A 4-month-old quarter horse filly presented with persistent serous discharge at the base of the left ear. An intraoperative lateral radiograph (A) of the filly’s skull shows a lesion (arrows).

1. What is your diagnosis? Explain the cause of the clinical findings.
2. Name at least two synonyms for this condition.
3. What is the preferred treatment?
4. What complications are associated with treating this condition, and how can they be avoided?

5. What is the prognosis for resolution of the problem?

(See page 126 for answers and explanations.)
1. Dentigerous cyst. This condition is due to failure of the first branchial cleft to close, leading to the abnormal development of a tooth-like structure that is attached to the temporal bone and enveloped in a secreting membrane, creating a fistulous tract to the base of the ear. Typical signs are limited to seromucous discharge at the base of the ear that may cause staining and matting of the hair as well as swelling at the temporal region. In this case, the filly had two molar-like teeth (A; arrows). The top arrow points to the larger tooth, while the lower arrow points to the smaller tooth, the distal part of which is superimposed over the petrous temporal bone.

2. Synonyms for dentigerous cyst include heterotopic polyodontia, ear fistula, ear tooth, temporal cyst, and temporal teratoma.

3. The preferred treatment involves complete excision and primary closure. The fistulous tract should be followed carefully (B) and removed with the cyst intact, without cutting through the mucosal lining. This is done to avoid contaminating the surgical site with secretions, thereby preventing secondary cellulitis. An intraoperative radiograph (C) obtained after removal of the large molar-like tooth shows the smaller molar-like tooth (arrow) that was subsequently removed.

4. Potential complications include facial nerve paralysis, abnormal ear carriage, hemorrhage, calvarium fracture, and continuous drainage. The zygomatic and auricular branches of the auriculopalpebral branch of the facial nerve and the superficial temporal artery should be avoided while approaching the lesion. The scutiform cartilage and auricular muscles should be avoided and the teeth separated from the underlying skull as gently as possible to prevent fracture of the temporal bone. Complete removal of the cyst and epithelial lining of the fistula is essential to prevent recurrence of drainage.

5. With proper surgical technique, the prognosis for complete resolution of the problem is excellent.

SUGGESTED READING