

A RARE CASE OF INTRAMUSCULAR MYXOMA IN AN ADULT DROMEDARY CAMEL

Shirish D. Narnaware, Rakesh Ranjan and F.C. Tuteja

ICAR- National Research Centre on Camel, Post Bag No. 07, Jorbeer, Bikaner 334001, Rajasthan, India

ABSTRACT

A rare case of intramuscular myxoma was reported in a female dromedary camel at the anterior side of hock joint of hind limb. Grossly, the tumour had 6 inch diameter and was covered by hairless dark coloured skin. The cut surface showed solid white area with oozing of blood. The histopathology of the tumour mass showed stellate to spindle shaped fibroblasts loosely arranged in an abundant myxoid matrix with few areas showing eosinophil infiltration. Cellularity was low and mitoses were rare. Based on gross and microscopic features, the neoplasm was diagnosed as an intramuscular myxoma.

Key words: Camel, gross, histopathology, myxoma

The skin and soft tissue tumours cover a wide range of tumours which are frequently reported in most of the domestic animals including camels (Gahlot, 2000; Khordadmehr *et al*, 2016). However, myxoma has been rarely reported in dromedary camels. Myxoma and myxosarcoma are tumours of fibroblast origin distinguished by their abundant myxoid matrix rich in mucopolysaccharides. The majority arise in the subcutis of the trunk or limbs. Grossly they are soft, gray-white, poorly defined masses which exude a stringy clear mucoid fluid (Meuten, 2002). They are characterised clinically by slow growth with minimal symptoms and histologically by an abundant myxoid matrix with stellate to spindle shaped fibroblasts (Stinchcombe *et al*, 2010). Present case report describes the gross and histopathological findings of an intramuscular myxoma of hind limb of a dromedary camel.

Materials and Methods

An 8 years old adult female dromedary camel of Mewari breed who died possibly of some systemic disease was presented for routine post mortem examination. Incidentally, the external examination of this carcass drew attention towards a large swelling which was observed on anterior aspect of hock joint in hind limb was measured about 6 inches in diameter and covered by hairless dark coloured skin. The cutting of this swelling revealed solid white mass resembling connective tissue with infiltration of adjacent musculature and oozing of blood (Fig 1). A tissue piece from this growth

was excised and histopathology was performed by embedding in paraffin and cutting of sections of 4-µm thickness and staining with haematoxylin and eosin (HE) stain.

Results

The detailed postmortem examination of the camel did not reveal metastasis evidence in organs such as lung, liver, heart, kidneys spleen and intestines.

The histopathology of the tumour mass showed stellate to spindle shaped fibroblasts with small hyperchromatic pyknotic nuclei and scanty cytoplasm loosely arranged in an abundant myxoid matrix (Fig 2 and 3). Focal areas of hyper cellularity, thickened and hyperemic blood vessels and eosinophilic infiltration was observed occasionally. No significant mitoses and cellular or nuclear pleomorphism were observed which ruled out malignancy. These findings were found consistent with a benign intramuscular myxoma.

Discussion

Intramuscular myxoma is a very rare tumour in animals (Simundic *et al*, 2019) and to the authors knowledge their incidence in dromedary camel is not yet reported. Intramuscular myxoma is a rare benign soft tissue tumour involving the musculoskeletal system which commonly occurs in the large muscles of the thigh, shoulder, buttocks and arms (Yaligod and Ajoy, 2003; Agarwal *et al*, 2015). Laura *et al* (2017) reported that intramuscular myxoma is a rare benign soft tissue tumour of mesenchymal origin, which

SEND REPRINT REQUEST TO SHIRISH D. NARNAWARE [email: sdnarnaware1@gmail.com](mailto:sdnarnaware1@gmail.com)



Fig 1. Solid white growth covered by dark hairless skin on anterior side of hock joint of camel.

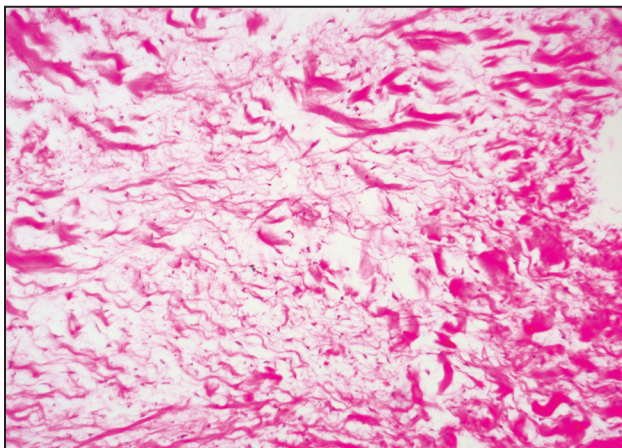


Fig 2. Histopathology of tumour growth showing stellate to spindle shaped fibroblasts. (HE X 100).

appears as a painless mass of slow growth in humans. It was emphasised that a differential diagnosis was important from soft tissue sarcoma. Computed tomography and nuclear magnetic resonance were considered the diagnostic tests of choice. The present case reported incidence of intramuscular myxoma in hind leg of a dromedary camel with infiltration of adjacent musculature. The macroscopic description as soft to solid, gray-white growth covered by dark coloured skin was consistent with earlier reports of intramuscular myxoma (Meuten, 2002; Yaligod and Ajoy, 2003). Similarly, in agreement with the present study, the myxoma was found more common in old and female patients in human and animal cases (Stinchcombe *et al*, 2010; Yaligod and Ajoy, 2013; Simundic *et al*, 2019).

The histopathological observations in the the present case such as stellate to spindle shaped fibroblasts with pyknotic nuclei and loosely arranged

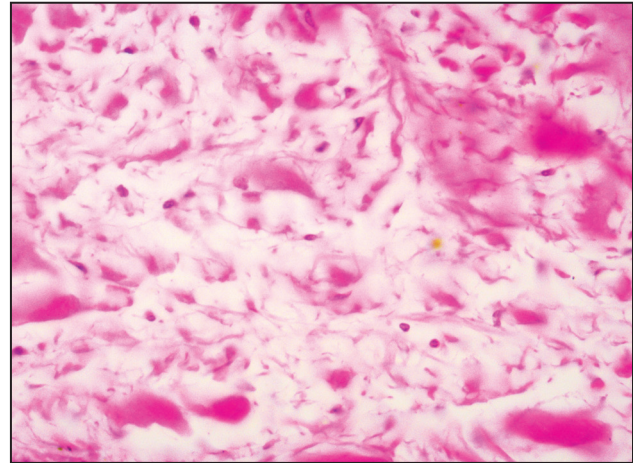


Fig 3. Stellate to spindle shaped fibroblasts with small hyper chromatic pyknotic nuclei loosely arranged in myxoid matrix. (HE X 400).

in myxoid matrix was more or less similar to the description of intramuscular myxoma in animal and human cases (Meuten, 2002; Yaligod and Ajoy, 2013; Simundic *et al*, 2019). However, in these reports relatively sparse vascular structures and hypo cellularity was observed. Ultraviolet radiation from prolonged exposure to direct sunlight is the major etiologic agent in different types of skin cancer in animals (Valentine, 2006). The camel of the present study belonged to an organised farm which was located at the thar desert where ample sunlight exposure is natural. This may underline the possible relationship between long ultraviolet exposure and incidence of cancer.

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