

## THE ROLE OF VIRAL AND MYCOPLASMA INFECTION IN THE GENESIS OF DEPLETED OVARY SYNDROME

Tillashaykhova M.Kh.

Department of Obstetrics Gynecology with Pediatric Gynecology

<https://doi.org/10.5281/zenodo.11410895>

**Abstract.** *The results of smear bacterioscopy evaluation showed that in women with hormonal disorders mycoplasma infection is detected in 5.7% of cases. In women with inflammatory processes, the detection rate of mycoplasma infection increases to 47.3%. In women with peritubar adhesions and purulent-septic complications, U.Urealiticum and M.hominis were detected in 78% of cases, gonorrhoea in one, chlamydia in three, and trichomoniasis in five patients.*

**Keywords:** *peritubar, U.Urealiticum and M.hominis, hypomenstrual syndrome.*

Ovarian exhaustion syndrome (OES) is a clinical syndrome whose typical manifestation is stable or episodic hypergonadotropic amenorrhea in women younger than 40 years of age [3,5,7].

Ovarian exhaustion syndrome (OES), is characterized by intense massive follicular atresia, presenting a spontaneously appearing complex of menopausal symptoms (secondary amenorrhea, infertility, sweating, hot flashes to the head and upper half of the trunk, palpitations and other signs).

There are many different opinions about the essence of this disease: some authors believe that there is a primary lesion of the ovaries (Maltseva L.I. 2010), while others believe that the central structures of the reproductive function are primarily affected (L.B. Butareva, M.A. Shakhova, 2010). Finally, there is an opinion excluding simultaneous lesion of all structures of the reproductive system (N. A. Zhakhur, L. A. Marchenko, 2010).

Despite the large number of published works on the problem of ovarian exhaustion syndrome, the question of diagnosis and choice of tactics of corrective treatment of this pathology is still debatable.

Due to the lack of pathognomonic signs, early diagnosis of ovarian exhaustion syndrome presents clinicians with significant difficulties. In this regard, it is presented in the literature of recent years under different names. Many authors in adolescence consider it as menstrual cycle insufficiency, dysmenorrhea, amenorrhea, sexual infantilism, and in the fertile age “hypomenstrual syndrome” older age this syndrome is referred to as “early menopause”, “premature menopause”, “premature ovarian insufficiency” and others. The age of cessation of menstruation, at which the diagnosis of SIJS is legitimate, is a matter of debate. At the same time, ultrasound and diagnostic methods of ovarian evaluation at an early stage of the disease, which would prevent the development of ovarian cancer and malignant degeneration of hormone-excreting cells, remain poorly studied.

Literature data indicate that infection plays an important role in the pathogenesis of SIJ, along with other factors. Thus, studies by Maltseva L.I. (2010) in 82 patients with apoplexy, tumor and tumor-like processes in the ovaries showed that destructive processes developed in the ovary are the result of activation of the chronic inflammatory process caused in the absolute majority of cases (98.9%) by chlamydia, myco- or ureaplasma infections.

According to WHO data, about 45 million new cases of curable sexually transmitted diseases (STDs) were registered among the population aged 15-49 years in 2005. However, against

the background of a decline in the incidence of syphilis, there is a rapid growth of other STDs, especially of viral etiology: HIV, hepatitis, herpes, papillomaviruses, etc. [1,6,9]. [1,6,9]. Activation and recurrence of these infections during pregnancy lead not only to serious obstetric and perinatal complications (threat of pregnancy termination, spontaneous abortion; premature birth; development of congenital deformities, intrauterine infection, hypoxia, hypotrophy, etc.), but also to gynecological and perinatal complications. etc.), but also gynecological complications (infertility, early decline of childbearing and menstrual function, premature and pathological menopause) in women of young, sexually active reproductive age [2,4,8].

It has been established that chemo- or radiotherapy dramatically reduces the number of follicles and can cause IUI. Despite the fact that autoimmune diseases are observed in 10-20% of women with SIJD, the role of autoimmune processes and some infections in the development of this pathology remains incompletely understood. This fact necessitates the need to continue research on the bacteriologic and histomorphologic aspects of ovarian exhaustion syndrome.

The aim of our study was to investigate the role of viral and mycoplasma infection in the genesis of ovarian wasting syndrome.

#### **Material and methods of research.**

We examined 115 women with menstrual dysfunction, secondary infertility, benign ovarian masses and inflammatory processes of the genitalia in the city maternity hospital No. 6, gynecological department of the MCH of Tashkent GTS and RSNPMCAH of the Ministry of Health of the Republic of Uzbekistan during the period from 2010 to 2013. The average age of the examined women was  $34.8 \pm 0.83$  years.

In order to make a diagnosis, functional diagnostic tests, genital ultrasound, basal (rectal) temperature, karyopycnotic index, folliculometry, cervical mucus filament extensibility, pupil symptom, fern, etc. were performed in all patients. The performed comparative analysis of functional diagnostic tests in women of the main group was significantly higher compared to the control values. On the basis of these tests, the diagnosis of SIJ was made. To identify the infection, all women underwent smear bacterioscopy and bacteriologic examination of genitourinary tract secretions. Smears were stained with Gram, hemotoxylin and eosin, Romanowsky-Giemsa (for chlamydia), and methylene blue (for trichomonads). Identification of infection with Herpes simplex virus, U.Urealiticum, M.hominis, Chl.trachomatis, Gardnerella vaginalis was carried out by ELISA and ELISA with the use of diagnostic antibodies "NPF LAB-diagnostics".

Statistical processing of clinical study data was performed on a personal computer Hewlette Packard Pentium IV in Windows 98 operating system using Microsoft Excel 98 software package, including the use of built-in functions of statistical processing.

#### **Results and their discussion**

After the diagnosis of SIJA was established, the patients were categorized into three groups:

The group consisted of 22 women with hormonal disorders and 19 patients operated for retention cysts and modified ovaries;

The group consisted of 28 women with inflammatory processes and 24 patients operated for cysts, cystomas and polycystic disease;

The group consisted of 16 women with peretubar adhesions, purulent-septic complications and 6 patients operated for pyovarus, pyosalpinx and pelvioperitonitis.

*Table № 1.*

**Results of clinical examination of patients with localization of genital inflammatory process  
(in percent)**

Clinical diagnosis	1-group (n=41)	2-group (n=52)	3-group (n=22)
Chronic salpingoophoritis	38.2	4.5	11.6
Cervical erosion	26.7	28.1	3
Colpitis	17	36	7,4
Endocervicitis	7.7	1	0
Papilloma of cervical canal	43	12.8	0
Peretubar adhesions	0	11,2	84.6
Chronic endometritis	0	5.3	3

As a result of the research the following data were obtained: in 1 - group of women with hormonal disorders mycoplasma infection U.Urealiticum and M.hominis was detected in 12.1%, Herpes simplex virus - 22.9%, Cytomeqalovirus -12.1%. In group 2 - group with inflammatory processes the percentage of detection of mycoplasma infection is 13.4%, CMV detection - 11.3%, HPV -33.6%. Moreover, if monoinfection was detected in women of 1 - group, in women of 2 - group microbial floras were determined with Chl.trachomatis in 15.3%, Gardnerella vaqinalis - 5.7%. In women of group 3 - group with peritubar adhesions and purulent-septic complications Cytomeqalovirus was found in 9.0% of cases, complications of U.Urealiticum and M.hominis infections - in 45.4% of cases, one had gonorrhea, three had chlamydia and five patients had trichomoniasis. CMV was detected in 58.9% and HPV in 81%. In this group, high degree of infestation was much less frequent compared to groups 1 and 2. (Table No. 2).

*Table № 2.*

	1-group (n=41)	2-group (n=52)	1-group (n=22)
U.Urealiticum M.hominis	12.1	13.4	45.4
Chlamydia trachomatis	0	15.3	13.6
Gardnerella vaqinalis	0	5.7	0
Cytomeqalovirus	12.1	11.3	9.0
Herpes simplex virus	29.2	33.6	9.5
Gonorrhea	0	0	4.5
Streptococcus pyogenes	0	12.5	0
Streptococcus aureus	0	9.4	0
Streptococcus faecalis	0	4.7	0
Candida albicans	0	5.7	0

Thus, the results of our studies have shown that the development of follicular and thecaluteal cysts is characterized by the presence of mixto-infection. The prognostic risk criteria for the development of urgent ovarian pathology are the presence of recurrent bacterial vaginosis, chronic endocervicitis and detection of Ur. urealitycum in association with Streptococcus aureus in the cervical canal of a woman.

Early shutdown of ovarian function as a result of inflammatory processes, in turn, leads not only to pronounced clinical manifestations of estrogen deficiency, but also to such formidable

complications as vegeto-vascular, psycho-emotional and urogenital disorders, which significantly reduces the quality of life of young women.

**Conclusions:**

Women with urea and mycoplasma infection in the reproductive system should be considered as a high-risk group for the possibility of IUI.

The severity of SIJD depends on the frequency and duration of recurrences of genital infections.

In case of urea- and mycoplasma infection in the reproductive system, the development of chronic inflammatory process of autoimmune nature with damage to ovarian tissue and depletion of follicular apparatus is noted.

**REFERENCES**

1. Maltseva L.I. Modern problems of infectious pathology in obstetrics and gynecology // Practical Medicine № 2 (41) April 2010.P.20-22.
2. Serov, V.N. Clinical and immunologic factors in the formation of autoimmune ovarian insufficiency of inflammatory genesis: scientific edition / V.N. Serov, M.V. Tsaregorodtseva, A.A. Kozhin // Obstetrics and Gynecology. - M., 2007. - №6. - С. 28-33.
3. Якубов, Х. Х., Носиров, Т. К., Хужаназаров, Д. А., & Маманиязов, Э. Б. (2021). НЕКОТОРЫЕ СУДЕБНО-МЕДИЦИНСКИЕ АСПЕКТЫ ОЦЕНКИ ПОСЛЕДСТВИЙ ЛЕГКОЙ ЧЕРЕПНО-МОЗГОВОЙ ТРАВМЫ. *Re-health journal*, (2 (10)), 220-224.
4. Yakubov, K. H., & Nasirov, T. K. (2020). FORENSIC MEDICAL ASSESSMENT CLINIC OF MORPHOLOGICAL CHANGES IN CASE OF CARBON MONOXIDE POISONING DUE TO ALCOHOL INTOXICATION. *Toshkent tibbiyot akademiyasi axborotnomasi*, (1), 183-187.
5. Nasirov, T. K., & Iskandarova, M. A. (2015). ANALYSIS OF ACUTE POISONING BY VARIOUS CHEMICALS ON THE ORGAN OF VISION. *International medical scientific journal*, 70.
6. Турдиева, К. (2023). Тиббиёт институтларида бадийий-ижодий тўғарақларнинг самарадорлиги. *Педиатрия*, 1(1), 280-285.
7. Турдиева, К. Ш. (2022). Актуальность и значение переводной детской литературы. *Труды ГПНТБ СО РАН*, (1), 72-76.
8. Турдиева, К. Ш. ХУДОЖЕСТВЕННЫЕ ОСОБЕННОСТИ ПРОИЗВЕДЕНИЯ «ШАЙТАНАТ» («ЦАРСТВО БЕСОВ»). *MEDICAL SCIENCES*, 34.
9. Курбанов, Б. Б. (2017). Современный подход хирургического лечения пролапса гениталий. *Новости дерматовенерологии и репродуктивного здоровья*, (3-4), 74-76.
10. Kurbanov, B. (2016). 138 The role of vascular endothelial growth factor as markers of hypertension induced pregnancy: Angiogenic factors. *Pregnancy Hypertension: An International Journal of Women's Cardiovascular Health*, 6(3), 248.
11. Бабаджанова, Г. С., & Курбанов, Б. Б. Патогенетические аспекты развития фолликулярных кист яичников. *ООО «Maxliyo-shifo» & V*, 68.
12. Расуль-Заде, Ю. Г., & Шехтман, М. М. (1999). Некоторые особенности Ca<sup>2+</sup> гомеостаза у беременных с фоновой патологией и гестозом. *Вестник Российской Ассоциации акушеров-гинекологов*, (2), 21-26.

13. Расуль-Заде, Ю. Г., Дусчанова, З. А., & Климашкин, А. А. (2012). Оценка клинической эффективности ингибиторов обратного захвата серотонина в комплексном лечении тяжелых форм предменструального синдрома. *Врач-аспирант*, 51(2.4), 544-554.
14. Расуль-Заде, Ю. Г., Климашкин, А. А., & Назаров, Б. Б. (2012). К вопросу о роли донаторов оксида азота при различных акушерских состояниях. *Український хіміотерапевтичний журнал*, (3), 108-112.
15. Юлдашева, Д. С., Мухамедханова, Ш. Т., & Ищенко, И. В. (2014). Продукция эстрогенов у девочек-подростков с первичным склерокистозом яичников. *Врач-аспирант*, 64(3.2), 240-244.
16. Юлдашева, Д. С., Зокирходжаева, Д. А., Ищенко, И. В., Мухамедханова, Ш. Т., Ахмедова, Д. Р., & Мирхошимов, М. Б. (2002). ВЛИЯНИЕ ХРОНИЧЕСКОГО ТОНЗИЛЛИТА НА СОСТОЯНИЕ РЕПРОДУКТИВНОЙ СИСТЕМЫ ДЕВУШЕК С ДИСФУНКЦИОНАЛЬНЫМИ МАТОЧНЫМИ КРОВОТЕЧЕНИЯМИ. МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ УЗБЕКИСТАНА ТАШКЕНТСКИЙ ПЕДИАТРИЧЕСКИЙ МЕДИЦИНСКИЙ ИНСТИТУТ, 99.
17. Нажмутдинова, Д. К., Курбанов, Д. Д., Наврузова, Р. С., & Ищенко, И. В. (2020). Эффективность применения противовоспалительного вагинального раствора ибупрофена изобутиламмония для уменьшения выраженности воспаления нижних половых путей у женщин с хирургическими патологиями малого таза. *Фарматека*, 27(6), 76-81.
18. Наврузова, Р. С., & Юлдашева, Н. Ш. (2019). Пути ранней диагностики неопухолевых и опухолевых заболеваний матки и яичников. *Медицина: теория и практика*, 4(S), 378-378.
19. Юлдашева, Н. Ш., Наврузова, Р. С., Наврузова, В. С., Умарова, Н. А., & Ахмедов, О. М. Бачадон бғйни патологиясининг клиник-морфологик хусусиятлари ва тащислаш муаммолари. *ООО «Maxliyo-shifo» & V*, 11.
20. Наврузова, Р. С., Султанов, С. Н., & Юсупова, М. А. РАННЯЯ ДИАГНОСТИКА ХРОНИЧЕСКИХ ЦЕРВИЦИТОВ, АССОЦИИРОВАННЫХ С ВИРУСОМ ПАПИЛЛОМЫ ЧЕЛОВЕКА У БЕРЕМЕННЫХ ЖЕНЩИН. *ООО «Maxliyo-shifo» & V*, 87.