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Dermatology

AN INTERESTING CASE OF TRIPLE STI IN AN IMMUNOCOMPETENT MSM

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ABSTRACT Coexistence of multiple STIs is not uncommon. STIs are asymptomatic in their initial stages and coinfecting STI may be missed if not properly evaluated. Men having sex with men (MSM), because of their sexual behavioural, are at higher risk of acquiring STIs/ co-infections as compared to heterosexuals.

A 33-year-old homosexual male had anogenital warts since 1 month and urethral discharge since 1 week. He had asymptomatic, red lesions restricted to palms and soles with red lesions over penis 1 year ago with spontaneous resolution. Investigations of the present complaint were no diplococci on Gram stain, urethral swab negative for Gonorrhea, no abnormality on urine examination, RPR 1:16 and HIV non-reactive. Diagnosis was urethritis with anogenital warts and early latent syphilis. Treatment given was Tab. Cefixime 800mg, T. Azithromycin 1g (for gonococcal and non-gonococcal urethritis as follow up was not assured), 25% podophyllin in tincture benzoin and 70 % trichloroacetic acid and 1 injection of intramuscular Benzathine Penicillin 2.4 MU in divided doses with clinical improvement and fall in RPR (1:4) at 5 months. An optimized multi-STI co-testing strategy integrated with prevention, surveillance, and treatment is urgently needed to reduce the prevalence of sexually transmitted co-infections especially among MSM. A unique case of co-infection with HPV, syphilis and urethritis, a pattern of co-infection not reported in an immunocompetent MSM is highlighted.

KEYWORDS : STI, Anogenital warts, Syphilis, Gonorrhoea, VDRL

INTRODUCTION:

Sexually transmitted infections (STIs) contribute to a significant portion of public health burden globally. In 2020, WHO estimated 374 million new infections. [1] Risk factors increasing transmission of STIs include unprotected sexual contact with multiple partners, history of STIs, sexual assault, alcoholism, prostitution, having sexual partner with concurrent sexual contacts, prior history of STI, intravenous drug and low education.[1,3]

Coexistence of multiple STIs is not uncommon, 37% reported by Choudhary *et al*. [2] Many STIs are asymptomatic in their initial stages; hence, it is likely that a coinfecting STI may be missed. [2] Men having sex with men (MSM), because of their sexual behavioural, are at higher risk of acquiring STIs/ co-infections as compared to heterosexuals.[2]

CASE HISTORY:

A 33-year-old married male presented with yellowish-white discharge from urethra with burning micturition since 1 week and skin coloured, raised, asymptomatic lesions over penis since 1 month.

He had developed single, skin coloured, raised, asymptomatic lesion on penile shaft which progressed in number for which he did not take treatment. He subsequently noticed yellowish-white discharge from urethra since 1 week with burning micturition. His last sexual contact was 1 month ago, protected, peno-oral and peno-anal with known male partner.

He gave a past history of asymptomatic, red lesions, restricted to palms and soles along with red lesion over penis 1 year ago which had subsided spontaneously.

His first sexual exposure was at 16 years of age with known female partner. Subsequently he had multiple protected and unprotected, peno-anal and peno-oral sexual contacts outside marriage with 2-3 male partners. His last sexual exposure with spouse was 1 year ago, peno-vaginal protected. There were no similar complaints in spouse or partners.

Cutaneous examination revealed yellowish- white, mucopurulent discharge over urethral meatus. (Figure 1)

Multiple, well defined, skin/flesh coloured, discrete papules with verrucous and flat surface on right ventral aspect of penile shaft and patulous anus with deep rectal erythematous plaque with verrucous surface were noted. (Figure 2, 3) There was no regional lymphadenopathy. General and systemic examination was normal.

Figure 1: Yellowish- White, Mucopurulent Discharge Over Urethral Meatus

Figure 2: Multiple, well defined, skin to flesh coloured, discrete papules with verrucous and flat surface on right ventral aspect of penile shaft

With a clinical suspicion of gonorrhea, Gram stain was performed which showed polymorphonuclear neutrophils but no diplococci. Urethral swab sent for detection of Gonorrhea was negative. Urine examination was normal. Rapid Plasma Reagent (RPR) was reactive,

titre 1:16 and HIV was non- reactive.

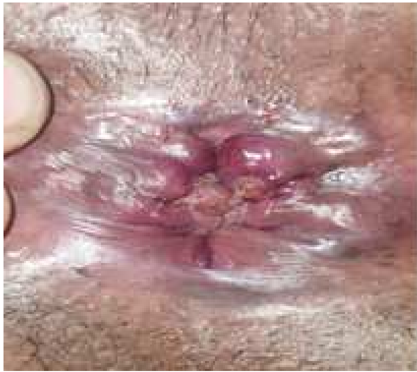

Figure 3: Patulous anus with deep rectal erythematous plaque with verrucous surface

Final diagnosis was urethritis with anogenital warts and early latent syphilis. Since the clinical presentation of minimal amount of thick bead of pus pointed towards gonorrhea but no diplococci were seen, he was treated for both gonococcal and non-gonococcal urethritis.

He was given Tab. Cefixime 800 mg single dose along with Tab. Azithromycin 1g single dose (As per CDC guidelines 2021, Cap. Doxycycline 100 mg was not given as the patient's follow up was not assured). He was counselled regarding partner testing and evaluation and safe sexual practices. Podophyllin and trichloroacetic acid application for penile and anal warts respectively was planned, but he was lost to follow up. Subsequently, he followed up after 1 month and clinical examination revealed complete subsidence of urethritis but persistence of warts. (Figure 4) 25% Podophyllin in tincture of benzoin and 70% trichloroacetic acid application was initiated for genital and anal warts respectively. He later followed up with his latest, consistent male partner whose clinical evaluation revealed no evidence of past or present STI and partner's HIV and VDRL was negative. Patient was also given one injection of intramuscular Benzathine Penicillin 2.4 million units in divided doses, after test dose. He received 5 applications of trichloroacetic acid and 3 of podophyllin for genital and anal warts respectively. On subsequent follow up at the end of 5 months, he reported marked improvement in anal and genital warts and repeat RPR was1:4. (Figure 5,6). On telephonic conversation, at the end of 7 months he had not developed any new STI.

Figure 4: Subsidence of discharge at the end of 1 month

Figure 5: Complete subsidence of warts at the end of 5 months

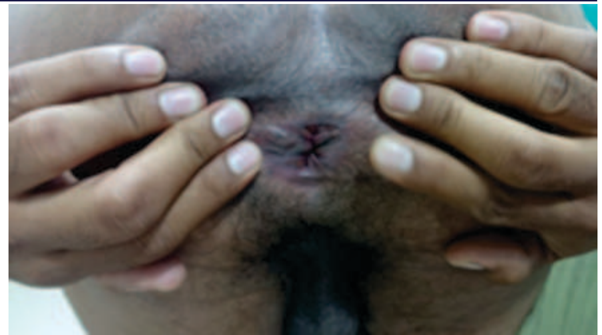

Figure 6: Near normal anus at the end of 5 months

DISCUSSION:

STI co-infections are associated with higher inflammation which can increase an individual's STI burden and increase chances of HIV acquisition. [3] According to a study, ~90% cases infected with Treponema Pallidum (TP) had co-infection with another STI, of which >20% were co-infected with ≥2 other STIs. [3] Choudhary et al in their study observed that, *TP* (48%), HIV (45%) and Herpes simplex virus-2 (HSV-2) (39.2%) were most frequently associated with multiple STIs. [4] which may be pertinent to their asymptomatic genital infection and secretion even after treatment. [4]

Various co-existence of STIs in the study by Choudhary et al are mentioned below:

1. Syphilis coinfected with HIV (43%), Hepatitis B Virus (HBV) (40%) and genital wart (40%)[3]
2. HSV-2 coinfected with HIV (46%)[3]
3. Gonorrhea co-infected with HIV (20%), Chlamydia Trachomatis (CT) (60%), and/or HBV (17%) (recurrence of gonorrhea in patients with multiple STIs highlights vulnerability of such population in acquiring STI and also eventually becoming reservoir of drug-resistant organisms.[4])
4. Anogenital wart co-infected with HIV (66%), syphilis (66%), HSV-2 (16%), HBV (16%), and Hepatitis C (16%). [4]

Ye ZH et al, in their study noted that among the 177 participants, 105 (59.3%) had a single infection, 34 (19.2%) had dual infections, and eight (4.5%) had multiple (i.e., more than two) infections with overall prevalence of co-infections being 23.7%.[3] Human Papilloma virus (HPV) /CT (47.1%) and HPV/CT/NG (50. 0%) co-infection were the most prevalent types, similar to that of a study in South Africa.[3] Nearly all co-infections were related to HPV (97.1% of dual infections and 100% of multiple infections).[3] Predominant co-infection related to HPV could be attributed to the fact that HPV infections can persist for life and be detected easier than other bacterial STIs. [3] Vaccination against HPV, therefore, should be the priority rather than treatment of symptoms.[3]

Ye ZH et al in their study noted that despite highest overall prevalence of HPV (76.3%), HPV-infected MSM had the lowest prevalence of co-infections (30.3%).[3] Conversely, MSM infected with TP had the highest prevalence of co-infections (88.2%).[3]

MSM show considerable burden of overall STIs and co-infections and are more vulnerable to STIs because of role of chronic and refractory inflammation; even if an acute bacterial infection is treated, genital tract milieu might be perturbed for months or longer, resulting in residual inflammation. [3] Hence, more attention should be paid to sexually transmitted co-infections among MSM. [3] Ye ZH et al in their study also reported low education to be associated with unprotected anal intercourse with new partner, which may expand the transmission of STIs.[3]

CONCLUSION:

Preventive services should focus more on MSM especially with lower educational levels and a previous history of STIs. An optimized multi-STI co-testing strategy integrated with prevention, surveillance, and treatment is urgently needed to reduce the prevalence of sexually transmitted co-infections especially among MSM.

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Conflict Of Interest: Nil

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