TAIL DOCKING IN AN AFRICAN LION (*PANTHERA LEO*)

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ABSTRACT

A four year old male African lion resident at the zoological garden of the University of Ibadan was discovered to have injured its tail at the region of the fifth caudal vertebra. A caudal vertebral fracture was diagnosed on clinical examination and in addition to severe laceration of the tail, the animal was in severe pain. A decision to amputate the tail at the level of the fifth caudal vertebrae was taken. This article describes surgical amputation of the tail at the level of fifth caudal vertebra. To the best knowledge of the authors this is the first report of a tail amputation in a captive African lion.

INTRODUCTION

Animal tails are known to be important for social signalling in some animal species (1). Tail docking refers to the amputation of part or all of an animal's tail. In dogs tail docking is commonly performed as a routine surgical procedure (2). In young puppies tail docking is usually done 3-5 days after birth and usually without anaesthesia or analgesia. Adverse effects of tail docking include pain and neurological consequences. Tail amputation should only be performed on those dogs whose tail or associated structures have been injured or where there is occult pathology of this appendage (3). Therapeutic caudectomy is indicated for traumatic lesions, infections, neoplasia and perinanal fistula. Complications include infection, dehiscence, scarring, fistula recurrence and anal sphincter and rectal trauma (4).

Anamnesis

A 4-year old male lion **(***Panthera leo***)** identified as "Johnson" at the Zoological garden University of Ibadan was involved in a fight with his enclosure mates resulting in a laceration and fracture of the caudal vertebrae at the level of the C5. The wound on the tail region was assessed and in addition to the soft tissue damage, a fracture of bone was diagnosed at the level of the 5th caudal vertebra which was evidenced by an increased range of motion of the tail at that region and attendant pain. Radiographic evidence of a fracture was unavailable at the time. The lion became withdrawn and refused food. Due to the associated pain a decision to amputate the remainder of the tail was taken.

Methodology

The lion was cage baited in order to restrain it. Anaesthesia was achieved with a combination Xylazine and Ketamine at doses of 0.5mg/kg Xylazine (Xyl M 2 VMD Hoge Mauw 900 B-2370 Arendonk – Belgium-Holland) Ketamine 5mg/kg (Ketamine HCl Laborate Pharmaceutical, E-11 Industrial Area, Panipat-132103, India) as a combined intramuscular injection.

The area around the wound was shaved and disinfected and draped. An incision was made at a point away from the point of injury and laceration and dissected backwards to create a flap for wound closure. A circumferential ligature was also placed around the entire tail to temporarily reduce blood supply to the tail and the coccygeal vein and artery were then double ligated using chromic catgut size 4 (Anhui Kangning Industrial Group co. Ltd No 288, South Erfeng Rd, Tianching, Anhui 239300.P.R.C., China). The caudal bone was then severed proximal to the intervertebral articulation before the point of fracture and the skin flap was closed over the caudal bone using an interlocking stitch to preclude wound breakdown and the need for resuturing. The suture material used was a size 4 chromic catgut (Anhui Kangung Industrial Group co. Ltd No 288, South Erfeng Rd, Tianching, Anhui 239300.P.R.C., China). The tail was covered with antibiotic spray (Oxytet spray The Arab Pesticides and Veterinary Drugs Mfg Co., Jordan) post operatively and the animal was placed on Ciprotab (Ciprotab 500 Ciprofloxacin tablets U.S.P. 500mg Medibios Laboratories PVT. Ltd. J/76 M.I.D.C. Tarapur, Thane-401506. India) which was administered twice daily for 5 days.

The tail stump healed uneventfully and animal recovered appetite and playfulness within seven days (Figures 1 and 2).

DISCUSSION

Surgical interventions on zoo animals are not common and even rarer still are those on wild cats. Very few reports are available describing management of fractures in wild captive felines (5). This case describes an attempt to prolong the usefulness of a zoological garden lion and is similar to the case of a leopard whose tail was

macerated by a hyena when it broke into its cage. The tail in the latter case successful reattached (6).

In this case the tail was badly lacerated (Figure 1) making the lion unable to interact with its mates. The tail was successfully amputated at the level anterior to the fracture at the fifth intervertebral articulation and the lion has since fully recovered. To the best knowledge of the authors this is the first report of such an intervention in a captive African Lion.

In other species of animals some of the reasons for tail docking include prevention of faecal soiling in lambs which can predispose animals to fly strike (7) and tail biting in pigs to prevent serious injury (8).Tail docking in dairy cattle may have originated for two reasons: to control disease transmission and improve the milker's comfort (1). In Karakkas lambs, deposition of fat in the tail which requires more energy than deposition of lean meat makes tail docking necessary to improve carcass characteristics (9).

Arguments against tail docking include acute pain, chronic health problems associated with docking, impaired locomotion and impaired communication by docked dogs. The case in support of tail docking include maintaining tradition and breed quality, prevention of tail damage, and accumulation of faecal material, as well as personal preference (2).

Tail docking is included in the surgical operations which are prohibited in pet animals by the European Convention as the procedure modifies the animals' appearance or represent surgery for non-curative purposes. This prohibition is supported by many other countries (2).

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FIGURES

Fig. 1: Pre-operative photograph of the tail showing laceration and swelling around 5th caudal vertebra.

Fig. 2: Johnson 5months post operatively.