

## What Is Your Diagnosis?

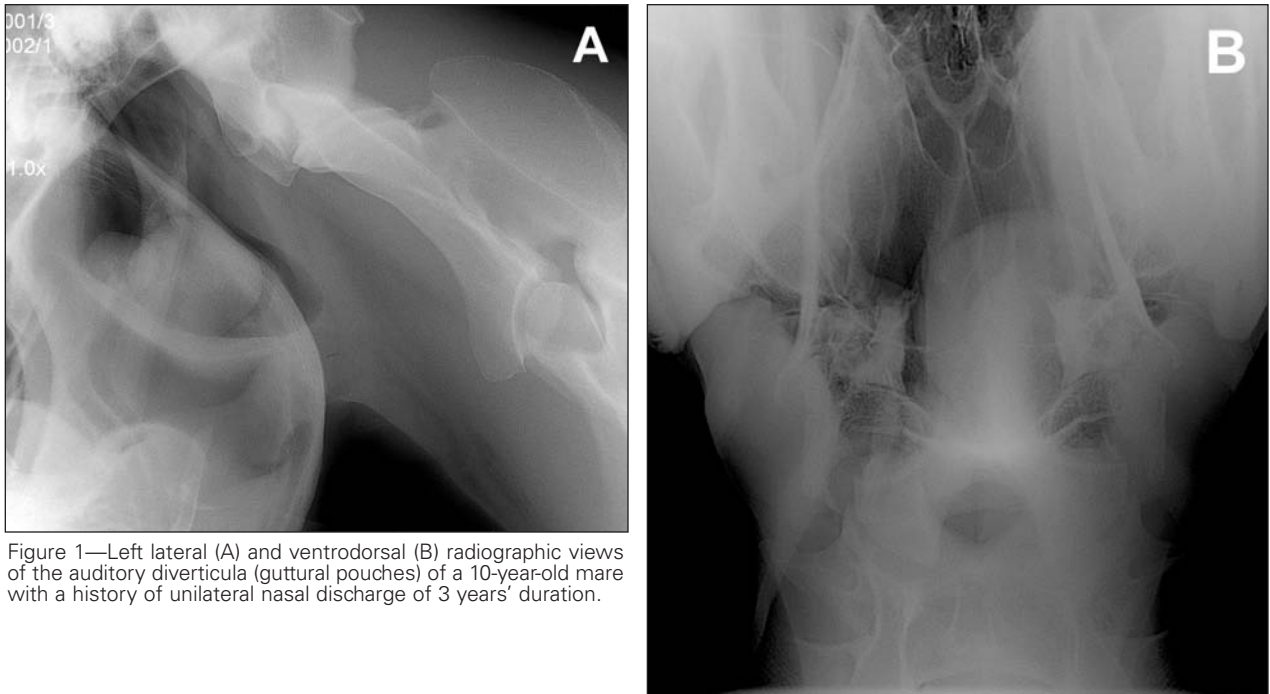


Figure 1—Left lateral (A) and ventrodorsal (B) radiographic views of the auditory diverticula (guttural pouches) of a 10-year-old mare with a history of unilateral nasal discharge of 3 years' duration.

### History

A 10-year-old Arabian mare was evaluated for discharge from the left nostril. The mare was purchased 3 years earlier and always had an intermittent discharge from the left nostril. Antimicrobial treatment temporarily resolved the discharge.

Physical examination revealed swelling in the left parotid region and a nonodorous, white to yellow discharge from the left nostril. Lateral and dorsoventral radiographs centered over the auditory diverticula (guttural pouches) were obtained (Fig 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page ▶

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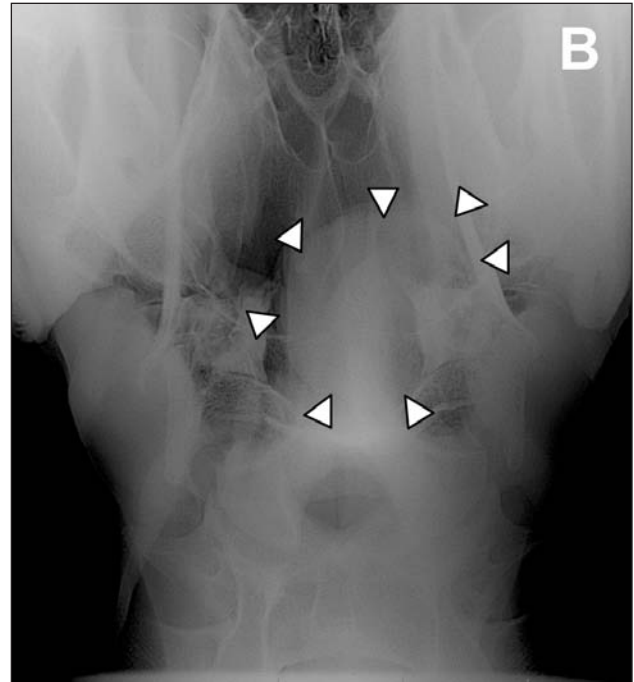
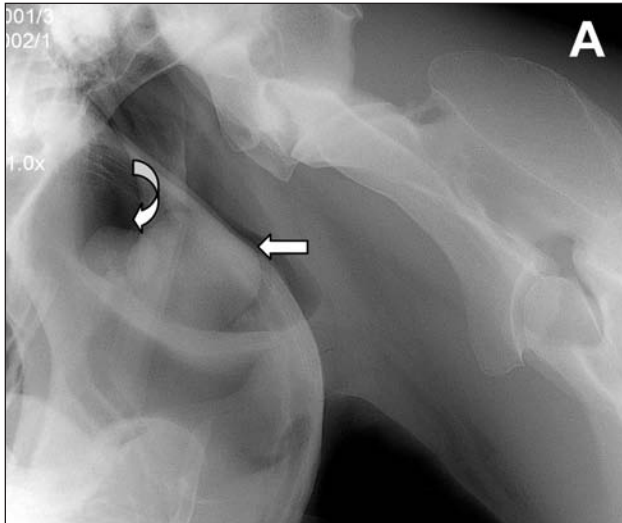


Figure 2—Same radiographic views as in Figure 1. On the left lateral (A) view, there is a small (curved arrow) and a large (straight arrow) irregular soft tissue opacity in the guttural pouch. On the ventrodorsal (B) view, there is a large (arrowheads), spherically shaped density in the left guttural pouch.

## Diagnosis

**Radiographic diagnosis**—There are at least 2 soft tissue opaque masses in the left guttural pouch that are contrasted by gas in the lumen (Fig 2). The smaller mass measures 3.5 cm in diameter, and the larger mass measures 8.0 cm in diameter. The ventral aspect of the guttural pouch or dorsal wall of the pharynx is thickened.

## Comments

Differential diagnoses for soft tissue masses associated with the guttural pouch include inspissated purulent material (chondroids), neoplasia, cysts, abscess, and regional lymphadenopathy.<sup>1</sup> Empyema of the guttural pouch may resolve with the formation of single or multiple firm masses known as chondroids.<sup>2</sup> This is a sequela to infection with *Streptococcus equi*. Enlarged lymph nodes may appear intraluminal on radiographs if directly superimposed on the gas-filled guttural pouch, although indentation of the wall of the guttural pouch may also be observed. The thick ventral wall of the guttural pouch observed on the radiographs may have been caused by a small accumulation of fluid, a thickened wall, or thick pharyngeal tissue (or a combination of these findings). In the horse in this report, chondroids were confirmed by direct videoendoscopy of the guttural pouch.

Guttural pouch empyema may be diagnosed by clinical signs, which include nonodorous, white to yellow nasal discharge; distention of the parotid region; and lymphadenopathy. Additionally, in more severe cases, stridor and dysphagia caused by impingement of swollen guttural pouches on the pharynx and inflam-

mation of the ninth (glossopharyngeal) and 12th (hypoglossal) cranial nerves, which are located beneath the floor of the guttural pouch, may be observed. Radiography and endoscopy are used to confirm guttural pouch empyema. Radiography may reveal soft tissue opacification of the guttural pouch or a gas-fluid interface, depending on the volume of exudate present. Chondroids form when the exudate becomes inspissated.

Treatment of guttural pouch empyema involves medical and surgical management.<sup>2-4</sup> Medical treatment includes guttural pouch lavage in addition to administration of antimicrobials. Surgical approaches to the guttural pouch can be used to remove chondroids and establish drainage.<sup>2</sup> In addition, a snare guided into the guttural pouch by endoscopy can be used to remove smaller chondroids.<sup>5</sup> Because of the chronic nature and size of the masses, surgical removal of the masses was performed by use of a modified Whitehouse approach during general anesthesia.<sup>2</sup>

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