Can trichomoniasis cause pharyngitis? A case report

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Abstract

Objectives: We report on a heterosexual male with sore throat diagnosed as oral Trichomoniasis vaginalis.

Methods: A rapid strep test and throat culture were negative. An oropharyngeal swab tested positive for Trichomonas vaginalis using a nucleic acid amplification test (NAAT).

Results and Conclusion: A detailed sexual history and oropharyngeal swab testing enabled the diagnosis of oral Trichomoniasis vaginalis in a male patient reporting oral sex with a recently infected female. The patient was successfully treated with metronidazole 2 g orally.

Keywords
Trichomoniasis, sore throat, oral sex, male

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Introduction

Three to five million new cases of trichomoniasis occur annually in the United States. Despite a higher prevalence than non-viral sexually transmitted infections (STIs), gonorrhea and chlamydia, attention to diagnosis and management in males is lacking. Genital trichomoniasis is more commonly studied, diagnosed and managed, but oropharyngeal infections are much less considered, mainly because the confusion still exists as to whether Trichomonas vaginalis (T. vaginalis) is responsible for pharyngitis and whether it can be isolated from the oropharynx. Here, we discuss a rare occurrence of T. vaginalis isolated from the pharynx. We also emphasize the importance of taking a very detailed sexual history which includes the practice of oral sex and treatment of trichomoniasis in males.

Case presentation

Patient is a 30-year-old single, heterosexual male who presented to the Family Medicine clinic with a 5-day history of sore throat and a painful right-sided neck mass; he denied cough, sneezing, rhinorrhea, fever and exposure to tuberculosis. Further investigation revealed participation in unprotected oral sex with his partner for 1 year, who had recently been diagnosed with vaginal trichomoniasis and was prescribed metronidazole.

Patient presented with an enlarged right anterior cervical lymph node, measuring 4.5 cm × 3 cm, and was non-tender at the time of the examination; patient states that he had been taking acetaminophen for the pain. Examination of the oral mucosa revealed good oral hygiene, with pharyngeal and right tonsillar exudates. Rapid streptococcal test and throat culture were negative for group A Streptococcus. Pharyngeal and tonsillar exudates using a Gen-probe AptaSwab Kit (blue swab) tested positive for T. vaginalis by nucleic acid amplification test (NAAT). Screening was negative for HIV, syphilis, chlamydia, gonorrhea and tuberculosis. Our patient’s symptoms resolved with oral metronidazole 2 g. We are reporting this case because there is no known case of oral infection from T. vaginalis reported in the literature.

Discussion

Trichomoniasis is an STI caused by the protozoan T. vaginalis. As an STI, it is of public health importance because of its association with HIV and contribution to preterm low-birth-weight babies among infected pregnant women. If untreated, it has a propensity to cause infertility through...
pelvic inflammatory disease in women and epididymitis in men. Despite a high prevalence of 174 million cases worldwide,\(^1\)\(^3\) T. vaginalis remains a non-reportable STI. The Centers for Disease Control and Prevention (CDC) recognizes the importance to treat male sexual partners, whether symptomatic or not, with oral metronidazole when female partners test positive.\(^4\)

T. vaginalis is usually underdiagnosed because about 70% of affected patients remain asymptomatic. Males are more disadvantaged as they are less often symptomatic and diagnosis is less accurate. Diagnosis of T. vaginalis in men requires testing two or more sites and culture sensitivity is less when compared to women.\(^5\) The use of NAAT results in higher accuracy among infected males than cultures.\(^6\) To increase sensitivity in males, samples from multi sources are recommended: urethral, urine and semen.\(^5\)

Our patient presented with complaints of sore throat and not as a contact of T. vaginalis. Persistent symptoms following streptococcal pharyngeal standard treatment coincided with a self-report of oral sex with a girlfriend who was recently diagnosed with trichomoniasis.

Being male, and reporting pharyngeal symptoms following oral sex with a positive sexual contact, posed a diagnostic challenge. Experimental research has reported the low sensitivity of culture in diagnosing males when compared to polymerase chain reaction (PCR). PCR testing of the oropharynx for Trichomonas is not approved by the US Food and Drug Administration (FDA), and it has a higher sensitivity and specificity using DNA sequencing.\(^6\) Take note that the Aptima Trichomonas vaginalis assay is an in vitro qualitative NAAT cleared by the FDA in females for the detection of ribosomal RNA (rRNA) from T. vaginalis to aid in the diagnosis of trichomoniasis.\(^7\) We obtained only pharyngeal and tonsillar samples using the Gen-probe Aptima Unisex Swab Kit (blue swab). This kit has been utilized by microbiological researchers and the Colorado Department of Public Health and Environment to assess the accuracy of extra-urogenital (pharyngeal and rectal) testing in trichomoniasis. Duboucher et al.\(^11\) report recovering T. vaginalis from pulmonary secretions by utilizing rRNA gene amplification and sequencing which supports our case that T. vaginalis can be transmitted orally. Other forms of sexual intercourse, oral and anal, are practiced by males and females irrespective of their sexual preference. A study on the prevalence of rectal trichomoniasis in men with proctitis revealed no positive test but was 12% for rectal Mycoplasma genitalium infection.\(^10\)

Although oropharyngeal cultures are not recommended in most STIs, scientists and clinicians understand the importance of testing in eradication of infections.

Our case brings to light that T. vaginalis can be transmitted orally and, if a patient presents with a sore throat and a history of unprotected oral sex with a partner who was recently diagnosed with Trichomonas. This warrants testing the oropharynx along with urine or semen for T. to exclude commensals.

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**Informed consent**
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