Surgical Management of Subcutis Cavernous Haemangioma in a Dog

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Abstract

A female Fila Brazileiro dog was presented with swelling on the cheek region which had grown over a period of last one year. The mass was soft in consistency and had no pain on palpation. Pre-operative haematology and serum biochemistry values were within the normal range. Thoracic plain radiograph revealed no metastasis. Fine needle aspiration biopsy revealed numerous RBCs. Excision of mass was done under general anaesthesia. Histopathological examination confirmed the tumor as cavernous haemangioma. No complications and recurrence noticed post-operatively.

Keywords: Cavernous; dog; haemangioma; tumor

Introduction

Haemangiomas are benign tumors of vascular endothelial cells or their progenitors (Schoniger *et al.,* 2008). Haemangiomas are common in dogs and rare in cats, horses and other domestic animals (Goldschimidt and Hendrick, 2002). Haemangioma in dogs and cats are capillary, cavernous or combined capillary cavernous type and are mostly recorded on skin (Schulthesis, 2004, Van der Gagg *et al.,* 1989; Hargis *et al.,* 1992; Miller *et al.,* 1992; Goldschmidt and Hendrick, 2002).

History and Clinical Observations

A six years old female Fila Brazileiro dog was presented with history of slowly growing mass on the left cheek for one year. On clinical examination, the mass was soft and non painful.

Diagnosis and Treatment

Fine needle aspiration of mass revealed numerous red blood cells. Pre-operative haematology and serum biochemistry values were within the normal range. Thoracic plain radiograph revealed no metastasis. On general anaesthesia, premedication with Butorphanol @ 0.1 mg/kg b.wt., Diazepam @ 0.25mg/kg b.wt. induced with Propofol @ 4mg/kg b.wt. and maintained with 3% Isoflurane. The mass was approx. (10cm× 7cm× 5cm) excised surgically in aseptic condition and haemorrhage controlled through ligation and electrocautery. Subcutaneous was closed using PGA 2-0 and skin was closed using polyamide 3-0. Post-operatively, antibiotic (Cefotaxime) @ 20 mg/kg b.wt. and Serratiopeptidase 10 mg bid was given for five days. Analgesic, Tramadol @ 4mg bid was given for three days. Mupirocin ointment was applied topically on surgical wound for five days and suture was removed on the tenth day. The mass was soft, red coloured and extensive neovascularisation on gross (Fig. 1 and 2). Based on histopathological examination the tumor was confirmed as cavernous haemangioma with characteristic variable sized vascular spaces containing numerous blood cells (Fig. 3). No complications and recurrence after surgery. Animal made an uneventful recovery.

Discussion

Haemangioma is a benign tumor of vascular endothelial tissues that occur in variety of sites *viz.* skin, liver, spleen, kidney, bone, tongue and heart. The lesion of cutaneous haemangioma has been reported to occur anywhere on the part of body surface (Baba and Toi, 2007 and Goldschmidt and Hendrick, 2002). Haemangioma in human beings regress spontaneously or intra-lesional corticosteroid therapy but has not to be recorded as curative measures in canines. Hence surgical excision was suggested as a choice of therapy (Sawale *et al.,* 2014). The average age of occurrence of haemangioma in dogs is approximately nine years. Haemangiomas have also been reported in dogs and cats as young as one year (Goldschmidt and Shofer, 1992) and in young animals it could be due to vascular proliferation rather than true neoplasms. Occurrence of haemangioma could be either due to solar induced or non-solar induced damage to skin.

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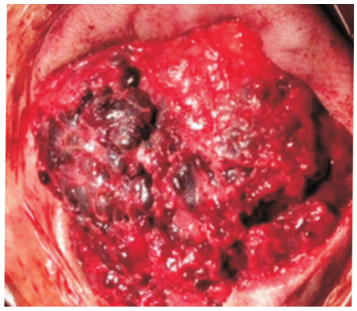

Fig. 1: Soft, red and numerous blood filled structures of the mass - intra-operative

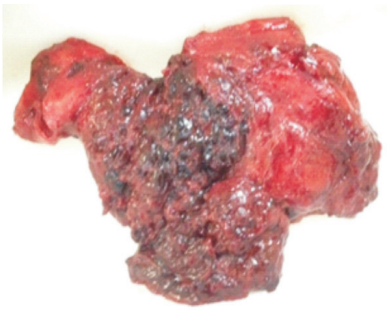

Fig. 2: Excised cavernous haemangioma mass

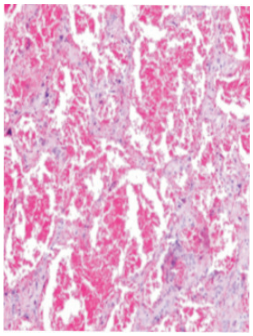

Fig. 3: Cavernous haemangioma variable sized widely dilated blood spaces containing numerous red blood cells (HPE 100x magnification)

Solar induced haemangiomas occurs in the non-pigmented skin and short hair coat breeds (Hargis *et al.,* 1992) where as non-solar induced dermal haemangiomas can occur at any anatomic site. Canine non-solar induced haemangioma of the subcutis is commonly seen in caudal dorsum or tail, head region (Goldschmidt and Shofer, 1992). Balachandran *et al.* (2012) observed cavernous haemangioma in the sub-cutis of chest region in a Rajapalayam dog. Sawale *et al.* (2014) observed single marble sized cavernous haemangioma in tail base in a Labrador dog. While in the present case, it was observed in the subcutis of cheek region.

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