

SURGICAL MANAGEMENT OF OESOPHAGEAL FOREIGN BODY IN INDIAN FLAP SHELL TURTLE BY MINIMAL INVASIVE OESOPHAGOSTOMY TECHNIQUE (MIOT) - A CASE REPORT

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Abstract: In the present case a male turtle weighing 1.4 kg presented with a history of ingestion of baited fish hook. The position of the hook was ascertained by radiographic examination which was within the caudal part of the oesophagus. Surgical removal of the fish hook was planned using a minimally invasive surgical technique i.e., MIOT under c-arm. General anaesthesia was used and the fish hook was retrieved by making a small incision on the lateral side of the neck. The incision of the oesophagus and skin closed routinely. Post-operatively turtle kept in secure captivity for 15 days without access to water resources. The turtle showed an uneventful recovery.

Keywords: Turtle, MIOT, Fluoroscopy, Fish hook, Oesophagostomy.

INTRODUCTION

Indian flap shell turtle is one of the common turtles and is mainly found in ponds, streams, marshes etc. Freshwater Indian flap shell turtles are opportunistic scavengers but they often feed on live prey, making them vulnerable to being caught on baited fish hook. Ingested fish hooks are mainly lodged in the oral cavity or cervical part of the oesophagus. A turtle left with hook stuck in, could hamper the ability to forage for food. If hook was swallowed it could lodge into the oesophagus or gastrointestinal tract keeping the turtle in agony and pain and proving to be fatal. The hook in the mouth cavity can be retrieved easily by simple manipulation. (Oróset *et al.* 2004, Di Bello *et al.* 2007, Casale *et al.* 2008). However, hook in a cervical region generally requires surgical intervention.

MATERIAL AND METHOD

An adult Indian flap shell turtle weighing 1.4 kg was brought to the Veterinary Clinical Complex, Parbhani by an animal lover with a history of swallowing baited fish hook. On anemiasis, it was revealed that the local vet attempted to remove the stuck hook by manipulation which resulted in the detachment of the nylon thread attached to the hook. Early

physical examination revealed that the turtle was active, alert and responsive. Hydration status was normal as the skin was moist and turgor. After radiographic examination using a dorso-ventral view, there was a radio-opaque object similar to a hook in the cervical part of the oesophagus just outside the coelomic cavity. (Fig.1)

The turtle was anaesthetised using Xylazine 1.2 mg/kg and Ketamine 60 mg /kg in single shot mixture intramuscularly (Sharun *et.al.*,2021). The anaesthesia was monitored using toe and tail pinch response. After general anaesthesia turtle examined under c-arm to confirm the position of hook. The futile attempts were made to dislodge the hock from its position by manipulating it with forecep under fluroscopy.

The neck of the turtle (VD view) was held in an extended position to access the view of the cervical oesophagus. Then a straight forceps was inserted in the oesophagus until its tip reached up to the hook. The hook was then grasped in forceps under fluoroscopy. (Fig.2)



Fig.1 Position of hook



Fig.2 Holding of hook under fluroscopy



Fig.3 Nick incision for hook retrieval



Fig.4 Retrieved fish hook

Then forceps was directed lateral to the neck and the hook palpated from outside. At this point, forceps was held in a stable position and a small nick incision of about 3-5 mm was made on the lateral aspect of the neck directly over the hook (Fig.3). After the incision, gentle pressure was applied to forceps so that the hook came out. Carefully remove the hook using thumb forceps. Oesophageal incision was closed with a simple interrupted suture pattern using polyglactin 910 (5-0). Skin closed with an interrupted pattern using nylon.

Postoperatively treated with injection Amoxicillin 10 -15 mg/kg for 6 days and regular dressing of surgical wound using povidone-iodine. The advice to caretaker was not let him go in any water resource for the next 7 days with follow-up on 8th day. On follow-up the turtle recovered uneventfully and was released to the nearest water resource.

DISCUSSION

According to the position of fish hook various approaches and techniques are used for its retrieval. If hook lodged in mouth cavity, simple extrusion with manipulation technique is used and if it is in oesophagus dehooking using AI sheath is used frequently (Jaeger *et al.*, 2003). Invasive surgical approaches are required in case of lodgement of hook in stomach and intestines (Di Bello *et al.*, 2013). If the swallowed hook becomes trapped in the gastrointestinal tract, it can cause stomatitis, strangling, intussusception, and intestinal tears, along with other digestive disorders (Moraes-Neto *et al.* 2003). Ingested fish hook causes oesophagitis and traumatic perforation to oesophagus and when it passes up to stomach and intestines causes severe injuries to these parts which may leads to the death of turtle so surgical removal is important.

In present case the nylon thread attached to the baited hook was absent, which was generally present in routine cases, as it got detached during unsuccessful attempts by local vet. In such challenging cases the surgical intervention without any further do is essential. In this case due to the fluoroscopy the hook was removed by minimal invasive oesophagotomy technique rather than going for conventional oesophagotomy.

CONCLUSIONS

The fluoroscopic minimal invasive oesophagotomy technique (MIOT) helps to retrieve baited fish hook from less than 5mm incision. The small incision helps to reduce the surgical time and duration of wound healing by minimizing the post-operative complications.

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