

SURGICAL MANAGEMENT OF RANULA IN A LABRADOR DOG

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Introduction

A salivary mucocele is an accumulation of saliva that has leaked from an injured salivary gland or duct and is lined with granulation tissue (Rahal *et al.*, 2003; Hedlund, 2002). The incidence of salivary mucocele in the dogs is less than 0.5% and it occurs most often in the dogs between 2 and 4 years of age (Safzadeh, 2004). All dog breeds are susceptible but it seems to be more common in poodles, German shepherds, dachshunds and Australian silky terriers (Hedlund, *loc. cit.*). This may be caused due to trauma or may have been broken or bruised with the resultant swelling closing off the duct. There are instances where the glands, because of an internal inflammatory process, release a fluid that is just too thick to make its way through the tiny ducts leading to an obstruction. Salivary cysts occur when saliva leaks from the salivary ducts into the tissues with in the mouth. However, blunt trauma, foreign body and sialolith have been suspected as major causes of salivary mucocele (Brown, 1989).



Fig.1: Salivary mucocele at base of the tongue

The saliva leaks from the torn salivary gland or duct, and accumulates in the adjacent tissue. Consequently, the accumulated saliva induces an inflammatory response (Rahal *et al.*, *loc. cit.*). The present report records successful surgical management of salivary mucocele in a 6 year old Labrador dog.

History and Observations

A six year old Labrador female dog was referred to the Dept of Veterinary Surgery and Radiology with gradual enlargement of soft painful mass on right side below the base of the tongue since three days with hyper salivation. On palpation a soft, fluctuant, painless mass was recognized in the right side of sublingual tissue just beneath the tongue (Fig.1). Respiratory rate, heart rate, and rectal temperature were within the normal values. Based on the history and clinical examination the condition was diagnosis as sublingual salivary mucocele (Ranula) and planned for surgical excision under general anaesthesia.



Fig.2: Excised Sublingual gland

Treatment

Dog was prepared for aseptic surgery and premedicated with Atropine sulphate @ 0.04 mg/kg body weight subcutaneously, pre-emptive analgesia @ 1 mg/kg body weight intramuscularly and Triflupromazine hydrochloride @ 1 mg/kg body weight intravenously. After 10 minutes,

anesthesia was induced with 2.5% thiopentol sodium and maintained by isoflurane and oxygen mixture. The patient was positioned in left lateral recumbency. A vertical incision about 4 cm was made over the swelling. The gland was separated from the capsule by blunt dissection. The artery and vein entering the gland were ligated and sublingual gland was

completely removed (Fig.2). The vestibular mucosa was sutured with 1-0 Vicryl (Polyglactine 910) in simple interrupted pattern. Post-operatively, Ceftriaxone 25 mg/kg Body weight P/O Bid for five days and regular application of Hexigel ointment over the wound was advised. Animal made uneventful recovery by tenth post-operative day.

Discussion

Nuh Kilic (2009) treated three dogs suffering with non painful sublingual sialoceles by marsupialisation successfully. However the lining of the mucocele is fibrous or inflammatory tissue and hence recurrence is possible in due course. As an alternative to drainage of the ranula by needle aspiration, redirection of salivary flow by marsupialisation has also been suggested by Smith (2000).

Subcutaneous tissues of the intermandibular or cranial cervical area and the sublingual tissues on the floor of the mouth are the common sites for accumulation of extra-vascular saliva (Mapes and Anderson 1984, Harvey 1993). In the present case the ranula may be due to chewing of plastic brush. Repeated drainage or injection of cauterizing or anti-inflammatory agents does not eliminate mucocele. Hedlund (2002) reported that there will be a chance that an animal develops a sialocele on the opposite side especially if there was an underlying genetic predisposition in animals that develop sialoceles.

Definitive treatment is removal of the damaged salivary gland to prevent further accumulation of mucus and drainage of the mucocele. In the present case complete resection of the mandibular sublingual gland

was done because the sublingual gland is intimately associated with the mandibular salivary gland duct and removal of one would traumatize the other as stated by Hedlund, (2002).

Summary

Successful surgical management of Sublingual mucocele (Ranula) in a Labrador dog is discussed.

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