ABSTRACT

The present case report describes successful surgical management of massive coccygeal varicosity by tail amputation in a 16 year-old female buffalo. This condition was 3 years chronic and the circumference of the tail had increased to more than double the size of normal (48 cm) but the length had reduced to half. The skin of the tail was thickened with multiple dry cracks and alopecia. Frequent episodes of serosanguinous or blood discharge from the skin cracks, advanced stage of pregnancy, difficulty while defecating, urinating, sitting and standing were the major concerns. Tail amputation was done from the first inter-coccygeal space under caudal epidural anesthesia. Unusually, both lateral coccygeal veins were markedly dilated but no fresh blood was present, only lengths of clotted blood were removed.

Keywords: coccygeal varicosity, buffalo, tail amputation, surgery

INTRODUCTION

Varicosity is a result of valvular defect in the superficial veins which allows blood to pool and stretch the veins, further weakening the walls of the veins. With chronicity, the affected vein becomes dilated and tortuous to accommodate the blood volume retaining in it. The incidence of varicose veins in animals is low compared to human beings. In cows and buffaloes, lower limb veins like the saphaneous are mostly involved. But, radial, cephalic, mammary and scrotal veins may also show varicosity (Tyagi and Singh 1993; Rambabu et al., 2009). Although coccygeal varicosity in buffaloes has been reported, surgical management by tail amputation is not advised due to the possibility of extensive haemorrhages and subsequent shock (Kulkarni et al., 2005). The present case report describes a massive coccygeal varicosity in a buffalo which was successfully treated by tail amputation.

CASE HISTORY AND OBSERVATIONS

A female buffalo, aged 16 years and weighing 440 kg was presented to the Teaching Veterinary Hospital with massive coccygeal varicosity (Figure 1). The history revealed that the condition had started 3 years before. Since then the circumference of the tail had gradually increased to more than double the size (48 cm) but the length had reduced to half. The skin of the tail was thickened with multiple dry cracks and alopecia. Frequent serosanguinous or blood discharge from the skin cracks was reported by the owner. The buffalo
was in the 10th month of gestation. On clinical examination, the buffalo was otherwise healthy but had great difficulty while defecating, urinating, sitting and standing. The weight of the tail also appeared also pose extra weight on the old animal. Considering all the aspects, surgical amputation of tail was advised and the owner was informed about the surgical risk involved in excessive bleeding and subsequent consequences.

**TREATMENT AND DISCUSSION**

Surgical amputation was done under caudal epidural anaesthesia using 2% lignocaine hydrochloride in the sacro-coccygeal space. The skin was too thick and it was difficult to feel the joint space through movement of tail. The amputation was done from the most cranial healthy portion of the tail i.e. at the 1st and 2nd inter-coccygeal joint space. A careful approach was taken for the major blood vessels, but there was no bleeding. Both lateral coccygeal veins were increased in diameter and were filled with lengths of clotted blood. No fresh blood was flowing in these distended veins. The accumulated clotted blood was squeezed out from the cranial and lateral sides of sacro-coccygeal space. The size of the surrounding tissue subsided following removal of clotted blood. Throughout the surgical procedure, no bleeding was observed but some precautionary ligatures were applied around the veins to avoid any bleeding. The coccygeal artery on the ventral side was also ligated. A layer of muscle sutures was applied with Polyglactin 910 no. 2 and the skin was closed using horizontal mattress sutures with braided silk No.3(Figure 2). Postoperatively inj. Streptopenicillin 5 g twice daily and inj. Meloxicam 15 ml, once daily, intranuscularly was administered for 5 and 3 days, respectively. Antiseptic dressing was advised with povidone iodine and herbal fly repellant ointment (Himax; Indian Herbs Company, Saharanpur, India). Gross examination of the amputated tail revealed excessively dilated coccygeal vein and

![Figure 1](image_url)
Figure 2. Photograph of the buffalo after tail amputation.

Figure 3. Photograph showing cross section of amputated tail with dilated coccygeal veins (yellow arrows) and excessive deposition of fibrous tissue (white arrow).
excessive fibrous tissue deposition on the ventral aspect of the tail (Figure 3). The skin sutures were removed on the 15th post-operative day. Telephonic follow up revealed that the animal calved normally with some assistance and delivered a live calf. Further follow up at 18 months found the animal to be healthy and doing well.

Varicosity of coccygeal veins in buffalo has been reported in literature but surgical treatment was not described (Tyagi and Singh, 1993; Kulkarni et al., 2005). In the present study, though the surgical attempt was guarded, it was made considering owner’s request and on ethical grounds. Chronic retention of blood in the coccygeal veins with no movement of tail may have led to clotting of blood. Dilated veins, thickened skin and excessive deposition of fibrous tissue might be the cause for massiveness and immobility of the tail.

In an adult buffalo, the circumference of a healthy tail at the base usually ranges from 20-22 cm, but in this case the circumference of the tail at the base was 48cm. For limb varicosities, contrast techniques are advised to find out the exact location of the arteriovenous shunt and attempts can be made to ligate and remove it in early stage, but with chronicity there develops multiple shunts and the ligatures are not helpful as the whole limb is engorged with blood (Tyagi and Singh, 1993). The reason behind the occurrence of coccygeal varicosity only in buffaloes but not in cows, need be explored. The weight and length of the tail along with increased laxity in the sacro-coccygeal joint of buffaloes are two of the hypotheses in the pathogenesis of coccygeal varicosity. These anatomical differences might predispose the buffalo tail to more self trauma than the cow tail. On long term follow up it was observed that once the hanging portion of the tail was amputated the progression of the condition stopped.

REFERENCES

