MANDIBULAR SIALOADENECTOMY IN DOG WITH SIALOCELE :CASE REPORT

ABSTRACT

The report aims to describe a case of left mandibular sialocele in a dog. A male, castrated, Shih Tzu dog, weighing 7 kilograms and five years old, was treated at the Veterinary Hospital of the School of Veterinary and Zootechnics at the Federal University of Goiás. A fluctuating non-painful subcutaneous swelling was observed in the left ventral cervical region during the clinical examination. Image tests revealed anechoic content with dilation of the salivary duct, heterogeneity and enlargement of the left mandibular gland and possibility of sialolithiasis. Besides, cytological analysis showed results that confirm the diagnose of left mandibular sialocele. Following the diagnosis, surgical treatment was made, performing sialoadenectomy. A skin incision was made ventral to the ear canal in the dorsal direction caudal to the angle of the mandible, and the patient was evaluated for days.Salivary sialocele is the most common sialoadenopathy in dogs and its diagnoses require several image methods and the surgical treatment is essential for healing and improving clinical signs.

Keywords: Canine, surgery, salivary gland, salivary duct

1. INTRODUCTION

Salivary sialocele or mucocele consists of an accumulation of mucinous secretion resulting from the extravasation of saliva into the interstitial space adjacent to the glands and salivary ducts [1]. It is characterized by an increase in volume, with a smooth, regular surface, well defined, unilateral or bilateral, painless and flaccid. Furthermore, it has a different anatomical location that depends on the affected gland [2,3].

The etiology of salivary mucoceles may be related to infections, trauma, obstructions or rupture of ducts, sialoliths, neoplasms, in addition to the idiopathic form [4]. Most of the time it is asymptomatic, although some animals may present dysphagia, abnormal tongue movements and inappetence [4,5].

Diagnosis is based on anamnesis, physical examination, fluid aspiration cytology, radiography and ultrasound. Treatment can be carried out conservatively through periodic drainage or glandular excision [3,5]. In view of the above, the objective of the present work is to report the use of the sialoadenectomy technique to treat mandibular gland sialocele in a dog.

2. PRESENTATION OF CASE

A male, castrated, Shih Tzu dog, weighing 7 kilograms and five years old, was treated at the Veterinary Hospital of the School of Veterinary and Zootechnics at the Federal University of Goiás. The owner's main complaint was the appearance of a non-progressive increase in volume in the left cervical region.

During clinical examination, physiological parameters were unchanged, and a fluctuating non-painful subcutaneous swelling was observed in the left ventral cervical region. Given the clinical board, mandibular sialocele was suspected. Complementary exams were requested like cervical radiography and ultrasound, blood count and hepatic and renal biochemical profile through measurement of serum alanine aminotransferase (ALT), alkaline phosphatase (AF), urea and creatinine.

The ultrasound examination showed anechoic content with dilation of the salivary duct, heterogeneity and enlargement of the left mandibular gland. The radiographic examination ruled out the possibility of sialolithiasis and the other analyzes were within the reference range for the species. Subsequently, a cytological analysis was carried out on the liquid collected from the affected region, which had a hypocellular, mucinous, yellowish and viscous appearance. Based on the information obtained, the diagnosis of left mandibular sialocele was established and the patient was referred for surgical treatment.

A skin incision was made ventral to the ear canal in the dorsal direction caudal to the angle of the mandible. Careful divulsion of the tissues was carried out and hemostasis was performed using electrocoagulation and in larger vessels, suturing in a crossed mattress pattern with number 3-0 poliglecaprone thread. The muscular fascia was incised, which promoted glandular exposure. Subsequently, dissection of the mandibular and sublingual glands was carried out up to the lingual branch of the trigeminal nerve (Fig.1), ductal ligation with number 3-0 poliglecaprone suture and transection of the duct-gland complex (Fig.2). Finally, the region was washed with 0.9% warmed saline solution. For synthesis, the subcutaneous tissue was reduced with number 3-0 poliglecaprone thread in an intradermal pattern and the dermorrhaphy was performed with number 3-0 nylon thread in a separate simple pattern. A passive drainage system with a Penrose drain was implanted in the ventral aspect of the surgical wound.

Figure 1 - Dissection of the mandibular salivary gland with presence of sialocele.

Figure 2 - Salivary gland with mucocele associated with healthy gland tissue.

On the fourth postoperative day, the drain was removed and 10 days after the procedure, the skin stitches were removed. Reevaluation was made after 60 days, and the patient did not present a recurrence.

3. DISCUSSION

The patient in the present report presented a mucocele of the left mandibular gland, in line with the description [5, 10-12] of a higher prevalence of cervical sialocele in canine patients. It was not possible to determine the cause, mainly because the patient described here had no history of previous trauma and the cervical x-ray ruled out lithiasis, in contrast to the statement of a greater association of this disease with obstructions or ruptures secondary to sialoliths [4,6].

The sialodenocentesis performed was compatible with material poor in cellularity, with a mucinous and cloudy appearance. However, cytological analysis normally demonstrates vacuolated macrophage infiltrate, coalescent and polymorphonuclear cells [7]. The ultrasound findings in this case are similar to those described by Kealy et al. [8] for sialocele characterized by an area with anechoic content and absence of flocculation.

The treatment performed in this case was sialoadenectomy of the mandibular and lingual glands, which corroborates the indication for choosing this surgical modality [3,5,7]. The choice of sialoadenectomy in relation to other treatments, such as drainage, aspiration and drug treatments, is due to the surgical approach being definitive for sialocele, preventing the condition from recurring. Furthermore, there is a reduction in the occurrence of complications such as secondary infections, worsening the patient's prognosis [5].There were pre and intra-operative complications and tissue divulsion was meticulously performed with special care to avoid accidental incision of the glandular capsule and leakage of contents at the surgical site. It is known that salivary gland excision is a simple, quick, effective procedure

and, when there's no saliva contamination infections are rare [2,9]. The technique used was associated with a passive postoperative drainage system with removal after four days, as well as Penrose or negative pressure drains [5]. No suture dehiscence or seroma was observed, unlike some reported cases in which xerostomia, interference with swallowing and a large amount of seroma were observed [5, 13,14].

4. CONCLUSION

The sialoadenectomy technique is effective in correcting mandibular gland sialocele and allows effective removal of the duct-gland complex.

Ethical Approval

Animal Ethic committee approval has been collected and preserved by the author(s)

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

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