

Animal Reproduction Update Year 2025, Volume-5, Issue-2 (Jul-Dec)



Os Penis Fracture Resulting in Urethral Obstruction in a Dog: A Case Report

Mahesh Kumar¹, Uttam Kumar Sahu², Kiranjeet Singh^{1*}, Aswathy Gopinathan¹, Sanjay Kumar Yadav¹, Kamalesh Kumar KS

¹T Sai Kumar¹, Chandana L¹

¹Division of Surgery, ICAR-Indian Veterinary Research Institute, Izatnagar, Bareilly, Uttar Pradesh- 243122, India

²Division of Animal Reproduction, ICAR-Indian Veterinary Research Institute, Izatnagar, Bareilly, Uttar Pradesh- 243122, India

ARTICLE INFO

Keywords: Dog, dysuria, os penis fracture, scrotal urethrostomy, urethral obstruction

doi:10.48165/aru.2025.5.2.2

ABSTRACT

Fracture of the os penis (FOP) is a rare and underreported condition in dogs that can result in serious complications, including urethral obstruction. This report documents the clinical presentation, diagnosis, and successful surgical management of a 7-year-old male mongrel dog with urethral obstruction secondary to an os penis fracture. The dog presented with pollakiuria, dysuria, penile swelling, abdominal distension, and urinary dribbling. Clinical examination revealed a distended bladder and pain on urination, and catheterization was unsuccessful. Radiographic imaging (ventrodorsal and lateral views) confirmed a fracture of the os penis, while ultrasonography revealed urinary bladder distension and urethral dilation proximal to the fracture. Surgical correction involved scrotal urethrostomy and castration under general anaesthesia. Pre-medication included glycopyrrolate, diazepam, and butorphanol, followed by induction with propofol and maintenance with isoflurane. The urethral mucosa was sutured to the skin using non-absorbable polyamide 3-0 sutures, and a urinary catheter was placed to maintain patency. Postoperative recovery was uneventful, with restoration of normal urination and a reduction in serum creatinine to 1.2 mg/dL. This case highlights the importance of prompt diagnosis and surgical intervention in os penis fractures complicated by urethral obstruction.

Introduction

Fracture of the os penis (FOP) in dogs is rare and underreported condition in veterinary literature. The os penis, a bony structure within the penile tissue of male dogs, plays a vital role in penile rigidity during copulation. Despite its anatomical significance, fractures involving this bone are rarely encountered in clinical practice (Denholm, 1957). The etiology of os penis fractures is often unclear, although traumatic events such as accidental falls, blunt perineal

trauma, or coitus -related injuries have been implicated in reported cases (Stead, 1972). Clinical presentation may vary depending on the severity of the fracture and involvement of adjacent structures. Some dogs may exhibit signs such as haematuria, dysuria, or inability to urinate immediately following trauma, while others may present with chronic complications, including urethral obstruction or stenosis, if diagnosis and treatment are delayed. The fracture may be palpable or radiographically visible depending on its location and degree of displacement. Management strategies

Corresponding author

ksuppli@yahoo.co.in (Kiranjeet Singh)

Received: 21.09.2025; Accepted: 26.09.2025

Copyright © Animal Reproduction Update (<https://acspublisher.com/journals/index.php/aru>)

are determined by the nature and extent of the injury. Conservative approaches, such as closed reduction, may be attempted in minimally displaced fractures. However, cases complicated by urethral damage or stenosis may necessitate surgical interventions including open reduction, penile amputation, and/or scrotal urethrostomy to restore urinary function and prevent further morbidity.

Case history and clinical findings

A 7-year-old male mongrel dog weighing 23 kg was presented with a 7-day history of pollakiuria, dysuria, penile swelling, abdominal distension and discomfort. On general examination, the dog appeared dull with reduced appetite, congested conjunctival mucous membranes, a rectal temperature of 102°F, and a heart rate of 168 BPM. Abdominal ballottement revealed a distended urinary bladder, and the dog exhibited dribbling and pain during urination. An attempt to catheterize the urethra via the external urethral orifice was unsuccessful, indicating a likely urethral obstruction or stenosis. Haematological parameters were within normal limits (Hb: 11.8 g/dL, TLC: $7.1 \times 10^3/\text{mm}^3$, PCV: 39.2%, Platelets: $260 \times 10^3/\text{mm}^3$), and biochemical values (BUN: 10.17 mg/dL, Creatinine: 1.14 mg/dL, SGPT: 56.58 IU/L, SGOT: 50.21 IU/L) indicated no current renal dysfunction. Radiographic examination (ventrodorsal and lateral views) revealed a fracture of the os penis (Fig.1a and b). Ultrasonography further showed marked distension of the urinary bladder and dilation of the urethra proximal to the fracture line (Fig.2a and b), confirming urethral obstruction due to os penis fracture and aiding in diagnosis and treatment planning.

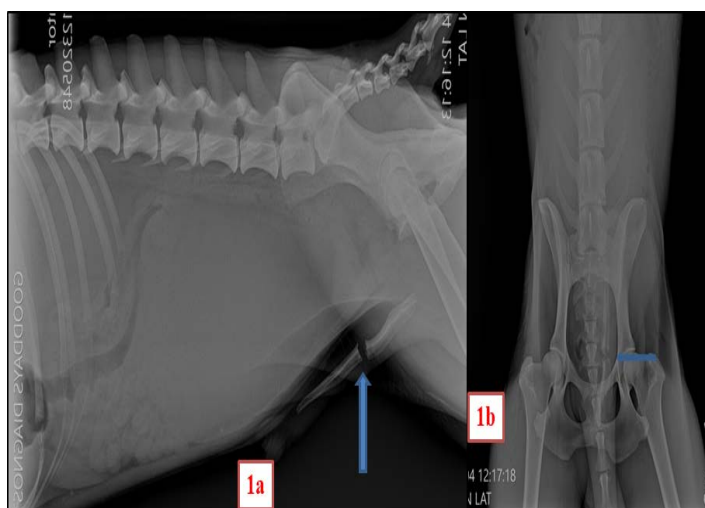


Fig.1. Radiographs showing fracture of os penis in a dog (A) lateral view (B) Ventrodorsal view

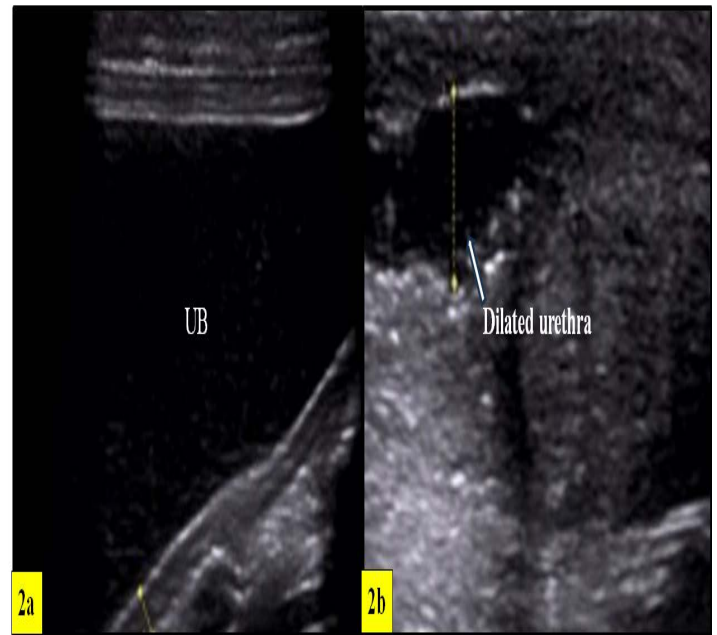


Fig. 2. Ultrasonographic images showing severe distension of the urinary bladder and dilatation of the proximal urethra secondary to urethral obstruction caused by os-penis fracture
The dog was diagnosed with urethral obstruction secondary to a fracture of the os penis, confirmed through radiographic evaluation (ventrodorsal and lateral views) and ultrasonographic imaging, which revealed a distended urinary bladder and dilation of the urethra proximal to the fracture site. Penile fractures in dogs are relatively rare due to the protected anatomical location of the os penis and the cushioning effect of surrounding soft tissues (Farrow, 1988). In dogs presenting with stranguria or dysuria, radiography and retrograde contrast urethrography are essential diagnostic tools to identify the site of fracture and evaluate urethral canal patency (Erne and McNicholas, 2009).



Fig. 3. Intraoperative images depicting key surgical steps: aseptic preparation of the surgical site, followed by castration, isolation of the retractor penis muscle, and suturing of the urethral mucosa to the skin to create a tension-free urethrostomy stoma.

A urinary catheter was inserted through the new opening to ensure drainage during the immediate postoperative period. Post-operative therapy included ceftriaxone (10 mg/kg IM), pantoprazole (1 mg/kg IV), and meloxicam (0.5 mg/kg IM) for five days, along with supportive fluid therapy using dextrose normal saline and Ringer's lactate. The dog showed uneventful recovery, with normalization of serum creatinine to 1.2 mg/dL, indicating relief of urethral obstruction and restoration of renal function.

Discussion

Os penis fracture is a very rare condition that is seldom reported in dogs. Treatment often involves repair of the fractured penis using plates and which is frequently ineffective. Therefore, a salvage procedure, scrotal urethrostomy, was chosen due to the superficial location of the urethra, its wider lumen at the scrotal level, and the lower incidence of postoperative complications compared to other techniques (Bradley, 1985; Newton and Smeak, 1996; Bilbrey et al., 1991). Catheterization served both as a diagnostic and therapeutic measure by evaluating urethral patency and acting as a splint for the urethra. However, in chronic obstruction or displacement, as in this case, catheter placement alone may not be feasible (Jeffrey, 1974; Ryer, 1980; Hobson, 1993). The decision to preserve the penis and avoid amputation was based on the anatomical location of the fracture and the feasibility of effective urinary diversion. In cases of severe trauma or lesions distal to the preputial fornix, penile amputation combined with scrotal urethrostomy may be indicated (Burrow et al., 2011). Early diagnosis,

appropriate surgical technique, and careful postoperative management facilitated complete recovery, allowing the dog to urinate normally and restoring renal function.

References

- Bilbrey SA, Birchard SJ and Smeak DD. Scrotal urethrostomy: A retrospective review of 38 dogs (1973 through 1988). *J Am Anim Hosp Assoc.* 1991; 27:560–564.
- Bradley RL. Complete urethral obstruction secondary to fracture of the os penis. *Compend Contin Educ Pract Vet.* 1985; 7: 759–763.
- Burrow RD, Gregory SP, Giejda AA, White RN. Penile amputation and scrotal urethrostomy in 18 dogs. *Vet Rec.* 2011;169(25):657. doi: 10.1136/vr.100039.
- Denholm TC. Fracture of the os penis. *Vet. Rec.* 1957; 69, 15.
- Erne JB and McNicholas WT Jr. What is your diagnosis? *J Am Vet Med Assoc.* 2009; 234, 201–202.
- Farrow CS. Penis bone fracture. In: Farrow CS (Ed.), *Emergency radiology in small animal practice.* 1988; BC Decker, Toronto, p. 368.
- Hobson HP. Surgical pathophysiology of the penis. In: Bojrab MJ (Ed.), *Mechanisms of disease in small animal surgery*, 2nd ed. Lea & Febiger, Philadelphia, 1993; pp. 552–559.
- Jeffrey KL. Fracture of the os penis. *J Am Anim Hosp Assoc.* 1974; 10, 41–44.
- Newton JD, Smeak DD. Simple continuous closure of canine scrotal urethrostomy: Results in 20 dogs. *J Am Anim Hosp Assoc.* 1996; 32, 531–534.
- Ryer KA. What is your diagnosis? *J Am Vet Med Assoc.* 1980; 177, 177–178.
- Stead AC. Fracture of the os penis in the dog: Two dog reports. *J Small Anim Pract.* 1972; 13, 19–22.