World Journal of Medical Images, Videos and Cases

CASE DESCRIPTION

A case of group sex trichomoniasis.

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Introduction

Trichomonas vaginalis is the most common sexually transmitted parasite. It is estimated that there are 156-276 million new infections annually around the world [1].

The condition nowadays, unlike in the XX century, is often asymptomatic or scarcely symptomatic even in women. In the XX century it was mostly the men not reporting any symptoms [1]. The incidence varies significantly among regions and countries, with some states reporting very high numbers of infections while others having only a limited number of cases (see many Thematic Atlas editions on paracyty.pl English version of the website). Another important aspect related to incidence is the underreporting or no existent reporting systems of sexually transmitted infections (STI) in some national healthcare systems. Also, the stigmatization and/or penalization related to STI in some states may impede accurate number of infections to be reported. In such cases it is often the patients seeking medications from the black market and self-medicating to get well or receiving some sort of help from traditional healers.

Yet another aspect closely related to STI is the individual sexual behaviours. It was already shown that abstinence programs in teens do not work. Medical literature many time mentioned that the best way of preventing STI is proper sexual education, foremost by medical professionals, accompanied by free condom distribution. Young persons are often too shy to ask their parents questions or if such sex education is done by their teachers, pastors or other unqualified personnel.

Prostitution, one of the “oldest professions”, which is illegal in many countries, is still an ongoing business, often controlled by criminal organizations. Countries which have legalized the profession have covered the need of the sex workers for health care benefits and periodic health screens, also benefiting the potential clients' health by limiting transmission of STI, of which some are very burdensome and costly to the national health care budgets (HIV, hepatitis). Taxation of such business may also be profitable to the state and limit the criminal control of the profession.

COVID-19 pandemic and lockdowns have changed the sex and sex market, too. A lot of the prostitution has since moved to the Internet. Of course, there is no STI risk between the prostitute and her potential client, interacting online, but Internet pornography and webcams not only have their benefits but may also have very strong hazards. Such hazards may involve modern day slavery,

exploitation and human trafficking as well as some crimes such a paedophilia and snuff.

Patient description

A 40 year-old female physician reported to us having burning pain in the vulvar region and profuse greenish, frothy discharge over the last few days (Figure 1).

The prominent symptoms first appeared approximately 5 days after the patient participated in strenuous sexual activity lasting over 9 hours, which involved group sex. She and her husband, also a doctor, were a swinging couple who engaged in group sex regularly in the previous 6 months.

The sex partners were usually found online, on one of the popular websites for swingers in Poland. The patient reported that it was mostly men who dominated these portals, so the sex often involved cuckolding (having the husband watch the wife having sex with one or more men) and sometimes meeting with another couple and having group sex and partner exchange. Less often (on two occasions) the husband and wife met another female and had female-female-male sex. The patient reported the encounters could involve bisexual activity, i.e. female-to-female sex and on two occasions male and female to male oral sex and frottage, where the female rubbed two penises together until orgasm, with vaginal fluid and semen exchange and contact, respectively. The patient also reported anal sex and double penetrations, always with condoms. Oral sex never involved barrier protection and condoms were always used for one-time partners. The meetings usually took place in hotel rooms or rented apartments but never in swinger clubs or in very large groups.

The activity which preceded the current symptoms involved group sex with another couple. The sexual activities involved male-male-female and female-female-male oral sex and penetrative sex and one-on-one partner exchange with the other parties watching and masturbating. In total each male had 4 orgasms and the females 2 orgasms each. The party lasted for about 9 hours in an apartment with intervals for food and drinks.

Diagnostics

Diagnostic procedure was performed immediately during the patient's visit and involved direct microscopic observation of the collected vaginal sample in the doctor's office. The freshly collected vaginal sample showed motile trophozoites of *Trichomonas vaginalis* (Figure 2). The swab sample was also transferred into a test tube with Diamond's medium and observed and recorded after 24h of incubation at 37ºC (Figure 3).

The patient was also advised to test herself for other STI, including HIV, hepatitis and *Chlamydia trachomatis*, which turned out to be negative. The utmost recommendation was to alert the other sex partners for them to get tested against trichomoniasis. The males that participated in the two couples' sex party were free from infection. The other female from the second couple was also infected with *T. vaginalis*.

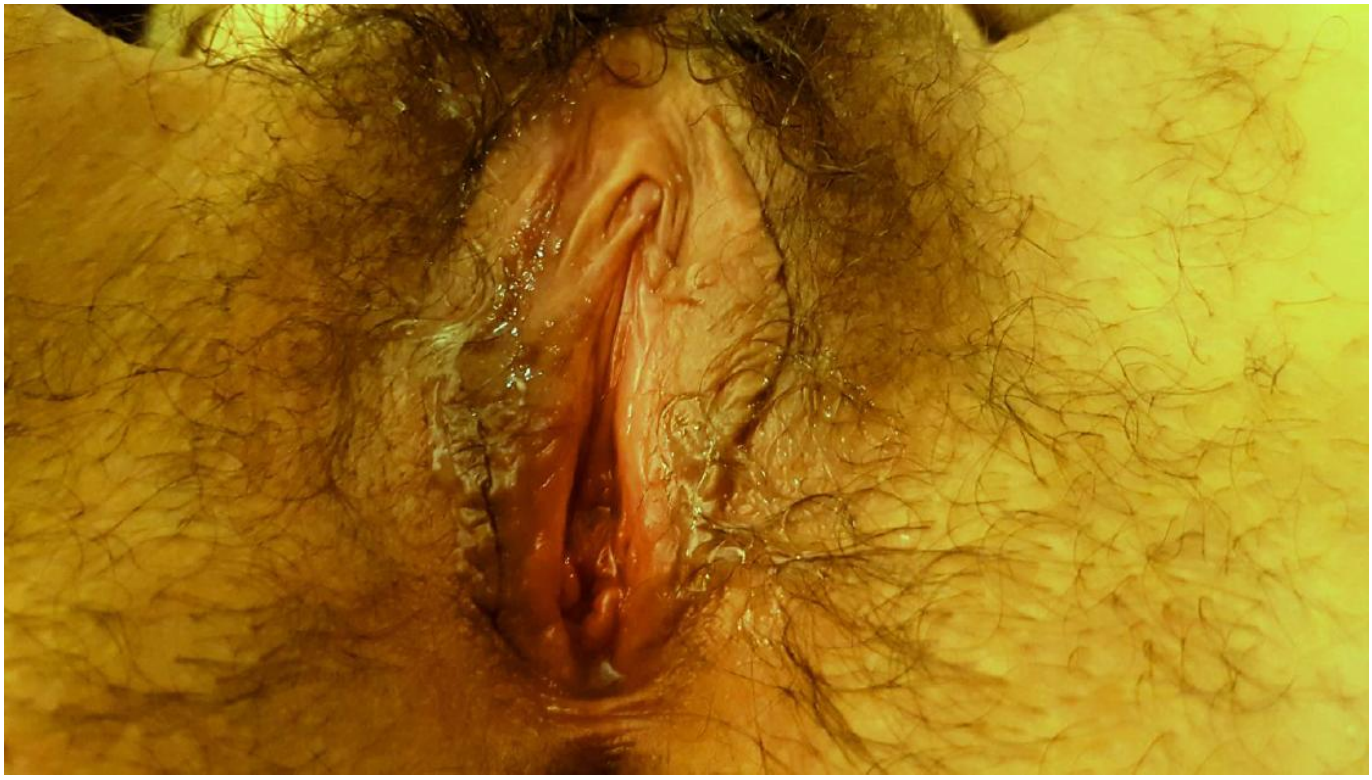

Figure 1. Clinical picture of the 40-year-old female patient infected with *T. vaginalis*. The patient showed full symptoms after about 5 days of sexual intercourse. You can see foamy, greenish discharge on the labia and redness of the urethra / vagina.

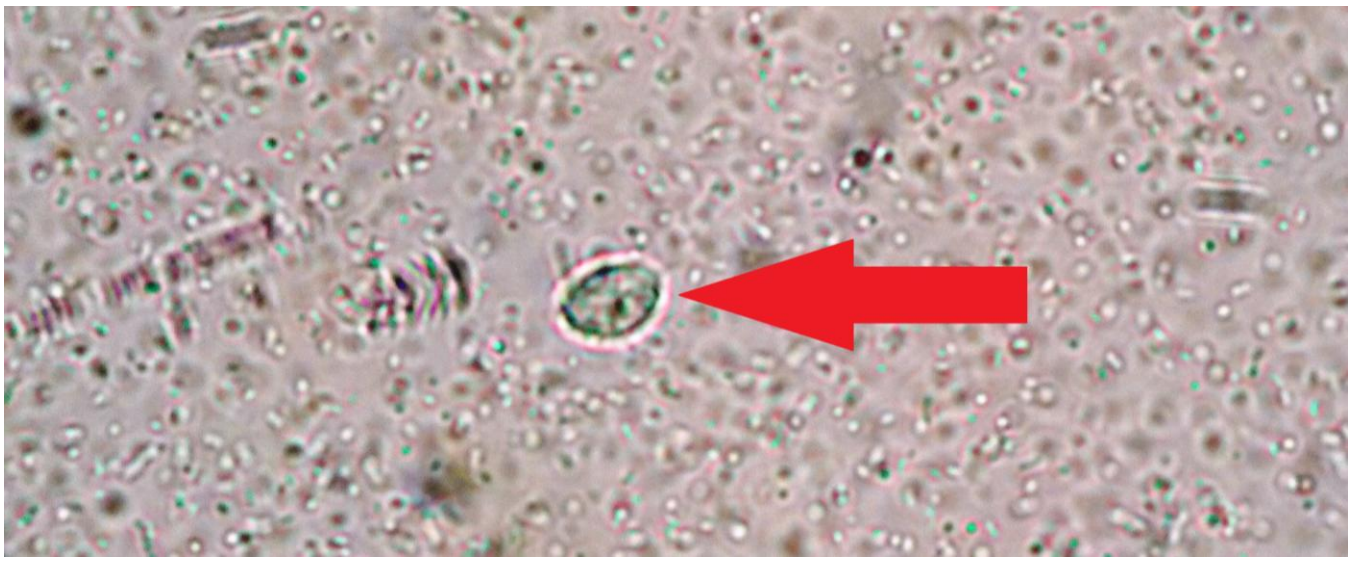

Figure 2. *Trichomonas vaginalis* trophozoite (indicated with the red arrow) as observed in the direct swab wet mount microscopic examination. Magnification 400× with digital augmentation.

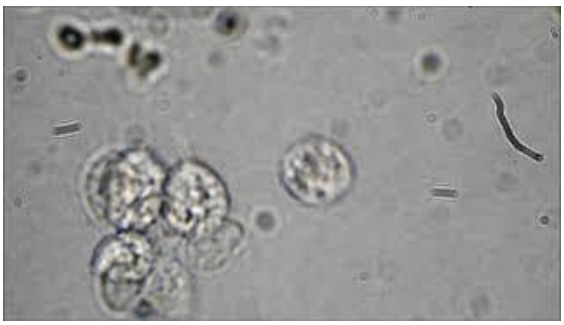

Figure 3. Live *Trichomonas vaginalis* in 24h Diamond's medium. Magnification 400× and 1000×, with digital augmentation. Please click on the YouTube link, below, to watch the recording: https://youtu.be/SZC8vsyS8Yw

Treatment

A standard regimen of metronidazole of 500 mg orally twice a day for seven days was prescribed. This approach is currently more effective than 2 g of the same drug in a single dose [2]. The patient was also told to refrain from sexual activity and take special precautions to avoid sharing hygienic products and towels for the duration of her treatment. Since she reported often enjoying a non-chlorinated hot tub with her children, it was also not recommended to use the jacuzzi until the treatment was finished.

Follow-up

The follow-up visit after completion of treatment was uneventful and all the symptoms present during the initial visit disappeared. Parasitological diagnostics did not show the presence of the parasite. The female from the other couple did not come for a follow-up visit but reportedly completed her therapeutic regimen successfully.

Discussion with conclusions

In this case it was most probably a female to female transmission of *T. vaginalis.* The patient reported sharing a common sex toy and having oral sex and vaginal fluid contact with the female partner from the second couple. Despite the fact that during the sex party described above, condoms were used during male to female vaginal and anal intercourse, the patient in this case got infected by having sex with the female partner.

Multiple partners and risky sexual behaviours may predispose persons to STI. The most severe STI like HIV and hepatitis may not give any symptoms for many years until fulminant disease, so it's vital to perform screening tests from time to time, especially if engaging in unprotected intercourse and oral sex. Also certain STI (e.g. with active lesions) may predispose persons for acquiring other STI. Another aspect is the increased STI transmission among women with bacterial vaginosis, which is the most common genital inflammatory state in females.

A comprehensive guide on *Trichomonas vaginalis* may be found on the English version of paracyty.pl website [1].

To conclude, one needs to keep in mind that *T. vaginalis*, just like other STI, may be transmitted among partners of the same gender.

References

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Conflict of interest: PK is Editor-in-Chief of WJOMI.

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