

SURGICAL MANAGEMENT OF FIBROMA IN DOMESTIC GOOSE

RUTUJA SAWANT*, HARSHAL PATIL, G.S. KHANDEKAR and DISHANT SAINI
Department of Surgery and Radiology, Mumbai Veterinary College (MVC), Parel-12
Maharashtra Animal and Fishery Sciences University, Nagpur, Maharashtra, India.

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SUMMARY

A female goose (*Anser anser domesticus*) was presented with maggots, ulcerated swelling at both limbs at palmar region. Physical examination revealed ataxia, pain on palpation and reduced feed intake. Blood profile was unremarkable except for a mildly elevated Total Leucocytic Count (TLC) and Alkaline Phosphate (ALP). Radiographic evaluation was done to rule out any bone involvement. Fine needle aspiration cytology (FNAC) revealed fibroma. The surgical correction was done under diazepam-ketamine anaesthesia and maintenance on isoflurane inhalation anaesthesia to remove the growths with gentle dissection. No any post-operative complication was encountered.

Keywords: Anaesthesia monitoring, *Anser anser domesticus*, Fibroma

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A 4.5 kg female goose (*Anser anser domesticus*) was presented to the Veterinary Hospital of MVC, Parel. The owners reported that the goose was having difficulty while walking. On presentation, the goose was alert and well hydrated along with 4 body condition score. On clinical examination, goose was ataxic with ulcerated swelling at palmar region of both limbs, but responsive to both visual and auditory stimuli. On further clinical examination revealed live maggot infestation on of the ulcerated swellings area (Fig. 1). Maggot wound dressing was done and goose was treated by enrofloxacin @ 5 mg/kg b.i.d. for 5 days S/C.

Extremities were lightly pinched with a haemostat and withdrawal response was present at both the limbs indicating intact cranial nerves, without any apparent deficits. Postural placing reflexes were assessed and found to be intact, with proper foot and pelvic limb placement. No abnormalities were noted on auscultation of the cardiopulmonary systems. A complete blood count (CBC) and serum biochemistry were performed to assess the goose's general health status, as the "unhealthy" birds have an 11.5 to 185.2 times higher risk of death associated with anaesthesia (Hollwarth *et al.*, 2022). Blood was drawn from the wing vein using 23-gauge needle. An avian biochemistry profile revealed elevated total leukocytic count (TLC) i.e. 40.5×10^3 cells/micro liter and alkaline phosphatase (ALP) i.e. 1567 IU/L. The elevated TLC values supported the bacterial infection of the ulcerated growth.

The radiographs were taken of both the limbs to rule out the bone involvement. Radiographs revealed soft tissue opacity at palmar region without any bone involvement.

The fine needle aspiration cytology of the swellings at web pad revealed fibroma. Fibromas are benign neoplasms, majority being round to oval intradermal or subcutaneous masses (Hendrick, 2002). The bird was kept off feed for 6 hours and water was made available until 3 hours prior to surgery. The bird was premedicated with single injection of combination diazepam (1 mg/Kg IM) and ketamine (20 mg/Kg). Premedication helped to reduce patient anxiety, facilitated handling and reduced the requirement for inhalational anaesthesia.

General anaesthesia was achieved with isoflurane 3% delivered via facemask. It is an inhalation anaesthesia very commonly used as an induction method in avian patients because of their highly efficient respiratory systems, reducing handling time and stress (Lawton, 2016). The bird was intubated with a 5-0 mm uncuffed endotracheal tube and maintained under isoflurane anaesthesia 1-3% during the surgical procedure. Fluids were administered intravenously in the wing vein at a rate of 5 mL/kg/h. Body temperature was maintained between 39.16-40.83° C with a warm circulating water pad. The bird was monitored recording HR, RR, Spo2 with pulse oximetry. The assessment of reflexes, including withdrawal, palpebral and corneal reflexes and cloacal muscle tone, was done to assess the depth of anaesthesia (Sabater González and Adami, 2022).

The surgical site was scrubbed with dilute chlorhexidine scrub and sterilized water. An elliptical incision was taken at the base of growth on both sides with BPblade no. 22. Bleeding was controlled with electrocautery. The surgical site was then closed using non absorbable suture i.e. Ethilon (1-0). Total surgical time was 50 minutes and total anaesthesia time was 100 minutes. After initial

*Corresponding author: rutujasawant24798@gmail.com



Fig. 1. Swelling at palmar region on both limbs on presentation



Fig. 2. Normal weight bearing post-surgery



Fig. 3-5. (3) Surgical removal of fibroma; (4) Surgical wound on 5th post-operative day; (5) Wound bandaging done to prevent wound infection

recovery from anaesthesia, the goose was kept in a plastic tub lined with towels and observed from a distance as 80 percent of deaths are associated with general anaesthesia occurred following anaesthetic, within zero to three hours post-anaesthesia (Hollwarth *et al.*, 2022). The patient was quiet during recovery. Meloxicam (0.5 mg/kg PO 24h × 5 days) and buprenorphine (0.03 mg/kg PO 6h × 3 days) were started for pain management. Daily dressing and bandaging were advised to avoid wound infection (Fig. 5). The goose ate well and drank water within 4 hours of surgery.

With adequate prior planning, avian patients can have smooth and successful surgical procedures under anaesthesia. Case selection and thorough patient examination before procedures can help to achieve successful outcomes while performing general anaesthesia on avian patients. In this report we described the successful surgical management

bilateral palmar fibroma in goose with clinical improvement of ambulatory ataxia in two weeks post-operatively (Fig. 2). The growths were hard and firm in consistency (Fig. 3). The fibroma can arise from any connective tissue, commonly found in head, neck, shoulder and leg region (Sastry, 2001).

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