

# What Is Your Diagnosis?



Figure 1—Lateral and dorsoventral radiographic views of the cranial cervical region of a 4-year-old Quarter Horse gelding.



## History

The owner of a 4-year-old Quarter Horse gelding reported that when the horse was a yearling, it had pulled back on a halter, after which a clicking sound was heard emanating from the horse's neck. The clicking ceased when the horse was 2 years old and, subsequently, the horse had been in training without incident. The owners were about to commence more intensive training and were interested in whether the incident as a foal would affect the horse's future ability. The only abnormality detected at examination was a slight stiffness when the head was moved laterally. Radiographs of the cervical vertebrae were obtained (Fig 1).

Make your diagnosis from Figure 1—then turn the page ♦

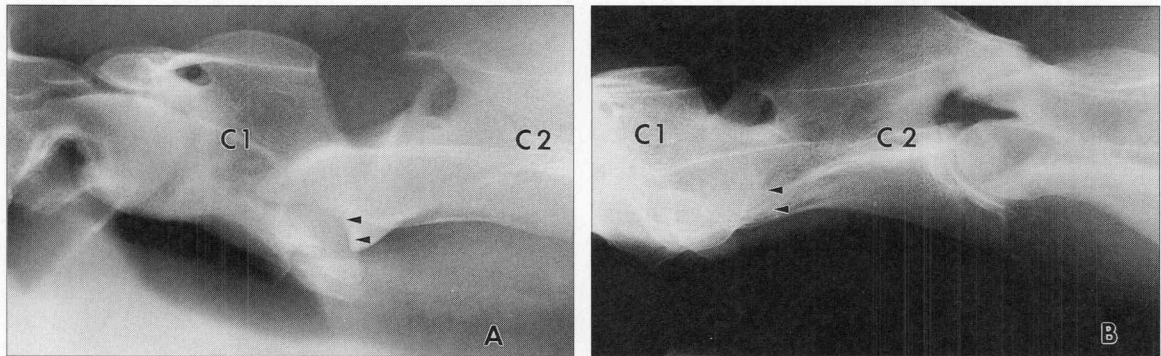


Figure 2—Comparative lateral radiographic views of normal (A) and fused (B) C1 and C2. Notice the articulation between C1 and C2 (arrowheads) in (A) and lack of articulation in (B).

### Diagnosis

**Radiographic diagnosis**—The articulation between C1 and C2 is not apparent radiographically and appears to be fused (Fig 2). The surrounding bone in this region has a smooth, distinct appearance, with no identifiable proliferation.

### Comments

The radiographic findings are compatible with a congenital fusion of C1 and C2.

Alteration of the cervical vertebrae may be associated with familial/congenital diseases or caused by physical trauma. Affected horses may have various abnormal clinical signs related to spinal cord compression. A clicking sound often is audible when the head is moved.<sup>1</sup> Trauma to the vertebral column may induce vertebral fractures. Although neurologic signs are not always evident, the horses appear to be in extreme pain and, if the cervical vertebrae are affected, horses will stand with their necks held rigidly. After fracture, there is progres-

sive hemorrhage and callus formation, which may eventually cause spinal cord compression.<sup>1</sup>

The horse of this report was unusual because of the lack of any proliferative response at the site of fusion and the lack of neurologic signs. The history, clinical signs, and radiographic appearance were suggestive of a congenital cause for the lesion. In view of the quiescent appearance at the site, a good prognosis was given to the owners.

1. MacKay RJ, Mayhew IG. Diseases of the nervous system. In: Colahan PT, Mayhew IG, Merritt AM, et al, eds. *Equine medicine and surgery*. 4th ed. Goleta, Calif: American Veterinary Publications, 1991;797-803.

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