A 6-month-old 1.5-kg intact male domestic shorthair cat was presented to the emergency service with a 4-month history of nasal and ocular discharge, stertor, dyspnea, open-mouth breathing, seizures, and a mass in the cervical region. The owner reported that the clinical signs had increased over time. The cat was eating and drinking normally but had a reduced level of activity.

Prior to hospital admission, the cat had been treated with amoxicillin–clavulanic acid with no improvement in signs.

On physical examination the cat had a normal temperature, pulse, and normal body condition score. The cat was assessed to be normohydrated and had bilateral ocular discharge. There was open-mouth breathing with increased abdominal effort and significant upper respiratory noise. The mass in left side of cervical region increased in size on inspiration and reduced during expiration. Complete blood count revealed erythrocytosis (10.18 X 10^6/μL) but there were no abnormalities on serum chemistry. Lateral and ventrodorsal radiographs of the neck and thorax were performed as part of the initial investigation (Figure 1).

Formulate differential diagnoses, then continue reading.

Keywords: internal medicine-feline, radiology-small animal, inflammation, secondary megaesophagus, nasopharyngeal disease

Diagnostic Imaging Findings and Interpretation

Radiographs show a large, smoothly margined, ovoidal soft tissue mass within the cranial esophagus.
The mass was homogenous, soft tissue opacity, clearly outlined by surrounding air within the esophagus which was severely dilated with air. The mass appeared pedunculated, extending rostrally into the nasopharynx with loss of air within the pharynx. The nasopharynx was abnormal in appearance with loss of air and increased soft tissue opacity and ventral displacement of the soft palate. The left tympanic bulla was also abnormal with smooth thickening of the bulla wall.

**Treatment and Outcome**

The part of the mass that could be reached and exteriorized through the oral cavity was partially removed by gentle traction (Figure 3). The 3.0 X 2.2 cm fragment removed was reddish white with a smooth surface. Histological examination of the fragment revealed inflamed granulation tissue with infiltrations of neutrophils and lymphocytes. Based on the clinical and histological findings, the mass was diagnosed as a nasopharyngeal polyp. The cat received postoperative prednisolone therapy, and clinical signs and megaesophagus resolved after surgery.

The radiographic findings raised suspicion for a large nasopharyngeal mass causing a secondary generalized megaesophagus.

Endoscopy was performed to evaluate the nasopharynx region and esophagus. A large, freely mobile mass was identified immediately caudal to the upper esophageal sphincter and the esophagus was enlarged and abnormally distended.

**Comments**

Feline inflammatory polyps, also referred to as nasopharyngeal polyps, respiratory tract polyps, and middle ear polyps, are non-neoplastic masses originating from the epithelial lining of tympanic bulla or eustachian tube, and are the most common masses that affect the middle ear of cats.

The exact etiology of nasopharyngeal polyps is not known, and their development may be multifactorial. Proposed etiologies include a response to chronic upper respiratory tract infection, chronic otitis media, ascending infection from the nasopharynx, or they may be congenital in origin.

Radiography can be used to identify soft tissue masses within the nasopharynx, dorsal to the soft palate and to evaluate the tympanic bullae for opacification, thickening of the wall and loss of the normal air shadow. However, the sensitivity of radiography for detecting otitis media is low and false negatives are likely.

Diagnosis of nasopharyngeal masses can be made by endoscopy, CT scan, skull radiographs, oral examination, digital palpation of the soft palate, nasopharyngeal biopsy, or any combination of...
Biopsy samples can be taken blindly or under endoscopic guidance.\(^2\)

Thoracic radiographs are recommended to rule out the presence of lower respiratory tract disease.\(^1\) Three reports of megaesophagus secondary to nasopharyngeal polyp in a cat have been published.\(^3\)–\(^5\) In both cases, thoracic radiographs revealed a severe generalized megaesophagus and evidence of aerophagia, as in the report presented here.

It is thought that the megaesophagus resulted from chronic aerophagia that developed due to the size of the polyp and its obstruction of the airway.\(^3\) Prognosis for resolution of megaesophagus in cats with upper airway obstruction can be good if the obstruction is treated and resolved.\(^3\)\(^,\)\(^4\)

Traction is a useful first-line treatment for removal of nasopharyngeal polyps in cats. However, clinical signs and potential involvement of the middle and inner ear can be used as guides to determine whether surgery is necessary in preference to traction and prednisolone.\(^3\) The most common complication of traction removal is polyp recurrence. Although traction can also cause temporary Horner syndrome, serious complications are unlikely.\(^1\)

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### References