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Surgical management of salivary Sialocele in german shepherd dog: A case report

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Abstract

A 4 years old male German shepherd dog was presented with a history of swelling under the rear portion of the jaw since last 3 weeks. On clinical examination soft, non-painful swelling under the lower jaw was observed and swelling was observed under the tongue or in the back of the mouth. The swelling was soft and feel like fluid within a pocket of tissue. A complete blood count (CBC) and routine serum biochemical analysis was within the range. From the anamnesis and heamato-biochemical examination, the case was diagnosed as salivary sialocele. Accordingly the surgery was planned. The animal was sedated with inj. Triflupromazine HCl @ 1mg/kg B. Wt. administered I/V. General anesthesia were achieved by using inj. Thiopentone @ 10 mg/ kg, IV. The surgical intervention was performed for removal of the mucoid saliva. Post operatively antibiotic and anti-inflammatory drugs were administered for 5 days. Dog recovered uneventfully. Prompt presentation and diagnosis, and surgical intervention improved the outcome of salivary sialocele causing due to non-penetrating foreign body.

Keywords: management, Sialocele, shepherd, german, case report

Introduction

A salivary mucocele or sialocele is an abnormal accumulation of saliva in the subcutaneous tissue adjacent to a damaged salivary gland or duct and is surrounded by granulation tissue. The saliva originates from a ruptured salivary gland or duct. A cervical mucocele is a collection of saliva in the deeper structures of the intermandibular space, the angle of jaw, or the upper cervical region. The sublingual and mandibular salivary glands are most commonly affected (Hedlund and Fossum, 2007) ^[4]. Sialocele is the most common salivary gland disorder in dogs especially in the Poodles and German shepherd, and it could be more commonly seen in dogs that are younger than 4 years of age (Ploypetch *et al.*, 2016) ^[9]. The secondary cause of salivary sialocele could be due to the sialolith induced duct obstruction (Lane, 2012) ^[6].

Excepted for the painless and slow onset, clinical signs of sialocele could be varied in according to the locations of the primary site. The mandibular and sublingual salivary glands are the most affected sites that saliva often be collected as the sialocele at the cervical and sublingual tissues. In contrast, the incidences of salivary sialocele were much lower at the pharyngeal and zygomatic areas (Lurye, 2008) ^[7]. After salivary gland or duct is ruptured, saliva would be collected in subcutaneous tissue, which is surrounded by vascularized connective tissue called a pseudocystic wall (Lane, 2012) ^[6]. Saliva takes the path of least resistance, most commonly accumulating in the cranial cervical or intermandibular, sublingual or pharyngeal tissue (Dewangan *et al.*, 2016) ^[1]. In the present paper reports surgical management of salivary sialocele in a German shepherd dog.

Case history

A four years old German shepherd dog was brought to the Department of Veterinary Surgery and Radiology with complaint of swelling under the rear portion of the jaw since last 3 weeks. On clinical examination, a very large fluctuant, non-painful fluid filled mass was evident in the cervical and intermandibular region. Body temperature, pulse, and respiration were within normal range. The dog continued to eat and drink normally until the day of presentation. Based on the history and clinical findings, cervical mucocele was suspected. On needle aspiration of the mass under aseptic conditions a thick mucoid, blood tinged fluid confirmed the presence of saliva and a diagnosis of sialocele.

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Fig 1: Soft fluid and filled cavity

Surgical treatment

After aseptic preparation of the animal, general anaesthesia was achieved using inj. Atropine sulphate @ 0.02 mg /kg S/C, inj. Dexamethasone @ 1mg /kg S/C. The animal was sedated with inj. Triflupromazine HCl @ 1mg/kg B. Wt. administered I/V. General anaesthesia were achieved by using inj. Thiopentone @ 10 mg/ kg, IV. The affected side was determined to be the left side by placing the animal in left lateral recumbency. On fine needle aspiration at the dependent areas of the sialoceles, the swelling is filled with saliva which is thick like mucoid and blood tinged fluid. Through a stab incision in the most ventrally dependant area complete drainage of the sialoceles content was done (fig. 2). The consistency of the content was thick mucoid fluid was drained. Then flushing with normal saline and with betadine solution, cauterization with cetone of tin iodine was done. Post-operative care was done by using Inj. Taxim (500mg), Inj. Meloxicam (2ml) intramuscularly for 5 days. The owner was advice to give soft diet for 3 to 5 days to his pet. The animal recovered uneventfully. The case was closely followed for a period of two months after the surgery, and there was no recurrence of the condition was reported.

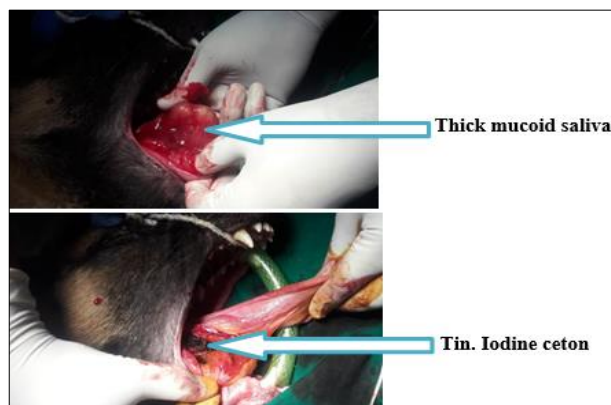


Fig 2: Through a stab incision in the most ventrally dependant area complete drainage of the sialoceles content was done

Discussion

A salivary mucocele is an accumulation of saliva in a single or multilobulated cavity lined with connective tissue, contiguous to a salivary gland or duct (Dunning, 2003) [2]. Salivary mucoceles, also known as sialoceles, salivary cysts and honey cysts, are thought to result from trauma to a salivary gland or duct resulting in leakage of saliva into the surrounding tissues. The injury of either the sublingual salivary gland or the duct by trauma causes leakage of saliva that usually from as three common saliva sacs, which were cervical mucocele at the ventral region of the throat, ranula at the sublingual mucosa area, and pharyngeal mucocele at the

paratonsillar submucosal region (Ploypetch *et al.*, 2016) [9]. Clinically, a salivary mucocele is observed as an abnormal swelling containing saliva. The swelling is commonly observed in the cranial cervical or intermandibular, sublingual, or pharyngeal tissues hence cervical, sublingual, or pharyngeal mucoceles are used to describe these abnormal collections of saliva (Tobias, 2010) [10]. Dogs are more commonly affected than cats and although all breeds are susceptible, there are reports indicating that poodles, German shepherds, dachshunds, and Australian silky terriers are frequently affected (Knecht, 1998) [5]. Salivary mucoceles are not cysts. Cysts are cavities lined by epithelium, whereas the granulation tissue lining if a mucocele is produced secondary to inflammation caused by free saliva in the tissues (Yasonu *et al.*, 2011) [11]. The actual cause is rarely identified; however choke collars, foreign bodies and sialoliths have been proposed in the literature. This disorder must be differentiated from salivary gland tumors, hematoma, lymph node enlargement, cyst, sialoadenosis, and sialoadenitis (Faraji – Abbasi *et al.*, 2018) [3]. Most dogs have cervical or intermandibular mucoceles and usually are asymptomatic (Dewangan *et al.*, 2016) [1]. These animals usually are presented for treatment with history of gradually developing, fluctuant, painless mass. Most mucoceles are soft and fluctuant whereas tumours and abscesses are generally firm. In this case, diagnosis of sialoceles was made based on history, clinical signs and needle aspiration method. Thick mucoid saliva was aspirated from the swellings suggesting a salivary sialoceles.

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