

SURGICAL MANAGEMENT OF SOFT PALATE HAEMATOMA IN CAMEL

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Palatine diverticulum (dulaa or gulaa) is a distensible diverticulum on the lower part of the soft palate and well developed in male dromedary camels (*Camelus dromedarius*), balloons out in 'rut' or breeding season as a form of sexual behaviour (Arnautovic and Abdel Magid, 1974; Reece and Chawla, 2001; Al-Sobayil and Ahmed, 2011). The exact mechanism of distension of the dulaa is not well understood. It has been assumed that the dulaa distends during expiration when the camel closes its nares and air is forced from the lungs into the oro-pharynx to inflate the soft palate (Arnautovic and Abdel Magid, 1974; Al-Sobayil and Ahmed, 2011). Trauma of protruded soft palate by sharp teeth, other object like tree and manger may lead to perforation of the soft palate wall, causing submucosal haematoma, necrosis, gangrene, food impaction leading to characteristic signs of dysphagia and dyspnoea (Gahlot *et al*, 1988; Gahlot, 1993; Gahlot, 2000; Al-Sobayil and Ahmed, 2011; Tanwar *et al*, 2016). The inflammatory condition with oedematous swelling of protruded dulaa becomes more complicated by the time. Successful surgical management of soft palate haematoma in camel is reported here.

History and Clinical Examination

Adult male dromedary camel aged 6 years was presented with a history of protruding the elongated mass "dulla" and salivation sine last 2 days (Fig 1). The camel had dysphagia and dyspnoea. The feed and water intake were completely absent. However, owner drenched some water and liquid feed into oral cavity to fulfil their daily requirement. Clinical examination revealed it as a case of protrusion of soft palate. Soft palate resection under xylazine sedation was planned.

Treatment

The camel was restrained in sternal recumbency and sedated with xylazine @ 0.3 mg/kg body weight,

intravenously. The oral cavity was irrigated with light potassium permanganate solution and the feed material, clots and debris were removed. The animal's mouth was opened by application of a rope each at upper and lower jaw and were pulled in opposite direction. Tongue was pulled out. The soft palate was grasped using a cotton towel and pulled rostrally. The distended pedicle of soft palate was resected close to its attachment using a long handle Mayo scissors. The head of camel was lowered down to prevent aspiration of blood. Haemostasis occurred spontaneously (Fig 2). On dissection of the resected soft palate, clotted blood was found inside the soft palate indicating haematoma (Fig 3, 4).

Post operatively, broad spectrum antibiotic and analgesic were administered parenterally for 5 days. Three doses of injection containing vitamin A, D, E, 20 ml was also administered intramuscularly on alternate days. The irrigation of oral cavity with light potassium permanganate solution was done daily till healing of the oral cavity wound. The animal was allowed free access to water but semisolid foods and leafy hay for 2 weeks. The eventless recovery was reported by the owner.

Discussion

In the present case the protruded dulaa was ulcerated, oedematous with occurrence of haematoma due to injury by sharp teeth. It has been reported that the injuries of dulaa cause laceration of mucosa and rupture of its blood vessels (Gahlot, 2000; Al-Sobayil and Ahmed, 2011; Tanwar *et al*, 2016). An increase in the size of the protruded dulaa occurs due to accumulation of inflammatory fluid, oedema, feed particles and haematoma. Camel owners are advised to rasp sharp teeth in male camels before every rut season to decrease the chance of soft palate injury and further complications. The delay in amputation of the injured dulaa may lead to

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