

Dog bite injuries of genitalia in male infant and children

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Abstract

The aim of the study is to highlight genital dog bites in male infant and children in developing countries and their management. We managed three cases (9 months, 5 years, and 8 years) of genital dog bite between January 1997 and July 2008. Two had unprovoked stray dog bites and the third was bitten by his pet dog when disturbed during eating. Extent of injury varied from small-lacerated wound to near emasculation. Primary repair was done after thorough washing and debridement under antibiotic cover. In the 9-month-old male infant who was near emasculated, scrotum was closed with the available skin and a small penile stump was reconstructed after meatoplasty. Immunization against tetanus and rabies was done for all cases. Postoperative recovery was uneventful, and the wound healed primarily in all cases. Parents of the infant were asked for feminizing genitoplasty but they refused so they were advised for hormonal replacement and penile reconstruction at adolescence. Male children are the most common victims of genital dog bites. These injuries can be repaired primarily with good outcome provided strict cleaning, debridement, wound repair, antibiotic cover, and immunization is applied.

Key Words: Dog bite, emasculation, injury, penis, reconstruction

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INTRODUCTION

Although human injury due to dog bite is common, isolated injuries to the genitalia in children by dog bite are rare.^[1] In infants who have been savaged by a dog, genital injuries are seldom described. On reviewing the literature, we found less than 20 male children with genital dog bite injuries.^[1-5] A rare case of severe genital dog bite injury is reported.

CASE REPORTS

Case 1

A 9-month-old male infant was brought to emergency room 6

hours after being bitten by a street dog. The baby was attacked by puppies while he was lying in a roadside hut. Examination revealed absence of glans, more than half of the shaft of penis, and both testis [Figure 1a]. There were scratch marks in the perineum and on inner side of thighs. After thorough irrigation and debridement, hemostasis was achieved [Figure 1b]. The vas on both sides was identified and ligated. Penile shaft, scrotal reconstruction, and meatoplasty was done with available skin after putting an indwelling catheter [Figure 1c]. Since the immunization status was not known, the infant was vaccinated against tetanus and rabies. Third generation cephalosporin were given to control the infection. He was discharged on 7th postoperative day. Patient was voiding in stream from the meatus on small stump when last seen in follow-up 6 years after surgery. Patient is waiting for penile reconstruction and hormone replacement as parents refused for feminizing genitoplasty.

Case 2

A five-year-old male child presented in emergency department of our hospital in October 1999. A street dog had attacked him while playing naked outside his house. Physical examination

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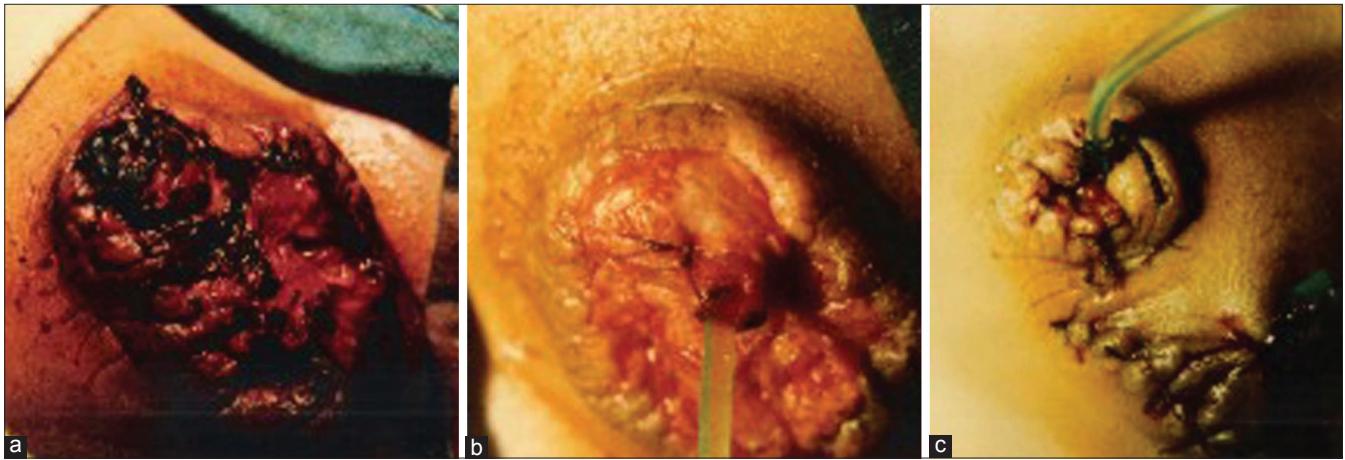


Figure 1: (a) Big wound with loss of penile shaft, testis, and scrotum. (b) Wound after thorough washing and debridement. (c) Reconstructed scrotum and meatus on very small penile stump after meatoplasty

revealed partial avulsion of prepuce skin and teeth marks on the shaft of penis. The penis and testis were normal. There were no injury marks on other parts. Under antibiotic and immunization cover, the child was circumcised under general anesthesia after thorough wash of the wound. Postoperative recovery was uneventful.

Case 3

An eight-year-old male child was attacked by a pet dog when the dog was disturbed while eating. Examination revealed lacerated wound on the root of penis, teeth marks on the shaft and thigh [Figure 2]. Wound was closed primarily after debridement under proper antibiotic and immunization cover and the child was discharged. Postoperative recovery was uneventful.



Figure 2: Root of penis and teeth mark at penile shaft and medial side of left thigh

DISCUSSION

Incidence of dog bite is higher (3.2%) in children but still higher in genital dog bites (47%). Dogs are known to be drawn to the perineum and genitalia of scantily clad and defenceless or immobilized infants. While licking the perineum exposed genitalia are easily accessible to dogs and the injury usually is severe ranging from partial penile amputation to emasculation.^[1-3,5-8] One of the case (infant) had severe injury to almost emasculation and is the true representation of dog bite injuries in developing countries where street dog population is high with poor housing facility.

Management of wound includes thorough irrigation and debridement of the wound, broad spectrum antibiotics, adding prophylaxis against rabies and tetanus. Primary suturing is advised in such cases, when patient presents early without gross infection. De-gloving injuries of the penis may require split thickness graft or local skin flaps. Scrotal wound is closed primarily even in cases of large skin losses, testis is covered with local flaps, meshed split skin thickness graft or may be put in

thighs or inguinal pouches. Treatment options for emasculation include hormonal replacement, penile reconstruction, or gender reassignment. Penile reconstruction and testosterone supplement is advised at adolescence in present case. Delay in presentation and tissue loss is directly proportional to infection rate, and inversely proportional to the results. Complications reported are cosmetically bad genitalia, meatal stenosis, retrusive meatus, and urethrocutaneous fistula.

As majority of the dog bite infections contain more than one organism, including aerobes and anaerobes, culture should be sent. Broad spectrum antibiotics are extremely active against the majority of pathogens isolated from bite wound, so these are the first line broad spectrum antibiotic till culture reports are available,^[6] however, they should be used cautiously in infants. Tetanus prophylaxis is done if previous immunization is longer than 5 years before injury. Passive immunization with human tetanus immunoglobulin is added for the patients who had not been previously immunized or where the last known

immunization was received more than 10 years before the injury.^[9]

In contrast to previously reported cases with pet dogs bite, two of our cases had stray dogs bite. The extent of trauma depends upon the age of the victim, number, and nature of attacking animals and protection with clothing. The German Shepherd and Doberman have five times higher risk than Labrador/Retriever or cross breed.^[8] Injuries are usually severe in cases of street dog bites being wild in nature and more in number (Case I).

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