International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

Journal Website: https://theusajournals.com/index.php/ijmscr

Research Article

PHYSIOTHERAPEUTIC TREATMENT METHODS AND URINARY INCONTINENCE

Submission Date: February 07, 2023, Accepted Date: February 12, 2023,
Published Date: February 17, 2023
Crossref doi: https://doi.org/10.37547/ijmscr/Volume03Issue02-02

Tilavova Sitora Amirzoda
Assistant Of The Department Of Obstetrics And Gynecology №1 Samarkand State Medical University, Uzbekistan

Khudoyarova Dildora Rakhimovna
DCS, Head of the Department of Obstetrics and Gynecology №1 Samarkand State Medical University, Uzbekistan

ABSTRACT

This article presents the results of scientific work on the effectiveness of complex treatment methods for premenopausal women with urinary incontinence at the Department of Obstetrics and Gynecology No. 1 of Samarkand State Medical University. The study was conducted on women who applied to the gynecology department during 2019-2020. According to the method of treatment, women were divided into 2 groups: the main group was prescribed complex treatment, and the comparison group was prescribed only medical treatment. As a result, the effectiveness of the complex treatment method was determined.

KEYWORDS

Urinary incontinence (UI), stress urinary incontinence, overactive bladder syndrome (OABS), premenopausal age, biofeedback (BFB) therapy, BTL premium 4000 G, treatment with physiotherapy methods, detrusor botulinum therapy.

INTRODUCTION

International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

The lack of information on the pathogenesis of the occurrence of UI in premenopausal women leaves its mark on the choice of conservative and surgical treatment tactics, the lack of a single algorithm for the treatment and diagnosis of such patients, the procedure for conducting these patients could be carefully determined, and the lack of a clear pattern of both conservative and surgical treatment is the main reason for ineffective surgical corrections in the treatment of UI.

In recent years, the problem of urogenital diseases has taken a leading place in the symptomatology of menopausal diseases, which is associated with their clear negative impact on the quality of life of postmenopausal women. The frequency of age-related urogenital diseases reaches 30%. In the premenopausal period, urogenital diseases occur in 10% of women, and up to 50% in the group of women aged 55-60. By the age of 75, 2/3 of women experience urogenital discomfort, and after the age of 75 it is difficult to meet a woman who has not experienced individual symptoms of urogenital diseases.

Studies conducted by foreign authors show that the prevalence of ST in elderly women in the USA is 37%, and in continental Europe - 26%, in Great Britain - 29% and in Japan - 27% [7, 11, 14, 17].

Urodynamic research is currently the only objective method of qualitative assessment of urinary disorders. Urodynamic examination of patients with mixed urinary incontinence reveals signs of urinary incontinence in stressful situations combined with overactivity of the detrusor. But it is known that the clinical diagnosis is not always confirmed by urodynamic tests [7]. In the studies of foreign authors [13, 14], when 950 patients with urinary incontinence were examined, the prevalence of clinical symptoms of the disease was 51%, while the diagnosis was made during urodynamic examination in only 12% of cases.

A complex and unsolved problem of urinary incontinence in women is the management of urinary incontinence (UI). Many methods of correcting stress urinary incontinence are described in the available literature [3, 7, 8, 11, 18, 22]. Modern methods of treating urinary incontinence are divided into conservative and surgical treatment. Surgical treatment is more commonly used for stress urinary incontinence and is aimed at strengthening the musculoskeletal system of the pelvis or restoring the function of the internal urethral sphincter. However, any surgical intervention carries a certain degree of risk due to the occurrence of a number of serious complications, and is often considered a mandatory measure rather than an optimal choice.

Therefore, it is important to treat urinary incontinence using modern methods and prescribe these methods to premenopausal women and analyze the results.

The purpose of the study is complex treatment of urinary incontinence using physiotherapeutic treatment methods.

Materials and research methods. The study was based on the clinical and laboratory examination of 128 women with urinary disorders in the premenopausal period who were under observation and admitted for treatment to the gynecology department of the 1st multidisciplinary clinic of the Samarkand State Medical University in 2019-2020. . The comparison group included 45 (35.2%) women treated with traditional methods of diagnosis and treatment, and the main group included 83 (64.8%) patients treated with complex therapy.

International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

The age of the examined women was between 45 and 56 years. The average age of women in the comparison group was 50.5±1.6 years, and in the main group it was 51.0±2.2 years.

During the study, in addition to general clinical and laboratory analyses, special tests were conducted, while the hormonal background indicators and the amount of relaxin-2 were determined. A standard electromyograph from the "Kolibri BeFit PRO" complex was used for BFB-training. The course of treatment included 10-15 procedures based on the patient's indications. Among the physiotherapeutic methods, vaginal and rectal electroimpulse therapy was performed once a day for 20 minutes using the BTL-4000 G PREMIUM (Russia) device.

Research results. We used 3 types of tests to evaluate and diagnose UI:

The Valsalva test was positive in 23 (51.1%) women in the comparison group and 58 (69.8%) in the main group;

the cough test was positive in 22 (48.9%) women in the comparison group and 65 (78.3%) in the main group;

Diaper test was positive in 22 (48.9%) and 49 (59.03%) groups, respectively.

These tests were negative in women of the control group. One of the modern methods of examination of the study was to determine the amount of Relaxin-2 in the blood. In the control group (almost healthy women of premenopausal age), this indicator was on average 1.3±0.1 IU/ml. The average amount of relaxin-2 in women of the main group was 0.35±0.02 IU/ml, and in women of the comparison group it was 0.38±0.04 IU/ml.

In premenopausal women, the level of estradiol was reduced by 44.0% in patients in the comparison group and by 57.9% in patients in the main group. Progesterone levels were reduced by 17.5 times in patients in the main group, and by 20.3 times in patients in the comparison group (Table -1).

Table 1

Tested women's steroid hormone levels

Groups	estradiol, nmol/l	AMH ng/ml	Progesterone nmol/l	Relaxin ME/ml	LH ME/ml	FSH mME/ml
Control (n=25)	48,0±0,1	1,5±0,1	35,1±0,1	1,3±0,1	6,2±0,1	3,2±01
Main (n=83)	27,7±2,0***	0,3±0,02***	2,01±0,02***	0,35±0,02***	22,0±0,02***	23,0±0,02***

International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

Comparison (n=45)	26,9±0,3***	0,20±0,002***	1,73±0,02***	0,38±0,04***	20,4±0,2***	20,0±0,2**

Note: * - there is a significant difference compared to the data of the control group (* - P<0,05, ** - P<0,01, * - P<0,001)**

Drug therapy was prescribed according to the type of urinary incontinence. All women were classified according to stress, overactive bladder and mixed type of UI (diagram 1).

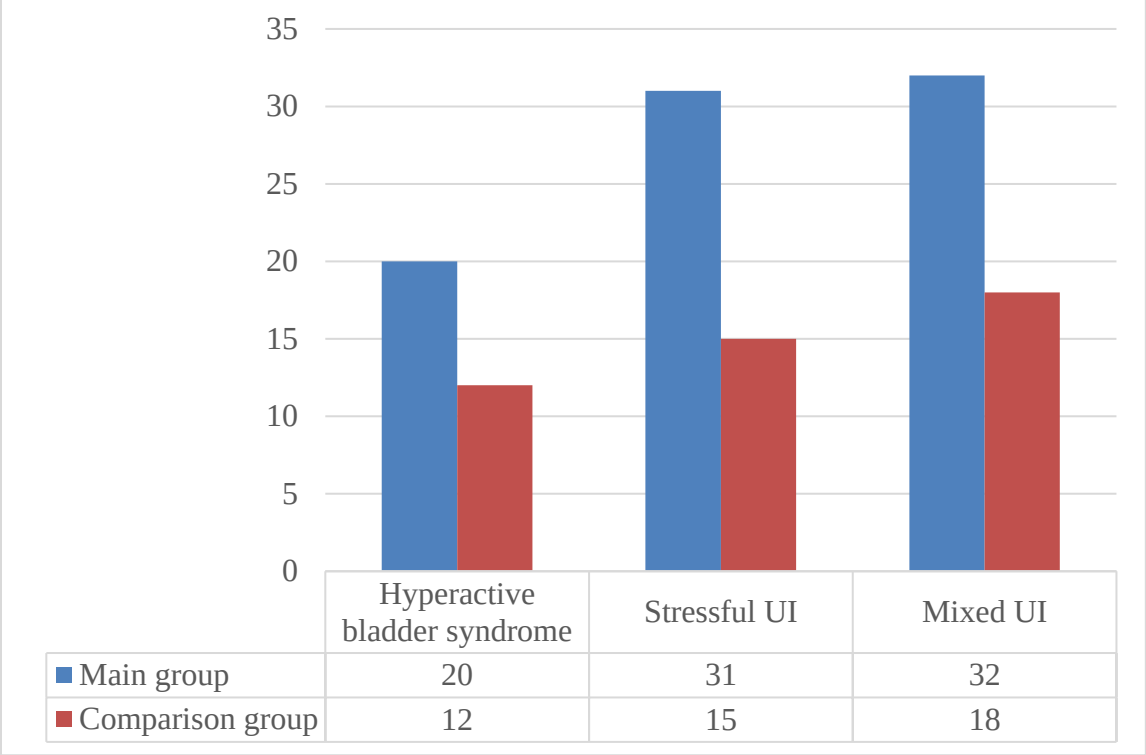

Diagram 1. Separation of main and comparison group patients according to UI type

For the treatment of urinary incontinence in hyperactive bladder syndrome, we used drugs of the M-cholinoblockers group. In the treatment of detrusor hyperactivity, two types of M-cholinoblockers, differing in chemical structure, are used - tertiary and quaternary amines (oxybutynin, trospium chloride), which are the first-line drugs for hyperactive bladder syndrome and UI. Oxybutynin was prescribed in a dose of 2.5 to 5 mg 3-4 times a day (maximum dose 20 mg/day).

The drug duloxetine from the group of M-cholinoblockers increases muscle tone in the free state and increases the force of contraction of the urethral sphincter. But there are side effects from the gastrointestinal tract and central nervous system, so

International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

patients often refuse to take it, although this is noted within 1 week after taking it. In our observations, the effect of this tool is expressed by the early recovery of urinary retention in the types of stress and mixed urinary incontinence.

If therapy with M-cholinoblockers was ineffective, then the dose was increased or replaced with an alternative drug - beta3-adrenoceptor agonist (Mirabegron) or their combination (beta3-adrenoceptor agonist + M-cholinoblockers) was used. To stop UI events, mirabegron, an agonist of beta3-adrenoceptors, was prescribed in HABS as the main method of treatment in women with UI, as well as in case of ineffectiveness of M-cholinoblockers and uncontrolled arterial hypertension.

Beta-3-adrenomimetics (beta (b)-adrenostimulators, beta (b)-agonists) - biological or synthetic substances that lead to the stimulation of β-adrenoreceptors have a significant effect on the main functions of the body and binding to β-receptors as a result, it leads to the separation of β1- and β2-adrenomimetics.

In total, 32 women with UI in HABS (12 comparison group and 20 main group) were prescribed beta-3-adrenomimetics with M-cholinoblockers in the first period of treatment. As a result, only 4 (12.5%; 3.12%) of 32 women had a therapeutic effect and a positive result was obtained.

For the treatment of overactive bladder syndrome urinary incontinence, we used a new method of treatment - detrusor botulinum therapy - in the main group of 20 women diagnosed with UI in the HABS. In this case, injection treatment with botulinum toxin type A, according to registered indications, is indicated in women with urinary incontinence and urge incontinence, if medical treatment is ineffective or serious side effects occur caused secretions (the most serious side effect was an increase in residual urine volume, which increased the risk of urinary tract infection), was administered by intradetrusor injection at a dose of 100 ME. The effectiveness of this method was shown in 10 women (50%, 12.05%) when the survey was conducted after 1 month, there was no UI symptoms at all and the tests were negative. Positive dynamics were observed in the remaining 10, but complete remission was not achieved.

Women with the stressful form of UI were prescribed antidepressants as a conservative treatment and the result was evaluated after 1 month. 15 women (33.3%) in the comparison group, and 31 (37.3%) women in the main group had UI of this form. At the same time as conservative treatment, BFB training and BTL-4000 PREMIUM G preium also used physiotherapeutic treatment methods for the women of the main group. The efficacy of this treatment was positive in only 1 woman in the comparison group (6.67%; 2.22%), compared to 18 women in the main group (58.1%; 21.7%). At this stage, we can see that the effectiveness of complex treatment is several times higher than that of conventional treatment.

For mixed and stressful forms of UI, the main group of patients underwent rehabilitation in the form of special BTL-4000 PREMIUM G courses to strengthen pelvic floor muscle tone to achieve stable compensation or stable remission of UI.

Compared to comparison group women (6.67%) who did not receive BFB-therapy, 25 (28.9%) patients with mixed-type UI in the main group led to treatment ($P<0.01$).

Hormonal therapy was prescribed to 39 women (86.7%) in the comparison group and to 28 women (33.7%) in the main group. After using this therapy, complete remission of symptoms of UI was not

International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

observed in anyone in the comparison group, but the use of hormonal therapy against the background of conservative therapy of UI led to a reduction of symptoms and improvement of the general condition in 64.4% (29). It led to remission of UI symptoms in 12% (10) of women in the main group, and positive dynamics in the remaining 18 (21.6%).

Analysis of the dynamics of the results of examinations of women with urinary incontinence before and after treatment using non-invasive special tests showed that after complex treatment 58 (69.9%) patients did not have spontaneous urine discharge during the tests, 20 (24, 1%) patients did not fully recover, but positive results were noted in terms of general disease symptoms. In 6 (13.3%) patients in the comparison group, spontaneous urinary excretion was not observed at all, and in the remaining 29 (64.4%) patients, the number of excretions decreased, but complete recovery was not observed, and in 10 (22.2%) patients, the total change was not before or after treatment.

CONCLUSION

To achieve stable compensation or stable remission of UI, we use the BTL-4000 PREMIUM G physiotherapy device and BFB-training to strengthen the pelvic muscles, and in the main group, this effect is 78.3% complete remission and In 21.7% of cases, it was reflected in the improvement of the general condition and positive dynamics of UI. The use of detrusor botulinum therapy, which we considered a new method of treatment for urinary incontinence in HABS, led to complete remission in 10 out of 20 patients.

REFERENCES

1. Абдеева Д.М. Анализ факторов риска развития недержания мочи у женщин / Д.М. Абдеева, В.Е. Балан, Д.Ю. Трофимов, А.Е. Донников // Акушерство, гинекология, репродукция. – 2012 - №2. – Т. 6. – С. 41-47.
2. Актуальная проблема женщин в постменопаузе - урогенитальные расстройства / Мудраковская Э.В., Горелик С.Г., Колпакова Н.А., Журавлева Я.В. // Научные ведомости БелГУ. Серия: Медицина. Фармация. - 2012. - №10. - С. 111-116.
3. Аляев Ю.Г., Балан В.Е., Григорян В.А., Гаджиева З.К. Особенности расстройств мочеиспускания у женщин в климактерии. - Смоленск, Маджента, 2007. - 192 с.
4. Амирзода Т. С., ШОПУЛОТОВ Ш. А. НЕДЕРЖАНИЕ МОЧИ И НЕУДЕРЖАНИЕ МОЧИ: КАЧЕСТВО ЖИЗНИ ПАЦИЕНТОВ //ЖУРНАЛ БИОМЕДИЦИНЫ И ПРАКТИКИ. – 2022. – Т. 7. – №. 5.
5. Ахтамова О. Ф. ANTIPHOSPHOLIPID SYNDROME AND MISCARRIAGE //УЗБЕКСКИЙ МЕДИЦИНСКИЙ ЖУРНАЛ. – 2022. – Т. 3. – №. 4.
6. АмировнаТИЛЯВОВА С., ХУДОЯРОВА Д. Р. РЕАЛИИ ВРЕМЕНИ. СИНДРОМ ГИПЕРАКТИВНОГО МОЧЕВОГО ПУЗЫРЯ И ПРЕМЕНОПАУЗА //БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ. – С. 25.
7. Балан, В.Е., Ковалева Л.А. Урогенитальный синдром в климактерии. Возможности терапии. // Акушерство и гинекология. – 2015. - № 5. – С. 104-108.
8. Тилявова , С., Закирова, Н., Закирова, Ф., & Курбаниязова, В. (2015). Акушерские аспекты нарушений мочеиспускания у женщин. Журнал проблемы биологии и медицины, (4,1 (85), 173–175.
9. Суярова З. С., Худоярова Д. Р. Ведение беременности и родов при идиопатической тромбоцитопенической пурпурой

International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

//Достижения науки и образования. – 2019. – №. 12 (53). – С. 41-46.

10. ХАСАНОВА Д. А. АУТОИММУННЫЙ ТИРЕОИДИТ: БЕРЕМЕННОСТЬ И РОДЫ //ЖУРНАЛ БИОМЕДИЦИНЫ И ПРАКТИКИ. – 2022. – Т. 7. – №. 5.
11. Худоярова Д. Р., Кобилова З. А., Шопулотов Ш. А. Возможности инновационного метода обучения–геймификация //Онтологические и социокультурные основания альтернативного проекта глобализации.— Екатеринбург, 2021. – 2021. – С. 361-364.
12. Худоёрова Д., Кобилова З., Шопулатов Ш. INFLUENCE OF CORONAVIRUS INFECTION ON CHILDREN AND THEIR MOMS //Журнал кардиореспираторных исследований. – 2020. – Т. 1. – №. SI-1. – С. 74-75.
13. Шопулотова З., Солиева З. ДИАГНОСТИЧЕСКАЯ ЦЕННОСТЬ УЗИ У БЕРЕМЕННЫХ ПРИ ХРОНИЧЕСКОМ ПИЕЛОНЕФРИТЕ //Eurasian Journal of Medical and Natural Sciences. – 2022. – Т. 2. – №. 12. – С. 223-227.
14. Шопулотова З. А. и др. ЯВЛЕНИЯ КОМОРБИДНОСТИ У БЕРЕМЕННЫХ С ПИЕЛОНЕФРИТОМ //Медицинская наука и практика: междисциплинарный диалог. – 2022. – С. 193-196.
15. Шавкатова А., Шопулотова З., Худоярова Д. Влияние озонотерапии на фетоплацентарную недостаточность //Журнал гепато-гастроэнтерологических исследований. – 2021. – Т. 2. – №. 3.2. – С. 63-66.
16. Askarova F., Yakhshinorov I. CONTRACEPTION OF PRIMARY AND REPEATED WOMEN IN THE CONDITIONS OF SAMARKAND //Eurasian Journal of Academic Research. – 2022. – Т. 2. – №. 6. – С. 1095-1097.
17. Doniyorovna K. D. et al. AUTOIMMUNE THYROIDITIS AND IODINE DEFICIENCY //ResearchJet Journal of Analysis and Inventions. – 2022. – Т. 3. – №. 7. – С. 1-6.
18. Friedman T., Eslick G. D., Dietz H. P. Risk factors for prolapse recurrence: systematic review and meta-analysis //International urogynecology journal. – 2018. – Т. 29. – №. 1. – С. 13-21.
19. Fozilovna A. O., Raximovna X. D. ANTIPHOSPHOLIPIID SYNDROME AND MISSION OF PREGNANCY //UMUMINSONIY VA MILLIY QADRIYATLAR: TIL, TA'LIM VA MADANIYAT. – 2022. – Т. 1. – С. 13-15.
20. Khasanova D. PREMENSTRUAL SYNDROME IN THE MODERN SCIENCE //International Bulletin of Medical Sciences and Clinical Research. – 2022. – Т. 2. – №. 12. – С. 16-22.
21. Khudoyarova D. S. D. R., Tilavova S. A., Shopulotova Z. A. Manifestations of examination of chronic pyelonephritis in pregnant women (clinical case) //Thematics Journal of Microbiology. – 2022. – Т. 6. – №. 1.
22. Khudoyarova D. R., Kobilova Z. A., Shopulotov S. A. OPPORTUNITIES INNOVATIVE TEACHING METHOD-GAMIFICATION //Онтологические и социокультурные основания альтернативного проекта глобализации. – 2021. – С. 361-364.
23. Khudoyarova D. R. et al. IMPROVEMENT OF METHODS OF NATURAL FERTILITY RESTORATION IN WOMEN WITH INFERTILITY CAUSED BY ENDOMETRIOSIS //Известия ГГТУ. Медицина, фармация. – 2020. – №. 4. – С. 20-22.
24. KHUDOYAROVA D. R. et al. RESTORING NATURAL FERTILITY IN WOMEN WITH ENDOMETRIOSIS //БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ. – С. 43.

International Journal of Medical Sciences And Clinical Research (ISSN – 2771-2265)
VOLUME 03 ISSUE 02 PAGES: 05-12
SJIF IMPACT FACTOR (2021: 5. 694) (2022: 5. 893) (2023: 6. 184)
OCLC – 1121105677
Publisher: Oscar Publishing Services

25. Khudoyarova, D. R. Improvement of methods of natural fertility restoration in women with infertility caused by endometriosis / D. R. Khudoyarova, Z. A. Kobilova, S. A. Shopulotov // Здоровье, демография, экология финно-угорских народов. – 2020. – No 4. – P. 53-55. – EDN YGGDOO.
26. Khudoyarova Dildora Rakhimovna, & Shopulotova Zarina Abdumuminovna. (2022). VACUUM - EXTRACTION OF THE FETUS BY DIFFERENT METHODS. Academicia Globe: Inderscience Research, 3(06), 238–240. https://doi.org/10.17605/OSF.IO/A3MS9
27. Pulatov U., Hamdullaev M. LUS THERAPY IN PREGNANT WOMEN WITH CHRONIC RHINOSINUSITIS //Zamonaviy dunyoda tabiiy fanlar: Nazariy va amaliy izlanishlar. – 2022. – Т. 1. – №. 18. – С. 37-40.
28. Rizaev J.A., Ahrorova M.Sh., Kubaev A.S., Hazratov A.I.; ,Morphological Changes in the Oral Mucous Membrane in Patients with COVID-19,American Journal of Medicine and Medical Sciences, 12, 5, 466-470, 2022
29. Rizaev Alimjanovich, Jasur; Shavkatovna, Akhrorova Malika; Saidolimovich, Kubaev Aziz; Isamiddinovich, Khazratov Alisher; ,CLINICAL AND IMMUNOLOGICAL ASPECTS OF THE RELATIONSHIP OF THE ORAL CAVITY AND COVID-19, Thematics Journal of Education, 7, 2, 2022
30. Rakhimovna K. D., Abdumuminovna S. Z. Traumatization of the genital organs //Academicia Globe: Inderscience Research. – 2022. – Т. 3. – №. 06. – С. 241-243.
31. Shodikulova G. Z., Pulatov U. S. EFFICIENCY EVALUATION OF TREATMENTS PATIENTS WITH RHEUMATOID ARTHRITIS BY DEPENDENCE OF CLINIC COURSE AND GENETIC POLYMORPHISM OF HAPTOGLOBINS //Toshkent tibbiyot akademiyasi axborotnomasi. – 2020. – №. 1. – С. 175-178.
32. Shavkatova G. S., Xudoyarova D. R., Shopulotova Z. A. METABOLIK SINDROM-ZAMONAVIY JAMIYATNING MUAMMOSI //Eurasian Journal of Academic Research. – 2022. – Т. 2. – №. 3. – С. 486-491.
33. Tilyavova S. A., Karimova G. S. Realities Of Time. Chronic Gender Inflammation And Pelvic Pain //European Journal of Molecular & Clinical Medicine. – 2020. – Т. 7. – №. 03. – С. 2020.
34. TODJIEVA N. I., ugli SHOPULOTOV S. A. COMMUNICATION OF PRE-CLAMPSIA OF SEVERE DEGREE AND EXTROGENITAL DISEASES //БИОМЕДИЦИНА ВА АМАЛИЁТ ЖУРНАЛИ. – С. 77.
35. Pushkar D. Y. et al. Diagnostika i lechenie nederzhaniya mochi pri napryazhenii u zhenshchin //Consilium Medicum. – 2001. – Т. 3. – №. 7. – С. 322-326.
36. Yakubovich S. I., Asliddinovich S. S. SPECIFIC DIAGNOSIS OF CHRONIC TONSILLITIS //ResearchJet Journal of Analysis and Inventions. – 2022. – Т. 3. – №. 06. – С. 202-204.