

USE OF AN ESOPHAGOSTOMY TUBE FOR MANAGEMENT OF TRAUMATIC SUBTOTAL GLOSSECTOMY IN AN AFRICAN PYGMY HEDGEHOG (*ATELERIX ALBIVENTRIS*)

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Abstract

A 6-month-old intact male African pygmy hedgehog (*Atelerix albiventris*) was presented for evaluation of a traumatic subtotal glossectomy. Physical examination revealed pale mucous membranes, mild dehydration, and a macerated tongue missing approximately 1 cm of the rostral tip. Severe anemia was identified via packed cell volume. The traumatic subtotal glossectomy was debrided and closed through primary intention. An esophagostomy tube was placed for nutritional support and medication administration. This report describes placement, maintenance, and successful use of this esophagostomy tube to manage severe oral trauma in a novel exotic pet species. Copyright 2016 Elsevier Inc. All rights reserved.

Key words: African pygmy hedgehog; *Atelerix albiventris*; esophagostomy tube; glossectomy; nutrition

A 6-month-old intact male African pygmy hedgehog (*Atelerix albiventris*) presented to the Exotic Animal Medicine Service at the North Carolina State University Veterinary Teaching Hospital for evaluation of bleeding from an unknown source. A significant amount of clotted blood (estimated 4 mL based on pictures provided by the owner) was discovered in the animal's cage the morning of presentation. Inappetence and frequent lip smacking were noted in the 8 hours between observation of the blood and presentation to the clinic. The animal was otherwise acting normally and had no previous pertinent medical history.

External physical examination of the patient revealed normal vital parameters, approximately 5% dehydration, pale mucous membranes, mild overconditioning (body condition score 3.5/5), moderate ptyalism, frequent lip smacking, a macerated tongue, and a grade II parasternal systolic heart murmur. A blood clot collected from the animal's cage contained approximately 1 cm of the rostral tongue. The owners were unable to determine how the injury might have occurred.

A complete blood count (CBC) and plasma chemistry panel were recommended, along with general anesthesia for thorough evaluation of the oral cavity, repair of the traumatic subtotal glossectomy, fluid therapy, and administration of analgesic medication. The placement of an esophagostomy tube was suggested owing to the severity of the injury, potential for prolonged anorexia, and inherent difficulty in hand feeding and orally medicating pet hedgehogs. It was also

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unknown whether this animal had sustained any pharyngeal trauma.

The patient was anesthetized with isoflurane gas (Piramal Healthcare Limited, Andhra Pradesh, India) in an induction chamber, positioned in sternal recumbency, and maintained under general anesthesia with 2.5% isoflurane in 100% oxygen at a 1.5 L/min flow delivered via a facemask. Intubation was unsuccessful, and the patient was maintained on a nasal mask for the duration of the procedure. Temperature, pulse, respiratory rate, electrocardiography, and pulse oximetry were monitored for the duration of the anesthetic event, and no immediate complications were encountered. The patient was treated with buprenorphine 0.02 mg/kg intramuscular once (Buprenex; Reckitt Benckiser Pharmaceuticals, Inc., Richmond, VA USA) for pain management and lactated ringers 5% body weight (BW) subcutaneously once (Abbott Laboratories, North Chicago, IL USA) for correction of dehydration. Closer evaluation of the tongue under anesthesia revealed that the rostral 1 cm was missing, and the rostral-most 0.4 cm of the remaining tongue tissue was severely macerated with involvement of the first few millimeters of the frenulum (Fig. 1). The remainder of the oral cavity was unremarkable. The pharynx was packed off with a gauze sponge and the rostral portion of the head was kept in a slightly dependent position to prevent aspiration of fluids and blood. The tongue was gently cleaned with sterile cotton-tipped applicators soaked with dilute chlorhexidine solution and then rinsed with sterile saline. The ragged margins were sharply



FIGURE 1. Appearance of a traumatic subtotal glossectomy in an anesthetized 6-month-old male African pygmy hedgehog.

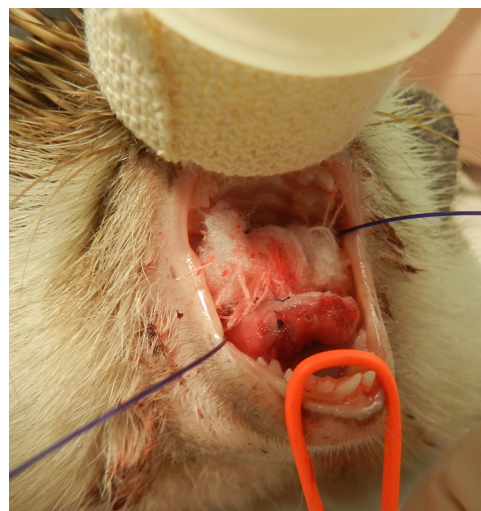


FIGURE 2. Postoperative appearance after debridement and closure of a traumatic subtotal glossectomy in the hedgehog patient.

debrided from the remaining tongue tissue and 3 horizontal mattress sutures were placed using 5-0 polydioxanone (PDS, Ethicon LLC., Guaynabo, Puerto Rico USA) to appose the dorsal and ventral epithelial surfaces of the tongue (Fig. 2).

The patient was repositioned in right lateral recumbency, and the left side of the neck from the ramus to the point of the shoulder was clipped and sterilely prepared. A sterile 8 Fr red rubber catheter (Tyco Healthcare Group LP, Mansfield, MA USA) was premeasured to the level of the last rib. Curved Kelly hemostats were placed through the oral cavity into the esophagus and used to tent the esophagus against the skin. Using a #15 scalpel blade, a stab incision was made through the skin, subcutaneous tissue, and esophagus. The hemostats were then bluntly pushed through the esophageal incision and the tip of the red rubber catheter was grasped with the hemostats. The catheter was pulled through the stoma into the oral cavity and then redirected into the stomach. The tube was secured to the skin at the insertion site with 2-0 polydioxanone in a purse string and finger trap suture pattern. The tube was also secured to the dorsum using a butterfly tape tab with 2 simple interrupted 2-0 polydioxanone sutures, leaving enough room to allow the patient to roll into a ball (Fig. 3). Whole-body radiographs confirmed appropriate esophagostomy tube placement within the gastric lumen. Spondylosis deformans and excessive small intestinal gas attributed to aerophagia were noted on these radiographs, but no other abnormalities were identified (Fig. 4). Excessive esophagostomy tube length was cut short and modified by placing a

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