Pathology of Cutaneous Fibroma with Eosinophillic Infiltration in Thoracic Region of a Foal

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Abstract
A piece of soft growth from right thoracic region of a foal was received for histopathological diagnosis. The tissue was processed, stained and microsections were cut following standard procedure. Histomorphologically, the growth was diagnosed to be fibroma with marked infiltration of eosinophils in its interstitium.

Key words: Eosinophillic infiltration, Fibroma, Foal, Thoracic region.

1. Introduction
The most common cutaneous tumour in horses is sarcoid (Cotchin, 1977; Nasir and Reid, 1999). Others include papilloma, lymphoma, sarcoma, fibroma, lipoma and adenoma (White et al., 2004; Valentine, 2006). Sporadic cases of cutaneous fibroma at different sites of the body in past have included fibroma at orbital area (Colitz et al., 2000), proximal tibial region (Kidd and Bradshaw, 2002), left thigh and thoracic inlet (Jahromi et al., 2008). In the present communiqué a case of cutaneous fibroma at thoracic region is reported with gross and histomorphological details, keeping in view of its rare occurrence.

2. Materials and Methods
The subject was a bay coloured foal aged about 1 year and 3 months of Sindhi breed. An oblong shaped (maximum diameter 5.0 cm) soft growth was observed in right thoracic region posterior to scapula by the owner about six months back which was increasing in size though at a slow speed. It was brought to local Veterinary Dispensary for treatment. The growth was palpable and appeared to be located intra-dermal. It was surgically removed following the routine procedures. A piece of growth without epidermal covering was received in 10% neutral buffered formalin by the Department of Pathology for diagnosis. The tissue was processed following routine histopathological method to have microsections (5 µm) which were stained by H&E and Van Gieson’s stains.

3. Results and Discussion
The H&E stained microsections were devoid of epidermal covering. The growth was uncapsulated and consisted of mature fibrocytes with abundant collagen fibers usually interwoven and rarely assuming whorl pattern (Fig 1). The fibrocytes of the growth blended with the extracellular collagenous stroma. Vascularity of the mass varied in different areas which were characterized by haemorrhage (Fig 2), congestion and engorgement of blood vessels. Most of the blood vessels were showing varying degree of perivascular infiltration of lymphocytes and occasional eosinophils (Fig 3). In addition moderate to marked aggregates of eosinophils along with a very small percentage of lymphocytes and plasma cells were discernible in the interstitium of the growth (Fig 4).

Except for the eosinophillic infiltration in the parenchyma of the present growth histomorphological features compared well with those reported by Goldschmidt and Hendrick (2002) and Jahromi et al. (2008). Our present observations of eosinophillic infiltration in fibroma supported the observations of Salm (1965) recorded in gastric fibroma in a woman aged about 54 years and opines that eosinophillic infiltration has been a feature in fibroma which misled many earlier workers in diagnosing such fibromas as inflammatory or granulomatous in nature. Infiltration of eosinophils is usually related to hypersensitivity/certain parasitic infestation and a number of inflammatory conditions among different species of animals like eosinophillic myositis in cattle, immunologic myositis in young dogs, enostosis in dogs, eosinophillic ulcer/rodent ulcer in cats, feline eosinophillic granuloma in cats etc. (Jubb et al., 2007).
Fig 1: Growth: Panoramic view. HE x100.

Fig 2: Growth: Area of haemorrhage. HE x100.

Fig 3: Growth: Perivascular infiltration of mononuclear cells. HE x400.

Fig 4: Growth: Aggregates of eosinophils in the interstitium. HE x400.

4. Conclusion

In the present case in the absence of complete anamnesis including complete blood count of a foal, it is difficult to pinpoint the cause of massive infiltration of eosinophils in fibroma but it is expected to be the outcome of some unexplained allergic/antigen-antibody reactions and needs further elucidations.

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References


