Journal of Pakistan Association of Dermatologists. 2019; **29(3)**: 338-340.

Case Report

A case of WATERING CAN PERINEUM caused by Neisseria gonorrhea in a seropositive patient and its serendipitous response to co-trimoxazole

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Abstract Gonorrhoea is a common sexually transmitted disease caused by Neisseria gonorrhoeae. In the modern era of broad-spectrum antibiotics, urethral fistulae (watering can perineum) are one of the rare sequelae of chronic gonococcal infection. Here, we report a case of gonococcal urethritis and watering can perineum in a seropositive patient. The recent worldwide emergence of multidrug-resistant strains of gonococci is alarming. In the present era of HIV pandemic, ineffective treatment of the patient or their partners for gonorrhea may result in the development of these complications.

Key words
Gonorrhoea, AIDS, Watering can perineum, co-trimoxazole.

Introduction

In tropical countries, gonorrhea remains a common cohabiting infection with chlamydia trachomatis in urethritis and such infections in high-risk individuals account for the transmission of HIV. Chronic complications are uncommon in the post-antibiotic era but we report an HIV positive patient with chronic gonorrhea diagnosed with perineal fistula and sinus at the base of the penis which is historically named as the "watering can" perineum.

Case report

A 36-year-old seropositive male presented with complaints of recurrent purulent discharge per urethra for 5 months, with perineal ulceration and leakage of urine for the past 1 month. The patient had a history of multiple homosexual and heterosexual unprotected contacts with the last contact with a male 5 months back, 5 days after which he developed dysuria and copious purulent discharge per urethra. He had received multiple courses of ofloxacin and tetracycline for the same with no improvement. 4 months later, he developed painful swellings in the perineum and at the base of the penile shaft, which later ruptured and leaked urine concomitant with an attempt to micturate.

Examination revealed the presence of purulent urethral discharge and two well-defined ulcers, one over the base of the penile shaft **(Figure 1)** and other in the perineum **(Figure 2)**, close examination of which revealed dribbling of urine. The surrounding skin was erythematous, indurated, and tender with the presence of significant bilateral inguinal lymphadenopathy.

A Dark Ground microscopy, Gram and Giemsa stains were performed on the discharge from ulcers and blood samples were sent for VDRL and TPHA. The urethral discharge and urine were sent for culture. Pending the final culture

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Figure 1 Ulcer over the base of the penis covered with pus and urine

Figure 2 Well-defined ulcer in perineum covered with pus discharge

Figure 3 Clean looking ulcers present in healing phase 7 days after administration of co-trimoxazole

reports the patient was initiated on co-trimoxazole to treat any secondary infection and asked to review after 7 days.

Gram-stained smears from the discharge from both urethra and the ulcers showed gram-negative diplococci and the culture revealed *Neisseria gonorrhea* sensitive to ceftriaxone and azithromycin and resistant to tetracyclines and fluoroquinolones. His serology for VDRL and TPHA was non-reactive.

On the follow-up visit, his ulcers were clean looking and healing **(Figure 3)**, with the absence of pus discharge per urethra. A provisional diagnosis of watering can perineum secondary to chronic gonococcal infection was made and the patient was administered ceftriaxone i.m. 250 mg and azithromycin 1 gm stat. The patient was asked to follow up at 15 days and 3 months and was referred to the urology clinic where on urethrography, a stricture in bulbar urethra was confirmed.

Discussion

"Watering can" perineum refers to urination through the perineum consequent to multiple urethroperineal fistulas which has a multi-factorial etiology (trauma balanitis xerotica obliterans, tuberculosis, schistosomiasis or gonorrhea).[1] Chronic gonorrhea can lead to a fibrous stricture formation, which can be either annular or tubular if it affects a segment of the urethra. Stricture formation most commonly occurs in the bulbous urethra and can develop distal to an area of an untreated abscess and can also contribute to fistula formation. If untreated this can subsequently track down and lead to the perineal fistula.[2]

A large study of 414 cases from Senegal showed that the most common site of stricture formation was bulbar urethra and was infectious in 63 % of the patients with gonorrhea being the implicated cause.[3] The clinico-investigative profile of our patient was consistent with gonorrhea induced urethral stricture. The lack of response to

fluoroquinolones and tetracycline is consistent with a study from New Delhi and is mirrored by our culture report.[4]

The serendipitous response to co-trimoxazole, a drug no longer used for this disorder is akin to a similar case in an HIV positive patient where the authors had surmised that the drug might suppress and to an extent even eradicate the organism.[5]

Though we treated the patient with ceftriaxone and azithromycin as per the guidelines, the salutary effect of monotherapy with co-trimoxazole, in this case, suggests that this relatively cheaper drug may need a relook for gonorrhea. The possible cause of watering can perineum in our case apart from the chronicity of gonorrhea and lack of suitable treatment could be the immunosuppression state.

Conclusion

Our case highlights the rarity of "water can perineum" in an STD set up and in view of the perceptible rise in the trend of resistance to ceftriaxone, it would be educative to elicit the sensitivity of Neisseria gonorrhea to co-trimoxazole.

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