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USE OF ESSENTIAL OILS IN VULVO-VAGINAL INFECTIONS IN PREGNANT WOMEN

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Abstract
The article describes the effectiveness of the treatment of pregnant women with vulvovaginal infections. A clinical and laboratory examination of pregnant women with IVI was conducted. At the same time, complaints, examination data, microscopy, cultural examination of the vaginal microflora were taken into account. The effectiveness and tolerability of aniseed oil in the complex treatment of vulvo-vaginal infections in pregnant women has been analyzed. Complex therapy of vulvo-vaginal infections using anise oil increases the effectiveness of treatment, which is characterized by a decrease in the frequency of relapses of the disease by 2.7 times due to the stable normalization of the microbiological characteristics of vaginal microbiocenosis by the time of delivery, does not cause an allergic reaction and is well tolerated by patients.

Keywords: essential oils, common anise, vaginal microbiocenosis, vulvo-vaginal infections, pregnancy.

Introduction

Worldwide, more than 50% of visits to a gynecologist are related to infectious pathology of the vagina and/or cervix, which, according to WHO, is observed in 25-45% of pregnant women, which is relevant. Disturbances in the vaginal microbiocenosis lead to the development of clinical manifestations of infection in the form of bacterial vaginosis, vulvovaginal candidiasis, aerobic vaginitis or their combinations. A large contribution is also made by the irrational use of antimicrobial drugs, which contribute to an increase in the prevalence of dysbiotic and infectious diseases in pregnant women. The issues of treating pregnant women with genital infections complicated by the threat of termination of pregnancy remain not fully understood.

Despite a large number of studies devoted to the treatment of CVI, drugs are being sought to treat mixed infections. Thus, A. Novakov Mikić (2015) indicates the effectiveness of ocgenidine dihydrochloride/phenoxyethanol in pregnant women; F. Tara et al. (2016), who successfully used ozonated olive oil to treat vulvovaginal candidiasis, showed its advantage over clotrimazole; W. Mendling et al. (2016) report the use of dequalinium chloride (Fluomizin), which has a broad spectrum of action, for the treatment of mixed vaginal infections.

The aim of the study was to improve the diagnosis and treatment of complications in pregnant women with cervicovaginal infections. Materials and methods. A clinical and laboratory examination of 115 pregnant women with vulvovaginal infection complicated by the threat of termination of pregnancy was conducted. The diagnosis of vulvovaginal infection was made on the basis of microscopic, bacteriological methods and the GLC method for identifying microorganism markers. To achieve the goal, anise oil was used in a ratio of 1:10, containing

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essential oil of anise as active ingredients in pregnant women with vulvovaginal infection complicated by the threat of termination of pregnancy. Pregnant women with VVI were divided into 2 subgroups: subgroup A - 52 women who received traditional therapy (TT) - treatment according to a standard scheme depending on the nosology. Subgroup B – 63 women who, along with TT, used local vaginal sanitation with anise oil diluted 1:10, i.e. complex therapy (CT) for 4 days.

The treatment efficiency was assessed based on the subjective assessment of vaginal discharge. All pregnant women were observed on an outpatient basis with repeated vaginal smears after 15-30 days. Clinical observation over the course of treatment showed that after CT, the hyperemia of the vaginal and cervical mucosa disappeared in the patients of the main group, the discharge became mucous and decreased in volume, and the itching in the external genitalia disappeared within 2-3 days. In patients of the 2nd group, these phenomena passed within 4-5 days. With the addition of the treatment regimen, the mucosa becomes more shiny. Over the course of treatment, an effect on the coccal flora of the vagina was noted. Thus, in patients of the group receiving CT, the content of these microorganisms decreased to 25.3% compared to the beginning of treatment (88.4%), and among those receiving TT, to 58.2% (at the beginning of treatment 82.4%). The effect was also observed in relation to gram-negative rods and fungi. Under the influence of CT, their number after treatment decreased by 3.5 times, and after TT – only by 1.1 times. Gram-positive rods, reflecting environmental well-being, were cultured before treatment in 35.6% of patients receiving CT and in 38.8% of women receiving TT. After CT, their number increased to 64.7%, and after TT it decreased to 32.7%.

Additional criteria for assessing the effectiveness of treatment are the absence of adverse side effects, which corresponded to a sufficient level of drug safety in the group of patients who received CT. After the CT course, clinical recovery occurred in 61 (96.8%) patients. Fungal elements were found in 2 (3.2%) examined patients, inflammatory type of vaginal smear persisted in 3 (5.8%) patients, native preparation corresponded to the intermediate type of smear in 11 (21.2%) pregnant women, clue cells were found in 1 (2.04%) woman. After the TT course, clinical recovery was observed in 45 (86.5%) patients. Inflammatory type of smear was found in 11 (22.4%) women, intermediate type – in 15 (30.6%); clue cells were found in 2 (3.9%), fungal elements – in 5 (10.2%).

Bacteriological examination of cervical canal discharge revealed no growth of any microorganisms in 3.9% of patients in the main group and in 5.3% and 92.3% of the comparison and control groups, respectively. In 111 (96.5%) women in the main group, in 46 (93.9%) of the comparison group, and in 3 (6%) of the control group, colonies of staphylococci and enterobacteria grew predominantly in positive samples. In 34.8% of those examined in the main group, growth of yeast-like fungi of the genus Candida was detected. Staphylococci were cultured in 62.4% of cases. In 60% of cases, Escherichia coli and Proteus were detected. Various associations of anaerobic and aerobic microorganisms, including fungi, were cultured in 30 (19.1%) cases. All detected UMP had diagnostically significant high numbers of CFU/ml>105.

In the main and comparison groups, monocultures were isolated in 10 (8.7%) and 11 (22.4%) of the examined subjects, respectively, and in 105 (92.3%) and 38 (77.6%) microorganism associations were found, represented by E. coli and staphylococci, as well as Candida fungi. Staph.

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epidermidis were most often isolated in high titers (CFU/ml9) - in 33% of cases in the main group and in 16.5% in the comparison group, Enterococcus faecalis - in 26.1 and 12.2%, respectively, Escherichia coli - in 60.0 and 42.9% ($p<0.05$). There were also combinations of yeast fungi and staphylococci, streptococci, staphylococci and E. coli, staphylococci and Klebsiella, yeast fungi and E. coli (Table 3). Thus, the bacteriological examination mainly revealed opportunistic flora: Enterococcus faecalis, E. coli, Candida fungi, Staph. epidermidis in high concentrations (CFU/ml> 105). It should be noted that the bacteriological examination did not reveal "latent" urogenital infections (Table 1).

Table 1 Microbiocenosis of the contents of the cervix during bacteriological examination

Microorganisms	Main group, n=115		Comparison group, n=49		χ2	P
	абс.	%	абс.	%		
No growth detected	9	7,8	4	8,2	0,59	>0,05
Microbial growth	106	92,2	45	91,8	0,59	>0,05
Enterococcus faecalis	30	26,1	6	12.2	3,84	<0,05
Str. agalactiae B	38	33,0	11	22,4	1,84	>0,05
Staph. epidermidis	38	33,0	8	16,5	4,76	<0,05
Staph. aureus	12	10,4	3	6,1	0,77	>0,05
E. coli	69	60,0	21	42,9	4,08	<0,05
Klebsiella	4	3,5	2	4,1	0,04	>0,05
Proteus spp.	15	13,0	4	8,2	0,80	>0,05
Fungi of the genus Candida	40	34,8	16	32,7	0,07	>0,05

Bacteriological examination also revealed the total contamination of the cervical canal. As shown by the calculation of the χ2 indicator, there are reliable differences ($p<0.01$) between the contamination rates in patients of the main and comparison groups. As can be seen from Table 2, the level of contamination in the main group was higher. Violation of quantitative ratios in the bacterial community of the genital tract leads to the development of clinical manifestations of VVI in the form of a threat of termination and other complications of pregnancy.

Table 2 Total contamination of the cervical canal in pregnant women with genital infections, CFU/ml

Contamination level	Main group, n=115		Comparison group, n=49		χ2	P
	abs.	%	abs.	%		
low (0-10^3)	-	-	-	-		
Average (10^3-9×10^4)	42	36,5	30	61,2	7,49	<0,01
High (10^5-9×10^5) and more	73	63,5	19	38,8	8,51	<0,01

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In 98 patients (85.2%) of the main group and in 40 patients (81.6%) of the comparison group, massive growth of bacterial flora against the background of a viral infection was observed. Thus, cytomegalovirus infection was combined with massive growth of bacteria in 8 (13.8%), with HSV 2 - in 6 (5.2%) examined in the main group. This indicates a violation of secretory immunity under the influence of viruses and, probably, the addition of a secondary bacterial infection. Data on the frequency of cure for vulvovaginal infections in pregnant women complicated by the threat of termination of pregnancy are shown in Fig. 1. Against the background of the proposed treatment method, a decrease in clinical manifestations of VVI and normalization of the microbiocenosis of the vagina and cervix in the examined pregnant women were noted. From Fig. 2 it is clear that the most effective treatment was using CT, which leads to a decrease in the frequency of infection, relapses of the disease by 2.7 times due to the normalization of the microbiological characteristics of the vaginal microbiocenosis by the time of delivery. Relapses after treatment were observed in 5 (7.9%) and 11 (21.2%) pregnant women who received complex and traditional therapy, respectively.

The method of treating cervicovaginal infections complicated by the threat of termination of pregnancy, which includes, along with the generally accepted therapy, also a local sanitation component, is reliably more effective than the traditional one, since it allows to reduce the frequency of relapses of infection by 2.7 times due to the stable normalization of the vaginal microbiocenosis before childbirth, leads to a decrease in the frequency of premature births by 2.4 times, DRPO by 3.9 times, subinvolution of the uterus by 4.8 times, the use of anise oil does not cause an allergic reaction and is well tolerated by patients.

References

1. Бобрик Ю.В., Тимофеев И.Ю., Кулинченко А.В., Бабынин А.С., Козуля С.В. Ароматерапия, аэрофитотерапия: перспективы развития и возможности применения при реабилитации больных, профилактике заболеваний //Таврический медико-биологический вестник. 2014. Т. 17. № 2 (66). С. 17–21.
2. Инатовский А.В., Соколовский Е.В. Новые возможности терапии патологии вульвы и влагалища //Журнал акушерства и женских болезней – 2009 - №1, Том LVIII , выпуск 57-59.
3. Карташева О.Л., Ткачев А.В., Уткина Т.М., Потехина Л.П. Влияние эфирных масел полыни на рост микроорганизмов и образование ими биопленок //Бюллетень Оренбургского научного центра УрО РАН. 2012. № 3. С. 2–10.
4. Паштецкий В.С., Невкрытая Н.В. Использование эфирных масел в медицине, ароматерапии, ветеринарии и растениеводстве (обзор) //Таврический вестник аграрной науки - № 1(13) -2018. С. 16-38.
5. Ткаченко К.Г. Эфирномасличные растения и эфирные масла: достижения и перспективы, современные тенденции изучения и применения //Вестник Удмуртского университета. 2011. Вып. 1. С. 88–99.
6. Чумакова В.В., Попова О.И. Лофант анисовый (Agastache foeniculum L.) – перспективный источник получения лекарственных средств //Фармация и фармакология. 2013. № 1. С. 39–43.

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webofjournals.com/index.php/5

7. European STD Guidelines // International Journal of STD AIDS. - 2001. - Vol.12, suppl.3. - 107 p.
8. Kosalec I., Pepeljnjak S., Kuštrak D. Antifungal activity of fluid extract and essential oil from anise fruits (Pimpinella anisum L., Apiaceae) // Acta Pharmaceutica. – 2005. – Vol. 55, №4. – P. 377-385.
9. Lamont R.F. et al. Treatment of abnormal vaginal flora in early pregnancy with clindamycin for the prevention of spontaneous preterm birth: a systematic review and metaanalysis // Amer. J. Obstet. Gynecol. – 2011. – Vol. 205, №3. – P. 177-190.
10. Rabbimova G.T. Efficiency in phytotherapy endogenous intoxication syndrome in pregnant women with infectious risk // European Science Review. – Austria, 2016.– №7-8.– P. 113-115 (14.00.00; №19).
11. Раббимова Г.Т. Параметры эндогенной интоксикации и вариабельности сердечного ритма матери при угрожающих преждевременных родах инфекционного генеза // Проблемы биологии и медицины. – Самарканд, 2016.– №2 (87).– С. 74-78 (14.00.00; №19).
12. Раббимова Г.Т. Эффективность фито-пробиотической терапии при лечении угрозы прерывания беременности инфекционного генеза //Новости дерматовенерологии и репродуктивного здоровья. – Ташкент, 2017.– №3-4 (II).– С. 32-33 (14.00.00; №14).
13. Раббимова Г.Т., Негмаджанов Б. Б. Оценка эффективности лечения и профилактики осложнений у беременных с вагинальной инфекцией //The Journal of scientific articles «Health & Education Millennium». – Москва, 2017. – Vol. 19. № 1. - С. 48-50.
14. Egamovna M. F. et al. CLINICAL AND EPIDEMIOLOGICAL FEATURES OF THE COURSE OF SHIGELLOSIS IN ADULTS AT THE PRESENT STAGE IN 2009-2019 //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 5. – С. 1285-1294.
15. Абдухалилова Г. К. и др. Назофарингеальное носи-тельство str. e у взрослых. – 2022.
16. Egamovna M. F. et al. CLINICAL AND EPIDEMIOLOGICAL FEATURES OF THE COURSE OF SHIGELLOSIS IN ADULTS AT THE PRESENT STAGE IN 2009-2019 //Web of Scientist: International Scientific Research Journal. – 2022. – Т. 3. – №. 5. – С. 1285-1294.
17. Абдухалилова Г. К. и др. Динамика устойчивости к антибиотикам и частота назофарингеального выделения S. Pneumoniae у взрослых с острыми респираторными инфекциями. – 2022.
18. Ярмухамедова Н. и др. Особенности течения хронического гепатита с на фоне туберкулеза //Журнал вестник врача. – 2019. – Т. 1. – №. 1. – С. 129-132.1
19. Anvarovna, Y. N., Egamovna, M. F., Tashtemirovna, R. N., Buribayevna, M. G., & Saidovich, T. O. (2021). Clinical and Epidemiological Characteristics of Shigellosis in Adults at the Contemporary Stage. Central Asian Journal of Medical and Natural Science, 2(3), 311-318. https://doi.org/10.47494/cajmns.v2i3.221
20. Тиркашев, О. С. Клинико-эпидемиологическая характеристика кори в Самаркандской области / О. С. Тиркашев, Ф. Э. Матякубова, Н. Т. Раббимова // VOLGAMEDSCIENCE : Сборник тезисов VII Всероссийской конференции молодых ученых и студентов с

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международным участием: материалы конференции, Нижний Новгород, 16–18 марта 2021 года. – Нижний Новгород: Федеральное государственное бюджетное образовательное учреждение высшего образования "Приволжский исследовательский медицинский университет" Министерства здравоохранения Российской Федерации, 2021. – С. 624-625. – EDN GZYHJQ.