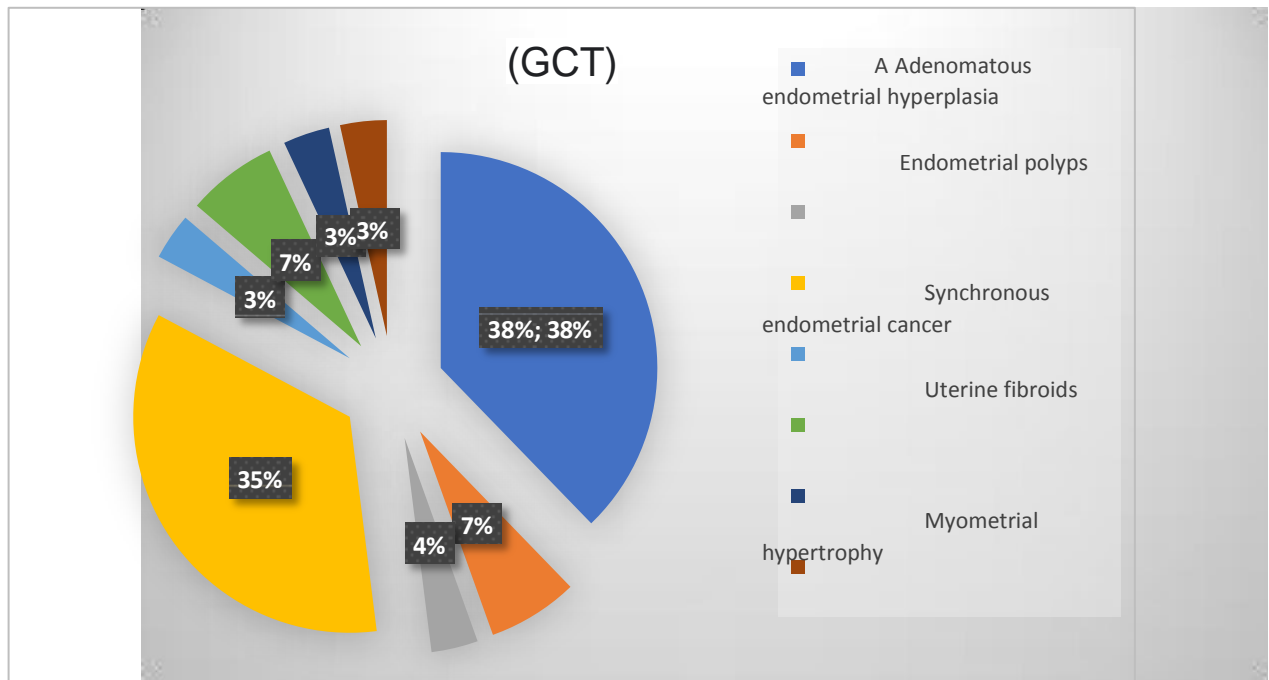


Diagram 1. Symptoms related to hormonal disorders in women with granulosa cell tumors of the ovary:

Symptoms	abs.	%
Amenorrhea	4	13,8%
Acyclic metrorrhagia	4	13,8%
Amenorrhea with subsequent acyclic bloody discharge	2	6,9%
Hypermenorrhea	1	3,5%
Opsomenorrhea	1	3,5%
Amenorrhea followed by uterine bleeding	1	3,5%
Opsomenorrhea followed by amenorrhea	14	48%
Bloody discharge in postmenopause	1	3,5%

Table 2.

Table 2 compiles all complaints of women with granulosa cell tumors of the ovary related to hormonal disorders. It can be assumed that the majority of metrorrhagia, hypermenorrhea, and bloody discharge are associated with tumor production of estrogens, while opsomenorrhea and amenorrhea are linked to inhibin production, and virilization and hirsutism with androgen production. Thus, the majority of granulosa cell tumors produce estrogens. Amenorrhea was observed in 4 cases,

accounting for 13.8%. A similar situation occurred with acyclic metrorrhagia - in 4 women - 13.8%. Amenorrhea with subsequent bloody discharge was detected in 2 women, constituting 6.9%. One patient complained of hypermenorrhea, while another complained of opsomenorrhea, and one reported amenorrhea with subsequent uterine bleeding, with an additional complaint of opsomenorrhea followed by amenorrhea and virilization and hirsutism. Each accounted for 3.5%. Fourteen women complained of bloody discharge in postmenopause, approximately 48%. In total, symptoms related to hyperestrogenism accounted for approximately 76%.

Symptoms of hormonal disorders in women with GCT:

Symptoms	abs.	%
Bloody discharge	2	40%
Enlargement of the mammary glands	3	60%
Enlargement of the uterus	2	40%
Pubic hair growth	1	20%
Virilization and hirsutism	1	20%

Table 3

Table 3 can be considered conditional due to the small number of patients observed by us. In total, 5 girls were observed, 4 of whom were in childhood, and therefore, the signs were mainly observed in them and were considered pathological. 1 girl was in the teenage period, but menarche was not observed; instead, hirsutism and virilization were present. This may indicate that the tumor in her case was producing androgens. And 4 girls with symptoms of an estrogen-producing tumor each had several symptoms. Thus, bloody discharge was present in 2, accounting for 40%, breast enlargement in 3 (60%), uterine enlargement detected by ultrasound in 2, and pubic hair growth in only 1, corresponding to 40% and 20%.

**Conclusions:**

Practically all patients (except for 1) with granulosa cell tumors of the ovary had hormonal disorders.

1. In both cases, symptoms of hypoestrogenism were present. Granulosa cell tumors of the ovary are more often detected in the early stage than granulosa cell tumors of the ovary.

2. Cases without hormonal disorders turned out to be more malignant than hormone-producing tumors, as the degree of atypia was lower.

List of references:

1. Аксель Е.М. Статистика злокачественных новообразований женской половой сферы // Онкогинекология. 2012. № 1. С. 18–24.
2. Бохман Я.В. Руководство по онко-гинекологии. Л. Медицина, 1989.
3. Волкова А.В. Клинико-морфологические критерии прогноза ранулезоклеточных опухолей взрослого типа. Автореф. дис. ... канд. мед. наук. СПб., 2005.
4. Давыдов М.И., Кузнецов В.В., Нечушкина В.М. Лекции по онкогинекологии. М.: МЕДпресс-информ, 2009. с. 288—322
5. Карселадзе А.И. Морфология неэпителиальных опухолей яичников: Методические рекомендации. М.: МНИОИ им. П.А. Герцена, 1994.
6. Селезнева Н.Д., Железнов Б.И. Доброкачественные опухоли яичников. М.: Медицина, 1982. С. 147–165. Кровянистые выделения 22% Увеличение МЖ 34% Увеличение матки 22% Оволосенение лобка 11% Вирилизация и гирсутизм 11% Другой 11% ГКОЮТ [www.pedagoglar.uz](http://www.pedagoglar.uz) 29-son 4 –to'plam may 2022 Sahifa: 264
7. Gompel C., Silverberg S.G. Pathology in gynecology and obstetrics. Philadelphia: J.B. Lippincott Co., 1994. P. 358–363
8. Кержковская Н.С., Жордания К.И., Калистов И.Е. и др. Объем хирургического вмешательства при гранулезоклеточной опухоли яичников. Акушгинекол 2003;(5):36—41.
9. Кутушева Г.Ф., Урманчеева А.Ф. Опухоли и опухолевидные образования половых органов у девочек. СПб.: Н.-Л., 2001.
10. Scully R.E., Young R.H., Clement P.B. Tumors of the ovary, maldeveloped gonads, fallopian tube and broad ligament. Atlas of tumor pathology. Bethesda, Maryland, 1998.
11. Uygun K., Audiner A., Saip P. et al. Granulosa cell tumor of the ovary: retrospective analysis of 45 cases. Am J Clin Oncol 2003;26(5):517—21.
12. Yanovski N.A., Paramandhan T.L. Ovarian Tumors. Philadelphia: W.B. Saunders Co., 1973. P. 65–69.
13. Young R.H., Scully R.E. Ovarian sex cordstromal tumors: recent advances and current status // Clinics in Obstet. Gynecol. 1984. V. 11. № 1. P. 93–10