**MODERN EPIDEMIOLOGICAL ASPECTS OF TRICHOMONIASIS IN UKRAINE**

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| **About the author:** |  P.V. Fedorich, G.I. Mavrov, T.V. Osinskaya, L.V. Ivashchenko |
| **Heading** | EPIDEMIOLOGICAL STUDIES AND HEALTHCARE ORGANIZATION |
| **Type of article** | Scentific article |
| **Annotation** | Genitourinary trichomoniasis is the most common of sexually transmitted infections, not viral origin. The epidemiology of trichomonas invasion is not well understood. There are no unambiguous interpretations regarding the clinical picture, pathogenesis and complications of the disease.**The objective** was to determine the prevalence of trichomoniasis and the patterns of its distribution among sexual and age groups in Ukraine and its individual regions.Materials and research methods. The data of statistical reports of the Ministry of Health of Ukraine and the results of local epidemiological observations from 2011 to 2018 were used. Diagnosis of trichomoniasis was based on the results of a comprehensive examination in accordance with national regulations (orders). Statistical processing was performed using the STATISTICA 9.0 package. (StatSoft).**Results.** The incidence in a number of regions and in Ukraine as a whole remains high - about 100 per 100 thousand of the population. There is a tendency to a decrease in the incidence rate, but its rate varies greatly, depending on the place of residence and the age and gender composition of the population. In a number of regions and among certain age groups, in particular among young people aged 15-19, the incidence rate has been decreasing very slowly in recent years. Statistics do not reflect the actual prevalence of the disease, that is, registration is incomplete. In a number of regions there is a hypo- or overdiagnosis. This is evidenced by an extremely unevenincidence. The prevalence of trichomoniasis obviously depends on medical and social factors in a particular area, as well as on the sexual behavior of individual age groups. What prompts the study of the epidemiology of trichomoniasis to the use of small social groups.**Conclusions.** The incidence of trichomoniasis in Ukraine remains high, which allows us to regard it as one of the most pressing problems of modern dermatovenerology. A gradual decrease in the incidence from 2011 to 2018 was found. However, this decrease has significant differences depending on age, gender, place of residence, characteristics of sexual behavior in various social groups, andmost of all - on the features of the work of local health care institutions to record sexually transmitted diseases. |
| **Tags** | trichomoniasis, epidemiology, gender and age characteristics, social groups |
| **Bibliography** | * 1. Bykov AS, Vorobyev AA, Zverev VV, et al. Atlas po meditsinskoy mikrobiologii, virusologii i immunologii (Atlas on medical microbiology, virology and immunology). Мoscow: Medical Information Agency LLC, 2008. 340 р.2. Belova-Rakhimova LV, Prokhorenkov VI, Guzey TN. Puti razvitiya venerologii v Rossi i SSSR (1950-1959) (Ways of development of venereology in Russia and the USSR (1950-1959). Vestnikdermatologii i venerologii. 2015;2:141-147.3. Kobzar’ AI. Prikladnaya matematicheskaya statistika. Dlya inzhenerov i nauchnykh rabotnikov (Applied mathematical statistics. For engineers and scientists). Moscow: Fizmatlit, 2012. 816 p.4. Lyisak VV, Fomina OV. Sistematika mikroorganizmov (Systematization of microorganisms): ucheb. posobie. Minsk, BGU; 2014. 304 p.5. Mavrov GI, Nagornyy AYe, Chinov GP. Reproduktivnaya funktsiya muzhchin i infektsii, peredayushchiyesya polovym putem (Reproductive function of men and sexually transmitted infections). Zdorov’ye muzhchiny. 2009;2:142–145.6. Mavrov II. Statevi khvoroby (Sexually transmitted diseases): Translation from Russian. Ternopil: TSMU, 2005. 716 p
* 7. Bondarenko HM, Mavrov HI, Osinska TV, et al. Perynatalna invaziya trichomonas vaginalis, yak problema reproduktyvnoyi medytsyn (Тrichomonas vaginalis prenatal invasion, as a problem of reproductive medicine). Zhurnal Natsionalnoyi Akademiyi medychnykh nauk Ukrayiny.2016;4(3-4):368-6.8. Fedorych PV, Zelenyi SB, Sadovska OA, Dudikova KV. Porivniannia efektyvnosti diahnostyky trykhomoniazu za kulturalnym metodom ta metodom polimeraznoi lantsiuhovoi reaktsii z vykorystanniam praimeriv dlia vyiavlennia Trichomonas vaginalis, Trichomonas tenaxta Pentatrichomonas hominis (Comparison of Trichomoniasis diagnostic effectiveness by culture method and polymer chain reaction method using primers to detect Trichomonas vaginalis, Trichomonas tenax and Pentatrichomonas hominis). Ukrainskyi zhurnal dermatolohii, venerolohii, kosmetolohii. 2017;1(64):65-69.9. Fedorych PV, Zeleny SB. Method for determining the presence of Giardia lamblia in the sample under study and a set of primers for its implementation Pat.110767 Ukraine, IPC C12 /Q 1/68 (2006.01), C12 / Q 1/04 (2006.01), C12 / N 15/11 (2006.01), C12 / R 1/90 (2006.01). /Applicants and patent holders. - a201505750; stated. June 11, 2015; has published Feb 10, 2016,Bul. No. 3.10. Fedorych PV, Zelenyi SB. Sposib vyznachennia prysutnosti Pentatrichomonas hominis u doslidzhuvanomu zrazku ta nabir praimeriv dlia yoho zdiisnennia (Method for determining the presence of Pentatrichomonas hominis in the test sample and the set of primers forits implementation). Pat. 110759 Ukraina, MPK S12Q1/68 (2006.01), S12Q1/04 (2006.01), S12N15/11 (2006.01), S12R1/90 (2006.01). # a201501255; zaiavl. 16.02.2015; opubl.10.02.2016, Biul. No. 3.11. Fedorych PV, Zelenyi SB. Sposib vyznachennia prysutnosti Trichomonas tenax u doslidzhuvanomu zrazku ta nabir praimeriv dlia yoho zdiisnennia (Method for determining the presence of Trichomonas tenax in the test sample and the set of primers for its implementation).Pat. 107910 Ukraina, MPK S12Q1/68 (2006.01), S12Q1/04 (2006.01), S12N15/11 (2006.01). #a201407161; zaiavl. 25.06.2014; opubl. 25.02.2015, Biul. No. 4.12. Fedorych PV. Yavyshche antybiozu pry trykhomonadniy invaziyi sechostatevoyi systemy (The phenomenon of antibiosis in Trichomonas vaginalis invasion of the urogenital system). Medychni aspekty zdorov’ya cholovika. 2018;2(29):19-21. ISSN 2311-7931.13. Fedorych PV, Mavrov HI. Poyednannya zbudnykiv protozoynykh invaziy z mikrofloroyu, shcho asotsiyovana z bakterialʹnym vahinozom, u khvorykh na khronichni zapalʹni zakhvoryuvannya sechostatevoyi systemy (Combination of pathogens of protozoal invasions with microbiota associated with bacterial vaginosis in patients with chronic inflammatory diseases of the genitourinary system). Dermatovenerologiya. Kosmetologiya. Seksopatologiya. 2018;1-4:6-13.14. Klinger EV, Kapiga SH, Sam NE, Aboud S, Chen CY, Ballard RC, Larsen U. A Communitybased study of risk factors for Trichomonas vaginalis infection among women and their male partners in Moshi urban district, northern Tanzania. Sex Transm Dis. 2006;33(12):712–718. doi: 10.1097/01.olq.0000222667.42207.08.15. Lazenby GB, Taylor PT, Badman BS, Mchaki E, Korte JE, Soper DE, Pierce JY. An association between Trichomonas vaginalis and high-risk human papillomavirus in rural Tanzanian women undergoing cervical cancer screening. Clin Ther. 2014;36:38-45. doi:10.1016/j.clinthera.2013.11.009.16. Bouchemal K, Bories C, Loiseau PM. Strategies for Prevention and Treatment of Trichomonas vaginalis Infections. Clin Microbiol Rev. 2017;30(3):811-825. doi: 10.1128/CMR.00109-1617. Brooke-Bland P, Rakoff AE. The incidence of trichomonads in the vagina, mouth and rectum evidence that vaginal trichomonads do not originate in the mouth or intestine. JAMA. 1937;108(24):2011-2013.18. Crucitti T, Abdellati S, Ross DA, et al. Detection of Pentatrichomonas hominis DNA in biological specimens by PCR. Lett. Appl. Microbiol. 2004;38:510-516.19. Depuydt CE, Leuridan E, Van Damme P, Bogers J, Vereecken AJ, DondersGG. Epidemiology of Trichomonas vaginalis and human papillomavirus infection detected by realtime PCR in flanders. Gynecol Obstet Invest. 2010;70(4):273-280. doi: 10.1159/000314017.20. Fedorych PV, Mavrov GI. Incidence of Sexually Transmitted Infections: Local Study in Ukraine. World Science. 2018;2(8[36]):4-7. doi: 10.31435/rsglobal\_ws/30082018/6059.21. Fedorych PV, Mavrov GI. The role of protozoal infestations in chronic inflammation exacerbations in patients with genitourinary pathology. EUREKA: Health Sciences. 2018;5:28-33.22. Fichorova RN, Lee Y, Yamamoto HS, Takagi Y, Hayes GR, Goodman RP, Chepa-Lotrea X, Buck OR, Murray R, Kula T, Beach DH, Singh BN, Nibert ML. Endobiont viruses sensed by the human host—beyond conventional antiparasitic therapy. 2012. PLoS One 7:e48418.doi:10.1371/journal.pone.0048418.23. Fox J, Fidler S. Sexual transmission of HIV-1. Antiviral Res. 2010;85:276-285. doi:10.1016/j. antiviral.2009.10.012.24. Boiko I, Golparian D, Krynytska I, Unemo M. High prevalence of Chlamydia trachomatis, Neisseria gonorrhoeae and particularly Trichomonas vaginalis diagnosed using US FDA approvedAptima molecular tests and evaluation of conventional routine diagnostic tests in Ternopil, Ukraine. APMIS. 2019;127:627–634. DOI 10.1111/apm.12975.25. Johnston VJ, Mabey DC. Global epidemiology and control of Trichomonas vaginalis. Curr Opin Infect Dis. 2008;21(1):56–64. doi: 10.1097/QCO.0b013e3282f3d999.26. Kissinger P. Trichomonas vaginalis: a review of epidemiologic, clinical and treatment issues. BMC Infect Dis. 2015;15:307. doi:10.1186/s12879-015-1055-0.27. Kissinger P, Adamski A. Trichomoniasis and HIV interactions: a review. Sex Transm Infect. 2013;89(6):426-433.28. Mehr AK, Zarandi A, Anush K. Prevalence of Oral Trichomonas tenax in Periodontal Lesions of Down Syndrome in Tabriz, Iran. Journal of Clinical and Diagnostic Research.2015;9(7):ZC88-90.29. Wangnapi RA, Soso S, Unger HW, Sawera C, Ome M, Umbers AJ, Ndrewei N, Siba P,Li Wai Suen CS, Vallely A, et al. Prevalence and risk factors for Chlamydia trachomatis, Neisseria gonorrhoeae and Trichomonas vaginalis infection in pregnant women in Papua New Guinea. Sex Transm Infect. 2015;91(3):194-200. doi: 10.1136/sextrans-2014-051670.30. Glehn M, Sá L, Silva H, & Machado E. Prevalence of Trichomonas vaginalis in women of reproductive age at a family health clinic. The Journal of Infection in Developing Countries. 2017;11(03):269-276. https://doi.org/https://doi.org/10.3855/jidc.8143.31. Lan PT, Lundborg CS, Phuc HD, Sihavong A, Unemo M, Chuc NT, Khang TH, Mogren I. Reproductive tract infections including sexually transmitted infections: a population-based study of women of reproductive age in a rural district of Vietnam. Sex Transm Infect. 2008;84(2):126-132. doi: 10.1136/sti.2007.027821.32. Matini M, Rezaie S, Mohebali M, Maghsood AH, Rabiee S, Fallah M, Rezaeian M. Prevalence of Trichomonas vaginalis infection in Hamadan City, Western Iran. Iran J Parasitol. 2012;7(2):67-72.33. Davis A, Goddard-Eckrich D, Dasgupta A, El-Bassel N. Risk factors associated with sexually transmitted infections among women under community supervision in New York City. InternationalJournal of STD & AIDS. 2018; 29(8): 766-75. https://doi.org/10.1177/0956462418755223.34. Sutton M, Sternberg M, Koumans EH, McQuillan G, Berman S, Markowitz L. The prevalence of Trichomonas vaginalis infection among reproductive-age women in the United States, 2001–2004. Clin Infect Dis. 2007;45(10):1319-1326. doi: 10.1086/522532.35. Miller WC, Swygard H, Hobbs MM, Ford CA, Handcock MS, Morris M, Schmitz JL, Cohen MS, Harris KM, Udry JR. The prevalence of trichomoniasis in young adults in the United States.Sex Transm Dis. 2005;32(10):593-598. doi: 10.1097/01.olq.0000179874.76360.ad.36. Davis A, Dasgupta A, Goddard-Eckrich D, El-Bassel N. Trichomonas vaginalis and Human Immunodeficiency Virus Coinfection Among Women Under Community Supervision: A Call for Expanded T. vaginalis Screening. Sex Transm Dis. 2016;43(10):617-622.37. Field N, Clifton S, Alexander S, Ison CA, Khanom R, Saunders P, Hughes G, Heath L, Beddows S, Mercer CH, Tanton C, Johnson AM, Sonnenberg P. Trichomonas vaginalis infection is uncommon in the British general population: implications for clinical testing and public healthscreening. Sex Transm Infect. 2016:sextrans-2016-052660. doi:10.1136/sextrans-2016-052660.38. Sorvillo F, Smith L, Kerndt P, Ash L. Trichomonas vaginalis, HIV, and African-Americans. Emerg Infect Dis. 2001;7:927-932. doi:10.3201/eid0706.010603.39. WHO. 2012. Global incidence and prevalence of selected curable sexually transmitted infections – 2008. WHO, Geneva, Switzerland: http://apps.who.int/iris/bitstream/10665/75181/1/9789241503839\_eng.pdf.
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