Case Report



# Pharyngostomy and its management in a broken beak duck

## Abstract

The celebration of crackers during festivals wanes a threat to birds and atmosphere. Attractive cracker mimics like a prey for birds. A duck had injury of its beak by cracker explosion. The lower beak had fracture and burn wound on tongue. After examination, stabilization pharyngostomy tube placed for assisted internal feeding. Because, it serves oral cavity bypass and aids no movement of fracture lower beak. The assisted feeding tube was maintained in place for 12 days without discomfort. The duck recovered uneventfully and started feeding.

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## Case presentation and anamnesis

A duck presented to Teaching Veterinary Clinical Complex and Referral Veterinary Polyclinic, Indian Veterinary Research Institute, Izatnagar, India with broken lower jaw due to acquisition of ignited cracker. On clinical examination, it was found that lower jaw had two longitudinal split with glossitis. Besides lower jaw was pliable, it's not able to support the tongue (Figure 1A & 1B). Routine hematology and biochemical parameters don't have any remarks.

**Figure 1A** Duck with broken beak.

**Figure 1B** Dropped down splintered lower jaw.

## Surgical procedure

The duck underwent fluid therapy of Ringer's lactate @ 20ml per kg bodyweight via left medial metatarsal vein. The duck was premedicated with Midazolam @ 0.2mg per kg body weight and anesthesia was induced by Ketamine @ 60mg per kg body weight. The oral cavity rinsed liberally with normal saline along with Chlorhexidine mouth wash followed by 2g Glycerin applied over the tongue. One cm rostral to the communicating point of both the upper and lower jaw was marked by digital guidance (0.5cm rostro lateral to pharynx) (Figure 2). Hairs were plucked on exterior surface of skin of the marked point and a small communicable nick (exterior to oral cavity) was made over the marked site. A pre-measured length (from tip of the beak to cranial 1/3rd of the neck) of No. 8 French unit infant feeding tube was selected and the point (length from tip of the beak to nick) was marked in infant feeding tube. The tube tip was inserted into the esophageal opening till the marking on tube synchronized with the exterior surface nick while mouth held wide open. The tube was fixed on the skin surface and secured with an adhesive tape. The broken lower jaw was united with propylene 1-0 sutures; dental acrylic followed by temporary adhesive bandage was done for 12 days (Figure 3–7).

**Figure 2** Site of pharyngostomy via digital guidance.

 

**Figure 3** Pharyngostomy tube insertion.

**Figure 4** Intra-oral view of pharyngostomy tube.

**Figure 5** Pharyngostomy tube patency and multiple hemicerclage of splintered lower jaw polypropylene 1-0 suture.

## Postoperative care

Owner was advised to maintain for at least 21 days of tube feeding and for subsequent x-ray evaluation. Feeding was carried via pharyngostomy tube till 12 days postoperatively without any complications.

## Discussion

Ducks have tetra chromatic vision as like most of other birds.[1] This tetrachromatic vision aids attractants of object higher than humans.[2] Explosive crackers during festival celebration made more attractive design and colors, which made most of the birds, are victim of cracker burn injury. Unlike humans, thoracic limbs were not prehensile organ for birds. Injury of cracker explosion is classified into direct and indirect. Direct injuries arise like varies from deafness, imbalance, simple soft tissue burn wound and fracture even death.[3] Indirect injuries are resulting from crackers, fog and fragmentation of niche.[4] It causes temporary vision loss so birds bumping into object and air pollutants like ozone, sulfur dioxide and nitrogen oxide causes damage to the respiratory system of birds.[5,6] The injury depends on bird's position, aerodynamics and nature of explosion. Beaks are victim of organ in terrestrial while birds acquisition to ignited crackers as prey. So beak injury management was gained now more importance. In oral cavity affections in which delayed healing was expected assisted enteral feeding is indicated.[7] Because difficulty in small birds, long term use intravenous or intraosseous or subcutaneous fluid therapy in birds leads to morbidity and discomfort. Assisted enteral feeding may be alternative for long term maintenance of good patient health status with minimal stress in birds.

**Figure 6** Fixing of pharyngostomy tube.

**Figure 7** Immediate status after recovery from anaesthesia.

## Conclusion

We communicate the successful procedure of pharyngostomy tube placement and its management in a broken beak duck. This technique can be utilized in other birds in condition which arise of oral cavity

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bypass. To our knowledge this is the first case report of pharyngostomy tube placement in a duck.

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## Conflicts of interest

The authors declare there are no conflicts of interest.

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