Concurrent syphilis and *Chlamydia trachomatis* infection in bisexual male: A rare case of proctitis

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**Abstract**

Unsafe sexual practices in men who have sex with men population lead to emergence of high-risk networks for sexually transmitted infection transmission. The atypical clinical presentation of proctitis, the unawareness of physicians and patients in this regard, and the nonavailability of molecular diagnostic methods in routine practice may have contributed to its underdiagnosis. We report a case of syphilis in a bisexual male with a concurrent rectal *Chlamydia trachomatis* infection not previously reported from India. Reporting such cases has public health importance.

**Keywords:** *Chlamydia trachomatis*, proctitis, syphilis

**Introduction**

*Chlamydia trachomatis* (CT) is common bacterial sexually transmitted infections (STIs) in India. It is an important cause of patient morbidity and health-care cost. In India, screening efforts have focused mainly on genitourinary screening. In addition to genital route, extragenital route has also been identified as route of transmission of CT, especially in men who have sex with men (MSM). Extragenital screening is not always a part of routine STD screening, because of which many extragenital infections are undiagnosed and untreated.[¹,²] These undiagnosed and untreated extragenital infections are hidden reservoir for ongoing transmission of the infection. CT is the second most common bacterial pathogen of proctitis followed by *Neisseria gonorrhoeae.*[³] Chlamydia infection in rectum can cause rectal pain, discharge, rectal bleeding as well as proctitis.[⁴] The unprotected anal intercourse among MSM is on the rise and there is increasing prevalence of rectal CT in the parts of Africa, South America, and Southeast Asia.[⁵] The atypical clinical presentation, the unawareness of physicians and patients in this regard, and the nonavailability of molecular diagnostic methods in routine practice may have contributed to its underdiagnosis. We report a case of syphilis in a bisexual male with a concurrent rectal CT infection not previously reported from India.

**Case Report**

A 41-year-old man presented to the sexually transmitted disease clinic at All India Institute of Medical Sciences, New Delhi, with 6-month history of anal pain in absence of rectal discharge. His sexual history revealed that he was bisexual man with multiple casual partners. He was engaged in unsafe peno-anal insertive and receptive sex with his male partners and oral intercourse with female partners. On rectal examination, local skin inflammation and perianal ulceration was noticed. Inguinal lymphadenopathy was absent. On genital examination, patient had multiple pearly papules over the glans since 2–3 years. Patient does not give history of genital ulcer, genital discharge, generalized macular popular rash, generalized lymphadenopathy, and neurological disorders. Neither systemic symptoms nor oropharyngeal disorders were noticed. A detailed sexual health was performed. He was reactive for Venereal Disease Research Laboratories (1:320) and seronegative for human immunodeficiency virus (HIV),
hepatitis B surface antigen, antihepatitis C virus, and antithrompes simplex virus-1,2 antibodies. According to patient's history and sexual behavior, oropharyngeal, anorectal, and urethral swab were collected and subjected to culture for *N. gonorrhoeae*, *Ureaplasma spp.*, and *Mycoplasma hominis*. A multiplex polymerase chain reaction (PCR) targeting the urease gene of *Ureaplasma* spp. and the 16S rRNA of *M. hominis* was performed, as well as PCR assay was also performed to detect CT targeting the ompA gene. Cultures and PCR assay were negative for *N. gonorrhoeae*, *Ureaplasma spp.*, and *M. hominis*. PCR assay for CT was also found to be positive. Contact tracing was attempted but he denied giving information about his sexual partners.

He was treated with oral doxycycline 100 mg twice daily for 21 days and injection 2.4 MU, benzathine penicillin, and two injections 2 weeks apart. Patient was advised to follow after 2 weeks. On follow-up, the patient had an uneventful recovery and posttreatment PCR assays for CT were negative.

**Discussion**

Unsafe sexual practices in MSM population lead to emergence of high-risk networks for STI transmission. Here, we describe the concurrent syphilis and rectal CT infection in MSM patient. Patients with rectal CT usually present with anorectal pain, rectal discharge, rectal bleeding as well as proctitis.[8] Anal pain was presenting complain in our case. If left untreated, it can lead to complications such as anal strictures and lymphorrhoids.

There are no pathognomonic features for rectal CT; for that reason, such cases could easily remain untreated and act as a reservoir for the infection among MSM. Therefore, there is need of high index of suspicion in couple with microbiological investigation for identification of such cases. Although correctly identifying CT has been challenging but with the recent use of PCR in routine diagnostics, correct identification of genital extragenital infections has been possible.

Multiple partners, age under 25 years, concurrent gonococcal infection, a history of sexually transmitted diseases, HIV seropositivity and seroconversion, and the lack of condom use have been recognized as risk factors for CT infections.[7] At present, infection by this bacterium has emerged as an important cause of proctitis and proctocolitis in men who have sex with other men.[8] Multiple casual sexual partners, presence of other sexually transmitted diseases, namely, syphilis, and lack of condom use could be the attributable risk factors in our case. Presence of concurrent syphilis in our case suggests high-risk sexual behavior. Primary-care physicians need to be considered CT in the diagnosis of proctitis, especially in MSM. It is also crucial to have access to appropriate laboratory diagnostic methods in order to screen for all proctitis cases.

Our case has several rare and interesting features, specially bisexual male, concurrent infection with syphilis and CT, and the immunocompetent host.

In conclusion, this report is a reminder to clinicians, public health workers, and microbiologists of the possibility of concurrent infection in case of proctitis. Publishing further such case reports will provide more clarity regarding the clinical significance of the disease, including associated risk factors and appropriate treatment. Prompt medical intervention supplemented by a comprehensive microbiological workup aided in pathogen identification, resulting in the successful outcome of the patient.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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