

CLINICO-RADIOGRAPHIC FINDINGS OF HEAD AFFECTIONS IN THREE DOGS

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This study reports clinico-radiographic findings of head affections in three dogs. The dogs presented with swelling at the head region, dyspnea and epistaxis. Clinical and radiographic examinations were performed to diagnose the condition. Tumour was diagnosed in two dogs, whereas skull haematoma was diagnosed in one dog. A differential diagnosis of swelling in the head region is very essential for deciding the treatment and prognosis of the case.

Keywords: Epistaxis, Head, Radiograph, Tumour.

Dogs were often presented with complaint of swelling at the head region, it may be accompanied with unilateral or bilateral epistaxis. These signs may be associated with head injury leading to fractures, multilobular tumours of frontal bone and nasal tumours (Sharma *et al.*, 2018). Proper diagnosis is required to decide the line of treatment and prognosis. Due to the presence of bony skull, the palpation of inner structures is unlikely and hence a proper diagnosis through physical examination is challenging. Nevertheless, the diagnostic imaging techniques are very helpful in these cases. Radiography, being commonly available in Veterinary set up, is an important diagnostic tool to differentiate dissimilar tissue densities and can penetrate beyond bony skull. Herein, we report clinical-radiographic findings of head affections in three dogs.

Materials and Methods

Case 1, a 7-year-old male Labrador retriever was presented with a 4-year history of progressively worsening dyspnea and unilateral epistaxis (Fig.1). Before presentation the dog was treated for the upper respiratory tract and rickettsial diseases. A complete blood cell count, and haemo-protozoan examination were performed and showed no diagnostic findings. Thereafter,

radiographic examination of the dog was advised.

Case 2, a 3-month-old female German shepherd was presented with the complaints of dyspnea, intermittent epistaxis and swelling above the right eye. Clinical examination was unremarkable apart from swelling above the right eye (Fig. 2). On aspiration a viscous fluid was observed. Initially the case was suspected for abscess and fomentation with Sumag® ointment was advised. Later on, the case was again presented with red jelly like discharge from the swelling. The swelling was lanced and a dark tarry red coloured viscous secretion was drained. The cavity was cleaned and flushed with dilute povidone iodine solution. After few days epistaxis from the right side was reported by the owner without improvement in the swelling. The animal was further subjected to radiographic examination to rule out abnormalities related to bones of skull.

Case 3, a 2-month-old, mixed breed male dog with swelling at head from last 2 days was presented. On palpation the swelling was hard to touch. The pup was otherwise alert and no other symptom was noticed except for swelling at the occipital region and was subjected to radiographic examination of head region.

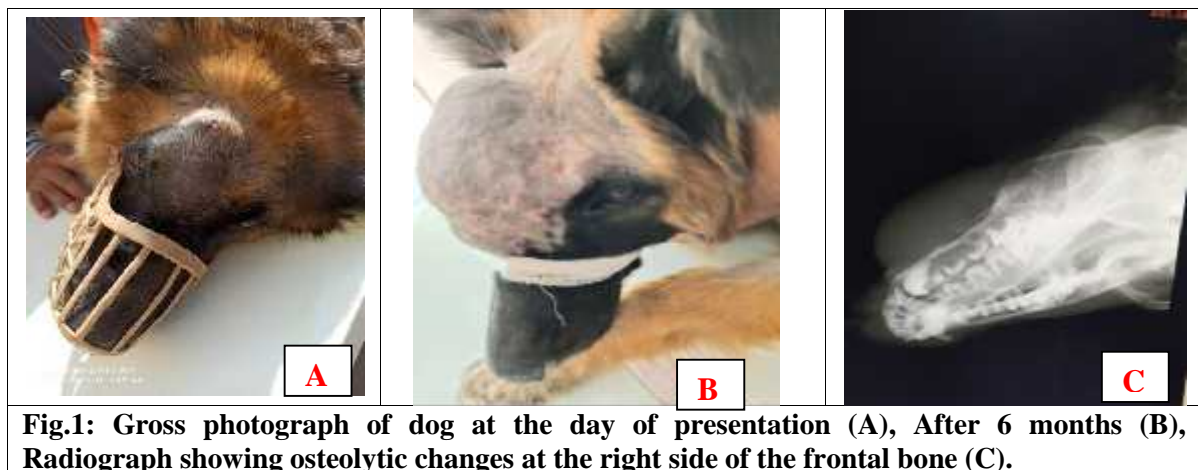
Results and Discussion

The first dog was subjected to

imaging, which showed a space occupying lesion within the right nasal cavity (Fig. 1c), the adjacent areas of the skull showed no visible anatomical changes or signs of invasion. As the patient was already treated medically for rickettsial or bleeding disorders, the case was further managed using doxycycline (10 mg/kg PO), fluconazole (10 mg/kg PO) in addition to oral haemostatics for 15 days. Thereafter, owner didn't turn up and further follow-up cannot be ascertained.

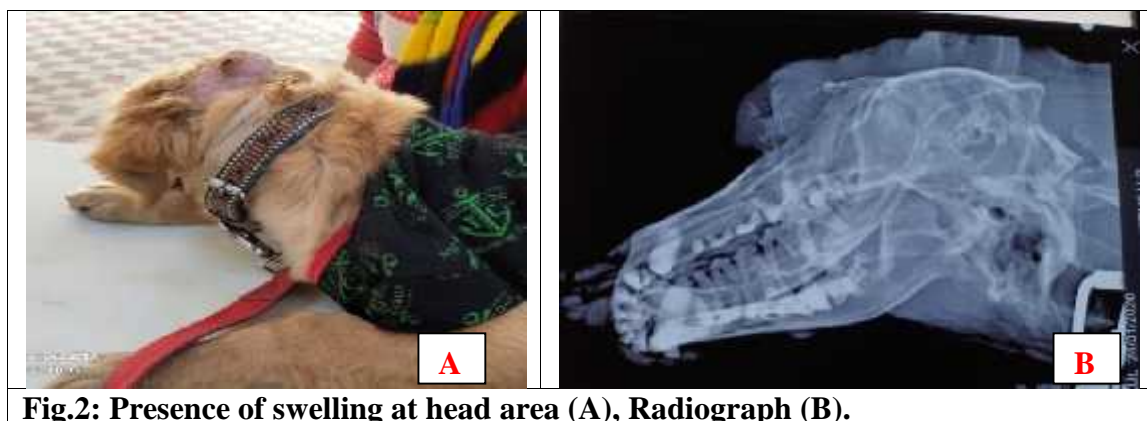
The radiograph of the second case showed osteolytic changes at the right side of the frontal bone above the orbital cavity. Additionally, the right side of the nasal cavity showed soft tissue density, suggestive of

tumour (Fig. 1). The owner could not come to the clinics due to the COVID-19 outbreak in the year 2020. Six months later the case was presented again with excessively enlarged growth (Fig. 1B). The dog was inactive, not eating and unable to bear weight from the hind limbs. Looking into the condition of the pet and as requested by the owner, the dog was euthanized. Although this type of tumour is generally reported in older animals as also reported by Sharma *et al.*, 2018, an early onset and further histopathological diagnosis cannot be explained, as our request for necropsy to determine the type of tumour was declined.



In the radiograph of the third case, the swelling at the head region was tentatively diagnosed as haematoma, as there was no break in the continuity of the skull bone and no other symptom (Fig. 2). The case

was medically managed using anti-inflammatory drugs and no further complication was reported up to one month. The swelling at the head region reduced gradually and the dog recovered.



Radiographic examination is one of the essential tools for diagnosis of cases which are presented with the symptoms, like unilateral or bilateral nasal bleeding and swelling at the head region. Clinical signs of unilateral or bilateral nasal discharge which may be serous, mucoid, mucopurulent or epistaxis, with or without the presence of a non-healing ulcer in the nasal planum as also mentioned by Worley, 2016. A correct diagnosis is essential for establishing treatment protocols and stipulating prognosis. Surgical removal is often difficult because of the location of these tumors and a very high rate of local recurrence as also reported by Jubb *et al.*, 2007 and Sharma *et al.*, 2018. In addition to the tumours, there are many

infectious, non-infectious and traumatic causes which may lead to the symptoms like epistaxis or swelling at the head region.

References

- Jubb, K.V.F., Kennedy, P.C. and Palmer, N. (2007). Pathology of Domestic Animals: chapter 1 – bone and joints. Vol. 1, 5thedn., Saunders, Elsevier. U.S.A. Pp.119-120.
- Sharma, S., Hazari, R. and Kumar, V. (2018). Multilobular tumor of frontal bone in dog: A case report. *Indian J. Vet. Pathol.*, **42**(2): 136-137.
- Worley, D.R. (2016). Nose and Nasal Planum Neoplasia, Reconstruction. *Vet. Clin. N. Am. - Small Anim. Pract.*, **46**: 735-750.