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V Lalzawmliana

Assistant Professor, Department
of Veterinary Surgery &
Radiology, C.V.Sc. & A.H., R.K.
Nagar, (West) Tripura, India

S Warson Monsang

Department of Veterinary
Surgery & Radiology, College of
Veterinary Sciences and Animal
Husbandry, R.K. Nagar, Tripura
(West), India

Debajyoti Pal

Department of Veterinary
Surgery & Radiology, College of
Veterinary Sciences and Animal
Husbandry, R.K. Nagar, Tripura
(West), India

Surgical management of salivary mucocele in a crossbred jersey calf: A rare case report

V Lalzawmliana, S Warson Monsang and Debajyoti Pal

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Abstract

The present study describes a case of successful surgical treatment of a rare clinical case of salivary mucocele in a crossbred Jersey calf. Based on the history from the owner, clinical examination and from the result of exploratory fine needle aspiration, the case was diagnosed as salivary mucocele involving mandibular gland. Radical surgical approach with complete resection of the cyst along with the affected gland was opted to treat the animal. The animal recovered uneventfully with a successful clinical outcome.

Keywords: Mucocele, mandible, anaesthesia, resection

1. Introduction

A salivary mucocele is an abnormal accumulation of mucoid saliva in the submucosal or subcutaneous tissue adjacent to a damaged salivary gland capsule or duct and is surrounded by granulation tissue (Dunning, 2003; Bellenger and Simpson, 1992) [3, 1]. The mucocele has a nonepithelial non-secretory lining, mainly consisting of connective tissues and capillaries (Karbe and Nielsen, 2008; William *et al.*, 2008) [6, 10]. The etiology of salivary mucocele is rarely identified (Boydell *et al.*, 2000) [2]. Except for intraoral cysts, salivary cysts are seldom seen and then mostly in horses and cattle. It was previously thought that these cysts arise as a sequel to a blocked duct. The present view is that salivary cysts in animals arise as a result of rupture of a duct and leakage of saliva in the surrounding tissues (Hofmeyr, 1988) [5]. The present case study describes a rare case of salivary mucocele in a 6 months crossbred Jersey calf.

2. Case History and Observation

A male Jersey crossbreed calf of 6 months was presented to the Teaching Veterinary Clinical Complex, R.K. Nagar, Tripura with a history of slowly enlarging soft swollen mass on the mandibular region. The animal was apparently healthy; all the clinical and hematological parameters were within the normal physiological range. Physical examination revealed a circumscribed soft, fluctuant mass of around 8 cm in diameter on the ventral aspect of the mandible, and it was painless on careful palpation (Fig. 1). Additionally, aseptic needle puncture was done to aspirate the cystic mass which yielded clear, thick mucoid saliva. Based on history, physical examination, location and result of exploratory fine needle aspiration the case was diagnosed as salivary mucocele involving mandibular gland.

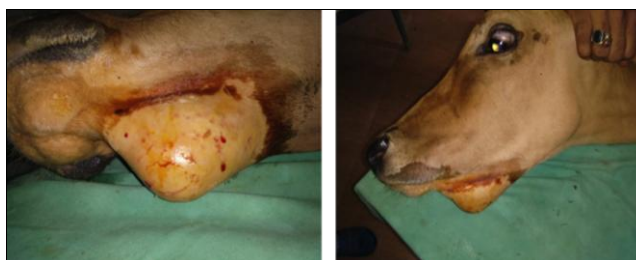


Fig 1: Enlarged soft swollen mass on the ventral aspect of the mandibular region

Corresponding Author:

V Lalzawmliana

Assistant Professor, Department
of Veterinary Surgery &
Radiology, C.V.Sc & A.H., R.K.
Nagar, (West) Tripura, India

3. Treatment and Surgical Procedure

Food was withheld for 24 hours and the animal was sedated with the help of Xylazine HCl @ 0.05 mg/kg bwt, i/m and site was prepared aseptically for surgical intervention. In addition, a circumscribed local infiltration of 2% Lignocaine HCl was done surrounding the area to induce local anaesthesia. About 6 cm long horizontal incision was given over swelling. The cyst was identified and separated along with the gland from the surrounding structures (Fig. 2). Resection of the cyst was done along with the affected gland by careful dissection. The surrounding tissue was sutured by using Vicryl (No.1) and the surgical wound was closed in a routine manner (Fig. 3). Post-operative treatment included inj. Intacef @ 10 mg/kg bwt, i/m, for 7 days and inj. Melonex @ 2.2 mg/kg bwt, i/m, for 3 days. Regular dressing was done after every 2 days with povidone iodine and Himax ointment was applied over the wound (Fig 4). The animal had uneventful recovery, the wound was healed and the suture was removed after 14 days.

4. Results and Discussion

The cyst is manifested by a circumscribed, soft swelling in the region of salivary gland. Aseptic needle puncture yields thick mucoid saliva (Hofmeyr, 1988) [5]. Some cases have been resolved by using periodic drainage, but surgical treatment is necessary to prevent recurrence (Waldron and Smith, 1991) [9]. Although the exact cause is difficult to determine, blunt trauma, foreign bodies and obstructive sialoliths may be regarded as aetiological agents of salivary mucocele (Hedlund, 2002) [4]. However, in the present case, the actual cause of the mucocele was not ascertained. Diagnosis of salivary sialoceles was made mainly based on history, physical examination, and results of paracentesis (Smith, 2000) [7]. Sialography has been described as a method for the diagnosis of sialoceles (Smith, 2005) [8], but it is technically difficult and in most cases like the present one it was unnecessary and therefore, not often performed because the diagnosis can generally be accurately made by careful observation and palpation. The treatment is generally done by surgery under general anesthesia. The radical operation is complete excision of the cyst, if possible without rupturing it and to include the whole or affected part of the gland. Resection of the gland is tedious and not without danger of injuring vital nerves and other structure (Hofmeyr, 1988) [5]. In this case, complete removal of the cyst along with the affected gland was done successfully without post-operative complication.



Fig 2: Identification and separation of the cyst from the surrounding structures



Fig 3 and 4: Closure of surgical wound; Post-operative dressing of the surgical wound

5. Conclusion

A salivary mucocele is an abnormal accumulation of mucoid saliva in the submucosal or subcutaneous tissue adjacent to a damaged salivary gland capsule or duct and is surrounded by granulation tissue. The present study describes a case of surgical treatment of salivary mucocele involving mandibular gland. Radical surgical approach with complete resection of the cyst was done with successful clinical outcome.

Conflict of Interest: Not available

Financial Support: Not available

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