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Surgical correction and histopathological study of fibroblastic sarcoid in a horse: A case report

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Abstract
An adult horse was presented with the complaint of abnormal growth identified as sarcoid on the lateral aspect of the thoracic cavity. Surgical intervention was carried out by giving local anaesthesia. The sarcoid was removed; area was sutured and covered with proper antiseptic material. Analgesic and suitable antibiotics were administered for 5 days. The resected mass was fixed in 10% formalin for histopathological examination. Histopathologic study revealed the characteristics feature of sarcoid which include hyperkeratosis, hyperplasia and immature fibroblasts. Sutures were removed after 7 days and the animal recovered fully.

Keywords: sarcoid, horse, hyperkeratosis, surgical, fibroblast

Introduction
The skin is the most common site for equine neoplasia (Scott and Miller, 2003) [5].The most common cutaneous tumours are equine sarcoid, squamous cell carcinoma (SCC), melanoma, fibrosarcoma, and cutaneous lymphosarcoma, respectively (Bastinello, 1983) [1]. Sarcoids are commonly occurring equine skin tumours that don't metastasise. Although common, sarcoids vary greatly in their size and appearance, the nature in which they grow and potentially spread and the way they respond to treatment. Sarcoids can develop anywhere on the horse's skin, but more common sites include the chest, groin, sheath and face. Of the various types of sarcoids, fibroblastic sarcoids are fleshy masses that grow quickly, bleed easily and often have ulcerated surfaces. The purpose of this paper is to describe surgical correction and histopathological study of fibroblastic sarcoid in a horse.

Cases
A 7 year old horse was presented with the complaint of abnormal growth on the skin at the level of 13th intercostal space (Fig. 1). On examination it was found that growth is Sarcoid and the owner was informed about the condition. Surgical removal was decided after proper permission from the owner. The animal was casted and the surgical area was prepared. Local anesthetic 2% lidocane hydrochloride was given around the Sarcoid area. Before removing the papilloma the skin was sutured with silk suture material in horizontal interrupted manner. After this the Sarcoid was carefully removed (Fig. 2). The Sarcoid weighed about 25g. The diameter of the sarcoid was 3cms. The area was covered with proper antiseptic material. Analgesic was given at the doze rate of 0.4mg/Kg body weight for 5 days intramuscularly and Penicillin G Procaine at the doze rate of 3000 units/Kg of body weight for 5 days. Sutures were removed after 7 days and the animal recovered fully. For histopathological examination, the material was fixed in 10% formalin for 48 hours and the processed for the study. Histopathologic study revealed the characteristics feature of sarcoid which include hyperkeratosis, pseudo-epitheliomatous hyperplasia and immature fibroblasts.

Fig 1: Fibroblastic Sarcoid at the level of 13th intercostal space in horse.

Fig 2: Fibroblastic Sarcoid after resection

Results and Discussion
Currently, there is no uniformly effective therapy for equine sarcoid. Surgical management (including conventional excision and carbon dioxide, laser excision), cryotherapy, hyperthermia, radiotherapy, chemotherapy, immunotherapy, topical immune modulation and antiviral agents are used with variable degrees of success. Tumours that are easily accessible and in a location such that skin closure is possible are often treated with conventional surgical excision (Taylor and Haldorson, 2012). In present situation also the conventional surgical method was performed because of the location of the

sarcoid on the lateral wall of the chest cavity.

It is critical that wide margins (2–3 cm) be removed to prevent recurrence due to inadequate removal of all extensions of the sarcoid into surrounding tissue (Carstanjen *et al*. 1997; McCauley *et al*. 2002). Because this is often difficult to achieve, conventional surgical excision alone has yielded success rates of 30–50%, with most tumours recurring within 6 months (Genetzky *et al*. 1983; McConaghy *et al*. 1994; Knottenbelt and Kelly 2000) [4]. Recurrent tumours are often aggressive and regrow more rapidly than the initial tumour (Tarwid *et al*. 1985; Mc Conaghy *et al*. 1994). This effect may be due to latent BPV present in normal skin that is disrupted and activated by surgical trauma (Carr *et al*. 2001a; Bogaert *et al*. 2008). It is recommended that focal recurrences at the suture line be addressed while they are still very small (Hewes and Sullins 2009) [2].

Fibroblastic sarcoids are raised subcutaneous masses that are classified as nodular sarcoids if the skin is unaffected or ulcerative if the skin surface is disrupted (Christina et al., 2009) [2]. Treatment should be based on tumour type and location, complications of the treatment, sensitivity of the tumour type to the particular treatment, treatment cost, patient behaviour, and owner compliance (Fow et al., 2002, Knottenbelt, 2003) [4]. Surgical removal is the simplest treatment available and usually preferable if a primary closure is possible or applicable. In present study surgical correction of fibroblastic sarcoid in a horse is being reported. Sullins et al (1986) [2] reported histopathologic characteristics of sarcoid include epidermal acanthosis, hyperkeratosis, and pseudo-epitheliomatous hyperplasia with long rete ridges into the dermal fibroblastic tissue containing immature fibroblasts.

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