



Donkey bite injury of genitalia in male child: A case report

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ABSTRACT

We reported a case of donkey bite to the external genitalia of a 10 years old child. We had performed delayed reconstruction of the penis following adequate saline washing and wound debridement; under antibiotic coverage. Previous studies have shown that delayed repair together with strict wound management resulted in satisfactory outcomes in most victims of such animal bites.

Key Words: Donkey bite, debridement, injury, penis, reconstruction.

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Introduction

Animal bites, particularly dog bites, are commonly acknowledged causes of human injuries with high risk of local infection and transmission of diseases including tetanus and rabies [1-3]. Bites to external genitalia in children are rare; and only few cases have been reported. Most reported pediatric genital injuries were attributed to dog bites [2-4]. In this case, a donkey bite had resulted in penile injury of a 10 years old child.

Animal's attraction to the perineal region and genitalia had be attributed to coprophagia, and some victim related factors such as immobilization, less dressing and lack of defense in pediatric cases [5].

Case report

We report a case of donkey bite to the external genitalia of 10 years old boy from the countryside. The child was brought to the emergency department 6 hours following the injury. Clinically, he was vitally stable, in agony due to both injury and urine retention. The injury was localized to the glans penis & distal penile shaft with no associated injury in the proximal penile shaft, scrotum nor the inner thigh as shown below (Fig. 1).



Fig. 1. Crushed glans and distal penile tissues at initial examination.

Emergency measures were conducted including adequate analgesia to relieve pain,

suprapubic ultrasound-guided catheter insertion to relieve retention, active immunization against tetanus and rabies and systemic antibiotic therapy (ceftriaxone) to guard against secondary infection. Initial wound care through copious irrigation by saline was conducted and we didn't performed debridement as a plan for close observation and delayed repair was intended. During his following 14 days admission, local wound assessment was conducted daily till the level of penile gangrene was established as shown in (Fig. 2) and auto-amputation of the injured part occurred on day 7 post injury as showed in (Fig. 3).



Fig 2. Glandular and distal penile gangrene.



Fig 3. Auto amputation of the distal penile area after one week.

Three months later, we performed excision with reconstruction of distal penile urethra, as shown in (Fig. 4). Following urinary catheter removal and closure of the suprapubic catheter, the child voided an average urine stream with a minimal post-void residual. The child and his parents were satisfied with the final results and the shape of reconstructed penis; despite some concerns regarding their child future sexual life.



Fig. 4. Urethral trimming and distal urethrotomy after 3 months.

Discussion

Human injuries due to animal bites are considered a major health concern due to the risk of local infection and systemic diseases transmission. Injuries in external genitalia in children have a wide range of severity, from minor scratches and contusions up to partial/total penile amputation and testicular loss have been previously reported [6].

Most reported cases resulted from dog bites [2-4], while in our case was caused by a donkey which bit the child who was attempting to beat it with a stick.

Initial wound management is critical. It's important to clean the wound with copious saline or lactated Ringer's solution, followed by adequate debridement followed by primary

or delayed repair. Risk of wound infection due to an uncomplicated dog bite was reported to be 6-29 %; [7] which decrease from 59 % to only 12 % if adequate wound irrigation is conducted [8]. Adequate care must be taken not to debride much tissue in order to avoid complication related to wound closure and final appearance.

Administration of antibiotics has been discussed in many reports, suggesting antibiotic prophylaxis for moderate and severe wounds including bites to the hand, head, neck and genital region. However, there are no standard guidelines regarding the optimal use antibiotic therapy.

Different classes of antibiotics have been used including; penicillin, doxycycline, and erythromycin. Combination therapy of clindamycin and trimethoprim-sulfamethoxazole in the children was also described [9,10].

When compliance is a concern or severe infection is anticipated; daily intramuscular injections of ceftriaxone is appropriate, as we did in our case. The antibiotic therapy was administered for 7-14 days. Rabies vaccine usually depends on local health policy, but appropriate tetanus vaccine is required.

Surgical management can include, if possible, primary closure which usually achieves good functional and cosmetic results in most cases. Investigations must be performed to assess urethral injuries and surgical exploration of the scrotum, if necessary, to assess the testes, vas deferens, and spermatic vessels. Orchiectomy is sometimes necessary and in case of testicular loss due to dog bite, the vas must to be identified and ligated [7,10,11].

In case of scrotal avulsion of the scrotum and its content and/or penile amputation, a delayed phalloplasty and urethroplasty technique is

advised using an abdominal skin flap and a bladder/buccal mucosa free graft [7].

Compliance with ethical statements

Conflicts of Interest: None.

Financial disclosure: None.

Consent: All photos were taken with parental consent.

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