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A. INTRODUCTION

Penile and preputial injuries occurred most commonly in pasture breeding sires. Medical approach to decrease inflammation and infection and/or surgical approaches (circumcision and posthioplasty) depend on the severity and the chronicity of the lesions. The objective of this case report is to present a case of penile amputation in a sire after failure of medical treatment and to evaluate the outcome of surgery.

B. CASE REPORT

PATIENT

22-month-old Hostein-friesian sire and weighing 570.00kg (figure 1)

HISTORY

A Holstein sire was presented to the bovine clinic for a barbedwire preputial injury, which occurred 2 days previously. He had previously been treated with a preputial purse-string suture and non-steroidal anti-inflammatory drugs (NSAID) without success.

CLINICAL EXAMINATION

The initial clinical examination revealed a tachycardia and paraphymosis with preputial prolapse (Figure 1). The prepuce was swollen and a 3 cm-wide circumferential laceration was observed (Figure 2A), as well as a drop-by-drop continuous micturition pattern. A distended bladder was palpated on rectal examination.



Figure 1: Holstein sire presenting paraphymosis with a preputial prolapse.



Figure 2: A. Penile examination at J0 showing circumferential laceration of the prepuce with necrotic tissues and B. examination at J5 showing an increase of the laceration area and a necrosis of the glans.

MEDICAL TREATMENT

Medical treatment with antibiotics (penicilline, 20,000 UI/kg, SID, IM) and NSAIDs (flunixin-meglumine, 1.1 mg/kg, SID, IV) associated with hydrotherapy was initially performed during 5 days. It was unsuccessful with loss of pain sensation, necrosis of the penile glans, and urinary obstruction. Partial penile amputation was offered to the breeder.

C. PARTIAL PENILE AMPUTATION

General intravenous anesthesia with xylazine (0.2 mg/kg, IM) and ketamine (5 mg/kg, IM) was performed as well as epidural anesthesia using xylocaïne (45 ml). The bull was placed in lateral recumbency with the upper hind limb elevated (Figure 3).

An elliptic skin incision starting at the level of the umbilicus and ending 15 cm cranial to the scrotum was performed, followed by blunt dissection of the penis. A bevel amputation was performed and the corpora cavernosum and spongiosum were transfixated separately.

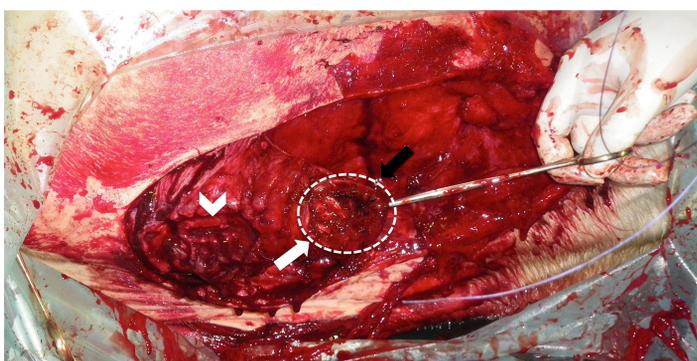


Figure 3: Per-operative view of the partial penile amputation showing the elliptic skin incision, the bevel amputation (circle) with the corpora cavernosum (white arrow) and spongiosum (black arrow) and the incised urethra (head arrow).

An antescrotal urethrostomy was performed at the caudal part of the skin incision using nonabsorbable monofilament suture in a simple interrupted pattern. Subcutaneous tissue and skin were sutured using a simple continuous pattern. A castration was then performed.

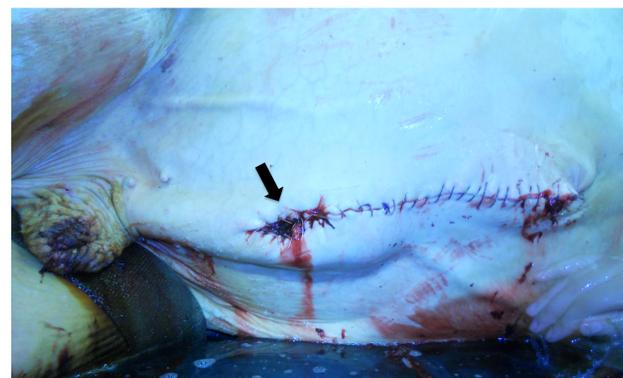


Figure 4: Immediate post-operative view of the partial penile amputation showing the ante-scrotal urethrostomy (arrow) and the castration.

Antibiotics: ceftiofur (1 mg/kg, IM, SID) and NSAID: flunixin-méglumine (1.1 mg/kg, IV, SID) were administered respectively for 10 and 5 days after surgery. Daily hydrotherapy was also performed postoperatively for 10 days.

D. OUTCOME

The sire recovered uneventfully after surgery and urinated normally as soon as he was able to stand up. He was discharged from the hospital 12 days after surgery to be fattened. No postoperative complication was observed (Figure 6). A telephone follow-up one month after surgery did not reveal any complication and the weight gain of the sire was normal.



Figure 6: 12 days post-operative view of the partial penile amputation and the ante-scrotal urethrostomy without complication.

E. DISCUSSION & CONCLUSION

Penile laceration is a common injury in breeding pasture sires. It usually carries a good prognosis after early surgical repair. Conservative treatment of preputial wounds is usually recommended for 2 to 8 weeks. In this case, loss of pain sensation, necrosis of the penile glans, and urinary obstruction precluded prolonged conservative treatment and were indications for immediate surgery. Penile amputation is an alternative procedure if necrosis is present.

F. REFERENCES

- Anderson D.E. Surgery of the prepuce and penis. *Vet Clin North Am Food Anim Pract.* 2008, 24(2):245-251.
Desrochers A. *et al.* Surgical management of preputial injuries in bulls: 51 cases (1986-1994). *Can. Vet. J.* 1995, 36: 553-556.
Gilbert R.O. Preputial surgery. in: *Farm Animal Surgery*, Fubini S.L. and Ducharme N.G.: 376-378.