

What is Your Diagnosis

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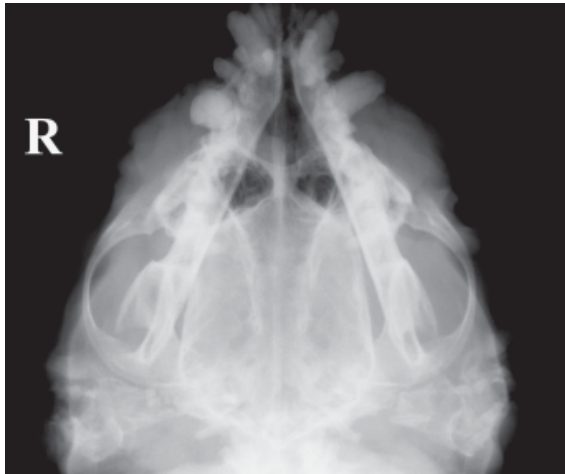


Figure 1. Dorsoventral radiograph

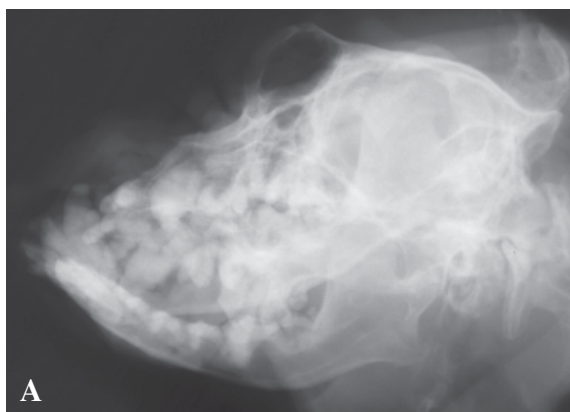


Figure 2 A. Right ventral- left dorsal oblique radiograph

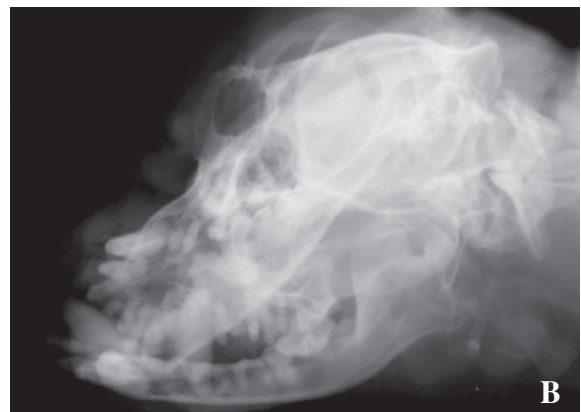


Figure 2 B. Left ventral- right dorsal oblique radiograph

Signalment :

9-year-old female English Bulldog.

History :

The dog had been treated otitis externa for 6 months. Head shaking and tilting were presented. Pinnal deformities were seen.

Clinical Examination :

Accumulation of secretion and exudate in the both ear canals and thickening of the aural mucosa were found. Sign of severe pain was noticed when aural palpation and open-mount examination were performed.

Radiographic Examination :

Dorsoventral and right (and left) ventral-left (and -right) dorsal oblique views of the skull were taken to examine the middle and external ear abnormalities.

Give your diagnosis and turn to the next page.

Radiographic findings :

Dorsoventral radiograph (Fig.1) showed dystrophic calcification or ossification of the external ear cartilage which results in narrowed external ear canals (Fig.3, 4A).

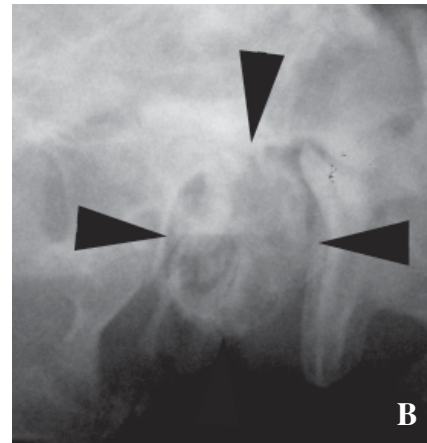
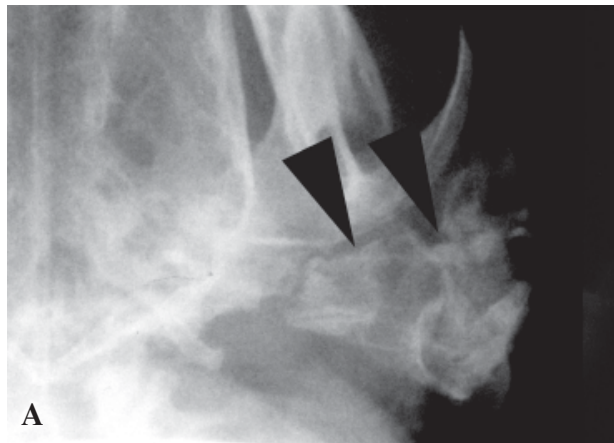


Figure 3 A, B. Left external ear and tympanic bulla radiograph

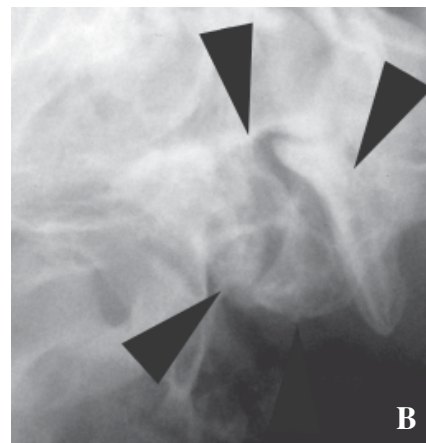
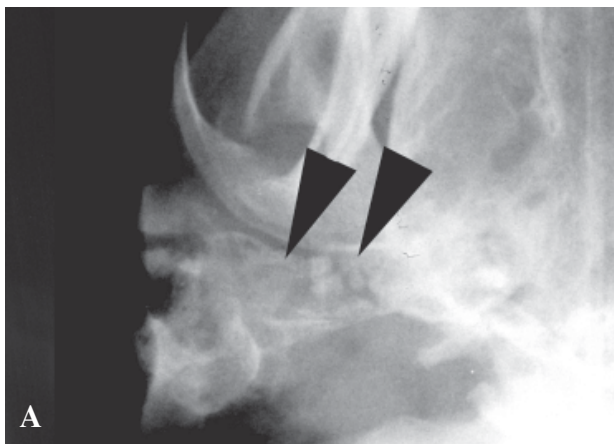


Figure 4 A, B. Right external ear and tympanic bulla radiograph

Radiographic diagnosis :

Chronic otitis media and externa

Discussion

The middle ear comprises an air-filled tympanic cavity containing three auditory ossicles. Canine tympanic cavity is usually quite large and round except in the bulldog that may be smaller and flatter. To evaluate the ear abnormalities, the dorsoventral (or ventrodorsal) view is the most useful because they enable a comparison between left and right sides. In dorsoventral view, however, the tympanic bullae are superimposed on other parts of the skull which can not be adequately assessed. Additional projections that minimize superimposition are the left (or right) 20° ventro-right (or-left) dorsal oblique and rostrocaudal (open-mount) views. In chronic otitis

media, there is usually an accumulation of exudate or granulation tissue within the tympanic bulla and a thickening of the bulla wall. Moreover, in chronic otitis externa which induces tympanic membrane rupture may be radiographically assessed by infusing non-ionic water-soluble contrast medium (2-5 ml) into the external ear canal and taking a radiograph to find the contrast in the tympanic bulla.

References

- Benigni, L. and Lamb, C. 2006. Diagnostic imaging of ear disease in the dog and cat. In Practice. 28: 122-130.
- Thrall, D.E. 2002. The cranial and nasal cavities-canine and feline. In: Textbook of Veterinary Diagnostic Radiology. 4th ed. W.B Saunders Company. Pennsylvania. 78-82.