Acute Primary Tuberculous Ulcer of Glans Penis

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ABSTRACT

Acute primary tuberculous ulcer of glans penis is a rare entity even in the endemic region. We present a 55 year old male with multiple undermined ulcers for short duration of 4 weeks with raised erythrocyte sedimentation rate, negative Mantoux test and histopathology revealed a diagnosis of tuberculous ulcer which responded well to antitubercular therapy.

KEY WORDS

Acute primary tuberculous, Glans penis, Tuberculous ulcer

INTRODUCTION

Despite the introduction of anti-tubercular drugs, tuberculosis continues to draw attention from worldwide health care professionals. The annual global incidence of genital ulcer disease (GUD) is estimated to be more than 20 million cases.[1] The etiology of GUD may be infectious or non-infectious. Many sexually transmitted infections (STIs) are characterized by genital ulcers – genital herpes simplex virus (HSV) infection, syphilis and chancroid being more common than others.[2] Tuberculosis (TB) of penis is rare even in developing countries that are endemic for TB. Though tuberculosis is common in Nepal, report of a case of penile tubercular ulcer is lacking. Many of the reported cases have been of long standing duration.[3] Two cases were reported from our department.[4,5] Here we report a case having acute course of primary tuberculous ulcer of glans penis which is even rare from eastern Nepal.

CASE REPORT

A 55 years old uncircumcised Hindu married male, farmer by occupation presented with chief complain of multiple genital ulcers on glans penis for 4 weeks. It started as papule of rice grain size which after 2-3 days duration gradually broke down to form painless ulcers. After 1-2 weeks, 2-3 papules appeared near earlier lesion, gradually formed ulcers, few coalesced to form larger one and few were discrete. These ulcers gradually progressed to become larger one and none of them were healing despite receiving oral and injectable antibiotics and a course of acyclovir. There was no history of trauma, dysuria, urethral discharge or multiple crops of painful vesicles. There was no evening rise of temperature, history of cough, weight loss or anorexia. There was no history suggestive of tuberculosis or genital ulceration in her wife and on examination she was completely normal. Other family members also did not give a history of tuberculosis. Neither the patient nor his wife gave any history of extramarital sexual intercourse. His general physical examination was normal.

On examination, there were multiple discrete to coalescent, slightly tender, minimally indurated undermined ulcers of varying sizes ranging from 7×6 mm to 14×9 mm with well-defined irregular margins, covered with unhealthy granulation tissue on the floor. There was no significant inguinal lymphadenopathy. Biochemical and hematological

Figure 1. Clinical photographs before treatment

Figure 2. Clinical photographs after 2 weeks of treatment

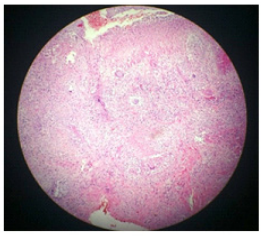

Figure 3. Histopathology (HE stain) caseous necrosis of the ulcer base. 100 X (10X10)

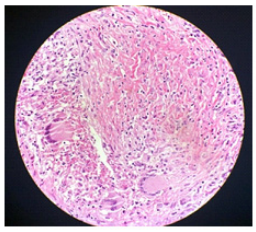

Figure 4. Histopathology (HE stain) central necrosis with Giant cells. 400X(10X40)

Table 1. Difference between acute primary tuberculous ulcer and papulonecrotic tuberculid

	Acute primary TB ulcer	Papulonecrotic tuberculid
Clinical feature	Gradually developing non healing under-mined ulcer	Recurrent eruption of dusky red papule then ulcer which heal leaving behind varioliform scar
Recurrence	May present after relapse or inadequate treatment	Recurrence occurs with waxing and waning pattern
Duration	Usually of longstanding duration, short course may be present	Longstanding duration with recurrent erruptions
Mantoux test	Usually positive	Strongly positive
Histopathology	Caseous necrosis with well-defined granu-loma	Leucocytoclastic vascultis in early lesion to well-formed granuloma in older lesion
Response to ATT	Good	Good

examination was normal. Serology for HIV (Human immunodeficiency virus) and HSV (Herpes simplex virus) and VDRL (Venereal Disease Research Laboratory) were negative. Except for ESR of 43 mm, other blood parameters were within normal limit. Chest X-ray and sputum for AFB (Acid Fast Bacilli) was normal. Swab culture from the floor of ulcer was sterile. Urine routine and ultra-sonogram abdomen and pelvis was normal. Mantoux test was negative (< 5 mm). A differential diagnosis (D/D) of papulonecrotic tuberculid and mixed infection (D/D: tubercular; chancroidal) was considered and biopsy done from the lesion revealed foci of central caseous necrosis surrounded by dense lymphocytic aggregates, macrophages and multinucleated giant cells, some of which were Langhan's type [Hematoxylin and Eosin stain (HE stain)]. However stain for AFB (TB) was negative.

Considering the clinical course, raised ESR and the biopsy findings; a diagnosis of acute primary tubercular ulcer was made and antitubercular therapy (ATT) category 1 (2HRZE+4HR) [H-isoniazid; R-rifampicin; Z-pyrazinamide; E-ethambutol] was started. Patient followed up in the OPD after 2 weeks and the lesion were almost healed and dried irregular scars with mild erythema was present at the site of previous ulcers.

DISCUSSION

Tubercular ulcer of the penis is extremely rare and is unsuspected in its initial course. Most of the reported cases are of long standing duration and acute tubercular ulcer has rarely been reported.[6] Though urinary tuberculosis is common in areas where pulmonary tuberculosis is common, penile tuberculosis is infrequent. An extremely rare form of genitourinary tract tuberculosis will present as tuberculosis of glans penis constituting less than 1% of reported cases worldwide.[7] Epididymis (42%) followed by seminal vesicle (23%), prostrate (21%), testis (15%) and vas deferens (12%) are the common sites of presentation.[8]

Penile tuberculosis is either primary or secondary. Primary penile tuberculosis are acquired either through violent sexual intercourse, fomites of infected patients or infected patients' own ejaculates.[8] Few authors reported primary penile tuberculosis post BCG vaccination for urinary bladder carcinoma.[9] Secondary form is complication of lung tuberculosis or TB of urogenital tract extended through urethra or it may be through haematogenous route. Penile tuberculosis can affect the skin, glans penis or cavernous bodies. Glans lesion can manifest as tuberculous chancre, gumma, papulonecrotic tuberculid or tuberculosis cutis orificialis. The lesion can be extensive, with the involvement of urethra and corpus cavernosum. Since young adults are affected, their female partner should always be evaluated for genital tuberculosis.[10]

In most cases the lesion takes the form of an ulcer as in our case, a nodule or papulo-necrotic tuberculides. Usually primary tubercular chancre are of long standing duration and develops by direct Mycobacteria inoculation in the skin after a local trauma, often unnoticed by the patient. After 2 to 4 weeks, a firm, painless, reddish-brown, slow growing papule or nodule arises, which may develop into an ulcer. After 3 to 8 weeks from the onset of TB chancre, there is often bacilli dissemination through the lymph and lymph nodes, analogous to what happens in the lungs with Gohn's complex.[11] However, among few of the cases reported as acute primary tubercular ulcer, 6 the ulcer develops after rapidly progressive course of 2 to 3 weeks, is friable, has a tendency to bleed and has a floor with coarse granular surface with undermined edges.[12]

However, papulonecrotic tuberculides are hypersensitivity reactions to Mycobacterium tuberculosis, present as

recurrent eruptions of dusky red papules; ulcerate; forms crust, then heal with varioliform scars. These occur symmetrically and predominantly on the extensor aspects (legs, knees, elbows, hands and feet) of the extremities and are asymptomatic. They are diagnosed on the basis of history suggestive of past or present tuberculosis, absence of tubercular skin lesion and good response to ATT.[13] Other areas that may be rarely affected are the ears, face, buttocks, and penis.[14]

Diagnosis of penile TB relies on the characteristic tubercular histopathology, raised ESR, positive Mantoux test and response to ATT. However in our case, Mantoux test was negative and PCR was not done due to financial constraints.

Delay in the treatment may lead to sequelae like urethral stricture and erectile dysfunction due to the involvement of corpus cavernosum.[15] We report this case mainly because of the short and rapid progressive course of the tuberculosis ulcer, which is very rare.

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