Foreign body induced penile gangrene in mentally challenged patient - A case report

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Abstract

Penile gangrene is extremely rare. It spreads very rapidly to surrounding structures and have high mortality rate. Its etiology can be infectious, traumatic or vasculogenic. Precipitating factors can be elicited with careful history and examination. Its management depends upon clinical presentation, which includes serial debridement, partial or total penectomy and treatment of underlying pathology[1]. In the present case 75 year old mentally retarded male presented with an ulceration over urethra. Relatives gave history of foreign body insertion. On examination blackish discoloration of distal half of penis was seen. Penectomy was performed as an emergency operation. On histopathology it was reported as penile gangrene.

Key words: Penectomy, penile gangrene, foreign body

Introduction

Penile gangrene is very rare urologic emergency, which is also known as penile necrotizing fasciitis or wet gangrene of the penis. Rarely it spreads and involves bladder, muscles, rectum, testis and scrotum leading to Fournier's gangrene. It is associated with high morbidity and mortality and in the majority of the described cases it affects not only penis but also the adjacent organs and tissues (e.g., bladder, muscles, rectum, testis, and scrotum)[2]. A variety of forieng bodies (FB) self-inflicted in the urethra was mentioned in the literature (needles, pencils, seeds, pellets, wires, and others)[3,4]. We present a case of elderly mentally retarded healthy patient who accidentally inserted unknown foreign object in the urethra.

Case Report

Seventy five year male presented with history of blackish discoloration of glans penis since two days. The patient is mentally retarded and relatives gave history of some foreign body insertion and removal from the urethra. The details of foreign body were not available. On examination the glans penis showed blackish discoloration and was foul smelling. No foreign body was identified at the time of examination. There was no significant history of diabetes, hypertension or tuberculosis or history of any trauma. Penectomy was performed and sent for histopathological examination.

On gross the penectomy specimen measured 8 cm. The proximal 2 cm of shaft of penis was viable. The glans and distal shaft showed blackish discoloration and urethral ulceration. A separately sent viable surgical margin measured 1cm. Microscopic examination from gangrenous part showed extensive necrosis, bacterial colonies, marked congestion and neutrophilic infiltrate

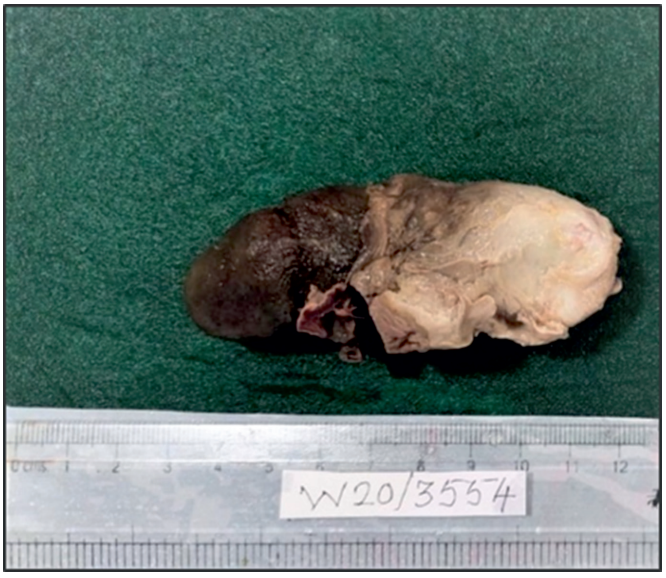

Fig.1: Showing blackish discoloration of glans and distal shaft

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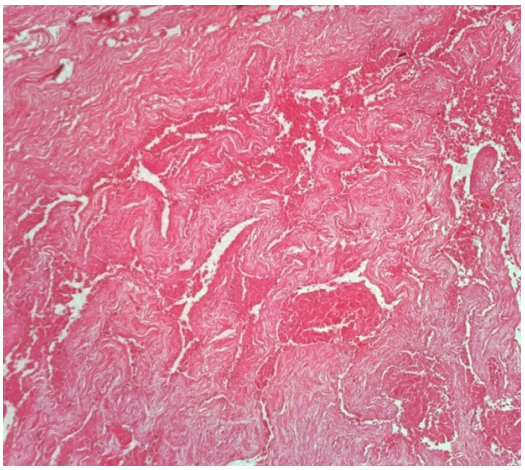

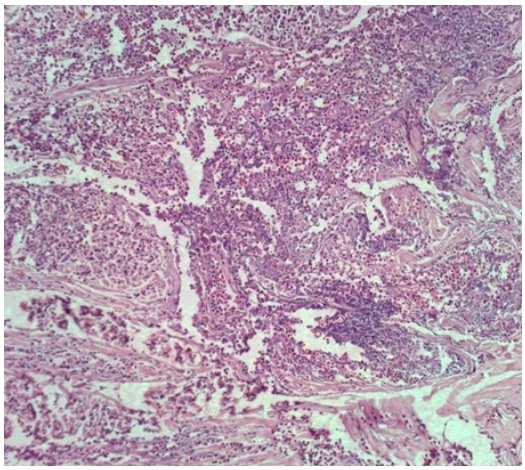

Figure 2 and 3: Showing extensive necrosis, bacterial colonies, marked congestion and neutrophilic infiltrate

Discussion

In 1883 Fournier, a French venerologist, reported 5 patients with unexplained gangrene of the penis and scrotum[5] Since then <400 cases of gangrene involving the male genitalia have been reported in the literature[6,7]. Fournier gangrene (FG) is a urologic emergency carrying a high mortality rate when inappropriately managed. It is a rapidly progressing, polymicrobial necrotizing fasciitis of the perineal, perianal, and genital regions, with a mortality rate ranging from 15% to 50%[8]. Fascial necrosis rate can be as high as 2–3 cm per hour; early diagnosis is therefore imperative[9,10]. A variety of FBs self-inflicted in the urethra are mentioned in the literature (needles, pencils, seeds, pellets, wires, and others)[3,4].

The problem is more common in male patients because the male urethra is longer and has multiple curves, unlike the female urethra. Diverse motivations were reported: sexual arousal, intoxication, and psychiatric illnesses were the most common[11]. Osca *et al.* reported that 5 of 8 patients of his series had psychiatric problems[12]. Kenney recommended psychiatric referral for those patients[13]. The pathological sequence of events in penile Fournier's gangrene may not be different from that of the scrotum; with infection of the subcutaneous tissues leading to small vessel thrombosis and gangrene of the overlying skin[14].

Case reports of penile gangrene after heroine injection have been reported, in which the injection into the femoral vessels causes arterial embolization of particulate matter into microcirculation of the genitalia causing arterial thrombosis[15]. Penile constriction injuries are commonly observed, especially in African countries, where hair, thin threads, or rubber bands are used as penile tourniquet to enhance sexual function in adulthood[16]. Old or geriatric patients apply rubber bands for urinary incontinence[17]. Potential complications include acute complications such as erosion of skin, corpus with urethral transection or gangrene of distal tip, and auto-amputation. Chronic complications include a chronic fibrosed band causing difficulty in erection and intercourse, penile lymphedema, urethral strictures, and urethra-cutaneous fistulas[3]. The mainstay of treatment of Fournier's gangrene of the penis still remains debridement, intravenous fluids, and intravenous broad spectrum antibiotics. Excising dead and devitalized tissue has a very important role to play in halting the spread of infection. Care should be taken however to avoid excision of healthy tissue, especially on the penis[9].

Conclusion

Penile gangrene is urologic emergency, so prompt and early intervention is lifesaving for patient. Although our patient did not have any co- morbidity, patient with co-morbidity should be treated aggressively. In our case patient was mentally retarded so care should be taken in such cases and psychiatric evaluation may be necessary in individuals who insert foreign bodies for self-pleasure.

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