

Masticatory Muscle Myositis Due to Auto Immune Disease in a Dog – A Case Report

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Abstract

Masticatory muscle myositis (MMM) is a immuno mediated neuromuscular disease of the masticatory muscles in dogs. In affected dogs the masticatory muscles are characterized by trismus while there is an absence of clinical abnormalities in other skeletal muscles. A 6 years old mongrel non-descript dog was brought with the complaint of not able to open the mouth and take feed since a week. The case was diagnosed as Masticatory muscle myositis. It was treated with oral Prednisolone @ 5mg/kg for three weeks. The dog had an uneventful recovery following treatment.

Key words: Masticatory muscle myositis, dog, Masseter myositis

Masticatory muscle myositis (MMM) or Masticatory myositis is a immuno mediated neuromuscular disease of the masticatory muscles in dogs. In affected dogs, there is an absence of clinical abnormalities of any other skeletal muscles. (Reiter and Schwarz, 2007). The breed predisposition were reported in the German Shepherd and Cavalier King Charles Spaniel (Taylor, 2000). This syndrome is commonly referred to as locked jaw syndrome and is characterized by trismus (inability to open the mouth) due to inflammation of the masticatory muscles, including the temporalis, masseter, medial and lateral pterygoid muscles, and rostral portions of the digastricus muscles (Evans *et al.*, 2004). The present article describes about masticatory muscle myositis in a dog.

Case History and Observations

A 6 years old mongrel non-descript dog was brought to the Small Animal Medical Unit of the Teaching Veterinary Clinical Complex, Veteri-

nary College and Research Institute, Namakkal with the complaint of not able to open the mouth and take feed since a week. Detailed anamnesis revealed that the dog was not able to swallow the food and took more time for eating the regular quantity of feed that was offered. On clinical examination all the vital signs including temperature, heart rate, respiration rate and CRT were within the normal range. The mucous membrane of conjunctiva was pale pink. The main clinical signs were trismus and dysphagia. Attempt to open the mouth by hand was unsuccessful. All the other skeletal muscles including the limb muscles were flexible and joints could be flexed and extended normally which differentiated it from tetanus. The posture and gait of the animal were normal. There was no exophthalmos or history of any physical injury. Haematological parameters were within the normal range except for the elevated creatinine phosphokinase. Based on the history and clinical signs, the case was diagnosed as Masticatory muscle myositis.

Treatment and Discussion

The patient was treated with Prednisolone (@ 0.5 mg/kg per oral) twice daily for 3 weeks and then later it was slowly tapered. It was also administered with amoxicillin with clavulanic acid (@20 mg/kg orally) for 10 days. Following treatment, the symptoms slowly reduced and the animal was able to open the mouth and able to masticate the food. The animal recovered uneventfully after a month of treatment with prednisolone. Masticatory myositis resulted when the immune system's antibodies specifically target these 2M muscle fibers which were limited to the masticatory muscles. MMM was known to respond well initially to corticosteroid therapy, but a relapse usually might occur if

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the treatment was discontinued prematurely. The response to the treatment was usually good (Pitcher and Hahn, 2007). Differential diagnoses for limited ability to open the oral cavity in dogs include ankylosis, luxation, dysplasia and osteoarthritis of the temporo mandibular joint, craniomandibular osteopathy, osteomyelitis, neoplasms affecting the ear and/or the jaw (especially those in proximity of the temporo mandibular joint), focal tetanus and generalised idiopathic polymyositis. Dogs with the chronic form of MMM might show atrophy of bilateral masticatory muscles. Unilateral masticatory muscle atrophy was usually caused by ipsilateral trigeminal nerve dysfunction, such as peripheral nerve sheath tumour (Anderson and Harvey, 1993).

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Micrometrical Studies on the Tongue of Goat Foetii (*Capra Hircus*)*

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Abstract

On thickness of lingual epithelium at various levels of the tongue, length and width of different lingual papillae and number of taste buds in fungiform and vallate papillae. Showed significant ($P \leq 0.05$) increase between succeeding age groups.

Key words: Micrometry, prenatal development, tongue, goat.

Micrometrical studies on the tongue had been conducted by various workers in mouse (Iwasaki *et al.*, 1996), goat (Ramaya *et al.*, 2000), buffalo calves (Singh, 2001; Gadre and Singatai-

ri, 2006) and buffalo foetii (Verma, 2008). Micrometrical development of the prenatal tongue in goats is presented in this paper.

Materials and Methods

The present study was conducted on the tongue of 18 goat foetii ranging from early pregnancy to near full term in age. The approximate age of the foetii were calculated by putting the body weight values in the formula (Singh *et al.*, 1979) for estimation of age in goat foetus. As mentioned below

The collected foetii were divided into three groups based on their estimated ages viz.- Group I (below 50 days of gestation), Group II (between 50-100 days of gestation) and Group

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