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Research Article

Patho-Morphological and AgNOR based Diagnosis of a Fibroma in a Camel

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Abstract

A male camel of 2 years of age was presented in the Teaching Veterinary Clinical Complex, F.V.Sc and AH., R.S Pura, Jammu for treatment with a history of growth at the axillary region near right forelimb for the last 1 month. On gross examination, growth was hard, fibrous and painful skin erosion on the medial side. On microscopic examination, revealed haphazardly arranged interlacing bundles of fibroblast and collagen fibres were observed. Histopathological examination revealed that it was a case of fibroma. The value of mAgNOR for fibroma was found to be 1.80 ± 0.88.

Keywords: Camel; Fibroma; mAgNOR

Introduction

Neoplasms are the most frequently recognized neoplastic disorders particularly of skin and subcutaneous tissues in domestic animals [1-3]. Skin neoplasms have been reported as solitary cases in camels. Spontaneously or naturally occurring tumors in domestic animals are of particular interest for comparative studies. Prolonged and continuous exposure to sunlight is the best known etiologic factor, and a sunlight-induced skin cancer relationship has been established in several domestic species [4]. In the presence report, a case of fibroma is reported with the patho-morphological details and further confirmation with molecular marker AgNOR.

Materials and Methods

A male camel of 2 years of age was presented for treatment in the Teaching Veterinary Clinical Complex, F.V. Sc and AH., R. S. Pura, Jammu with a history of growth at the axillary region from the last one month. Clinical parameters like rectal temperature, pulse rate and respiration rate were found to be normal. The hard growth was surgically incised and specimen was collected and fixed in 10% formalin and processed by routine paraffin embedding method. After 3 - 4 days of fixation, the tissues were washed in running water for 7 - 8 hrs, dehydrated in ascending grades of ethyl alcohol, cleared in benzene and embedded with melted paraffin wax (melting point 58°C). The paraffin blocks were prepared and the sections were cut at 4 - 5µ thickness with a hand operated microtome and stained by routine haematoxylin and eosin stain [5]. AgNOR study was also conducted on the specimen collected for histopathology. The section was stained for AgNOR by using the method with some modifications as described by Crocker., *et al* [6].

Results and Discussion

On gross examination, growth was large, hard, and grayish white in colour with a length of 8 cm. Mass was excised surgically under general anaesthesia (Figure 1). Histopathological examination revealed haphazardly arranged interlacing bundles of fibroblast and collagen fibres (Figure 2). AgNOR staining showed presence of black dots within the nucleus of the cancerous cells (Figure 3). The value of mAgNOR for fibroma was 1.80 ± 0.88. The histopathological findings were in accordance to those reported by Moulton [7]. Al-Sobayil., *et al*. [4] reported case of fibroma in camel which was similar in gross and histological appearance as that seen in the present study.

Figure 1: Photograph showing hard, large and grayish white in colour.

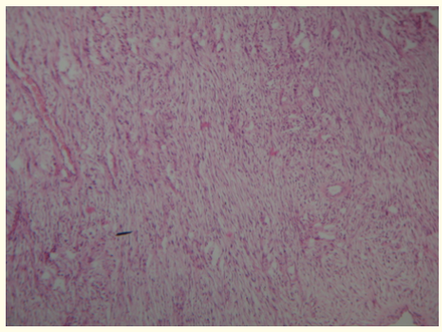

Figure 2: Photomicrograph showing haphazardly arranged interlacing bundles of fibroblast and collagen fibres. H and E X100.

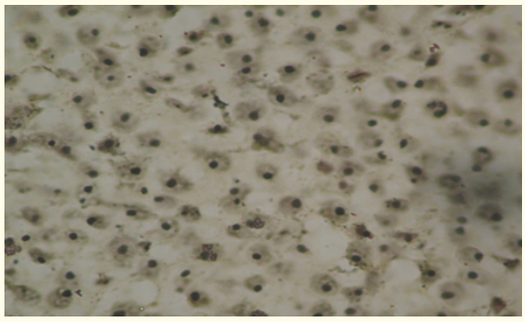

Figure 3: Photomicrograph showing presence of black dots within the nucleus of the cancerous cells. AgNOR X400.

Conclusion

On microscopic examination, revealed haphazardly arranged interlacing bundles of fibroblast and collagen fibres were observed. Histopathological examination revealed that it was a case of fibroma.

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