Int.J.Curr.Microbiol.App.Sci (2021) *10*(03): 1476-1479

International Journal of Current Microbiology and Applied Sciences
***ISSN: 2319-7706* Volume 10 Number 02 (2021)**
Journal homepage: http://www.ijcmas.com

Case Study

https://doi.org/10.20546/ijcmas.2021.1003.181

Cutaneous Fibroma in a Jersey Cross Breed Heifer

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Keywords

Jersey cross bred heifer, Fibroma, Paralumbar region, Pathology, Picrosirius red

Article Info

Accepted:
12 February 2021
Available Online:
10 March 2021

A B S T R A C T

A two year old Jersey cross breed heifer was brought to the Veterinary Dispensary, Kelur with the history of swelling on the left paralumbar region. Clinical examination revealed a soft to firm mass of about 3 cm diameter. Surgically excised mass was subjected to histopathological examination. Grossly the mass revealed a circumscribed soft to firm gray white colored nodule. Upon incision it was congested, firm and gray white color. Microscopical examination revealed interwoven bundles of collagen fibers and fibrocytes were arranged in haphazard pattern. The neoplastic cells were spindle shaped cells with pale ovoid to elongated nuclei and contained single to multiple nucleoli. The cells had indistinct cytoplasm. Scanty mitotic figures were seen. Picrosirius red special stain revealed red colored neoplastic fibrocytes. Based on the gross, histopathology and special staining, the mass was confirmed as fibroma on the left paralumbar region.

Introduction

Fibromas are benign type of neoplasm of fibrocytes that arises from dermis or subcutaneous region (Weiss and Goldblum2001).

Cutaneous fibromas are commonly observed in dogs and they are uncommon in other animals(Goldschmidt and Hendrick, 2002). In the present paper reports on the occurrence of fibroma of left paralumbar region of Jersey cross breed heifer.

Materials and Methods

A two year old Jersey cross breed heifer was presented to the Veterinary Dispensary, Kelur, Tamil Nadu with swelling on the left paralumbar region for treatment. Upon clinical examination, a soft to firm mass of 3 cm diameter was seen on the left paralumbar

region. The mass was surgically excised and collected in 10 per cent neutral buffered formalin. The formalinized tissue sample sent to Department of Veterinary Pathology, Madras Veterinary College, Chennai – 600007 for histopathological examination.

The formalinized tissue was embedded in paraffin and embedded sections were cut into 4 to 6 µm thickness and stained with Haematoxylin and Eosin(H & E) stain(BancroftandGamble,2008). Picrosirius red staining was performed as per procedure described by Junqueira *et al.*,(1979).

Results and Discussion

Gross examination of the surgical excised mass revealed a well circumscribed soft to firm gray white colored nodule about 3cm in diameter (Fig. 1). Cut section of the mass revealed congestion, firm, and also appeared as gray white in color.

Histological examination revealed interlacing bundles of neoplastic proliferating fibrocytes and collagen fibers were arranged in haphazard pattern (Fig. 2). The neoplastic cells were spindle shaped with pale ovoid to elongated nuclei with indistinct cytoplasm. The nuclei contained single to multiple nucleoli and mitotic figures were scanty. In some areas neoplastic collagen fibers separated by oedema and mucinous substances. It also revealed variable degree of blood vessel formation. The mass was seen in the dermal region of the skin. Picrosirius red special stained tissue revealed the presence of red colored neoplastic fibrocytes (Fig. 3).

Fig.1 Heifer-Fibroma-Well circumscribed soft to firm gray white colored nodule

Fig.2 Heifer-Fibroma-Interlacing bundles of neoplastic proliferating fibrocytes and collagen fibers were arranged in haphazard pattern Scale Bar H&E 20µm

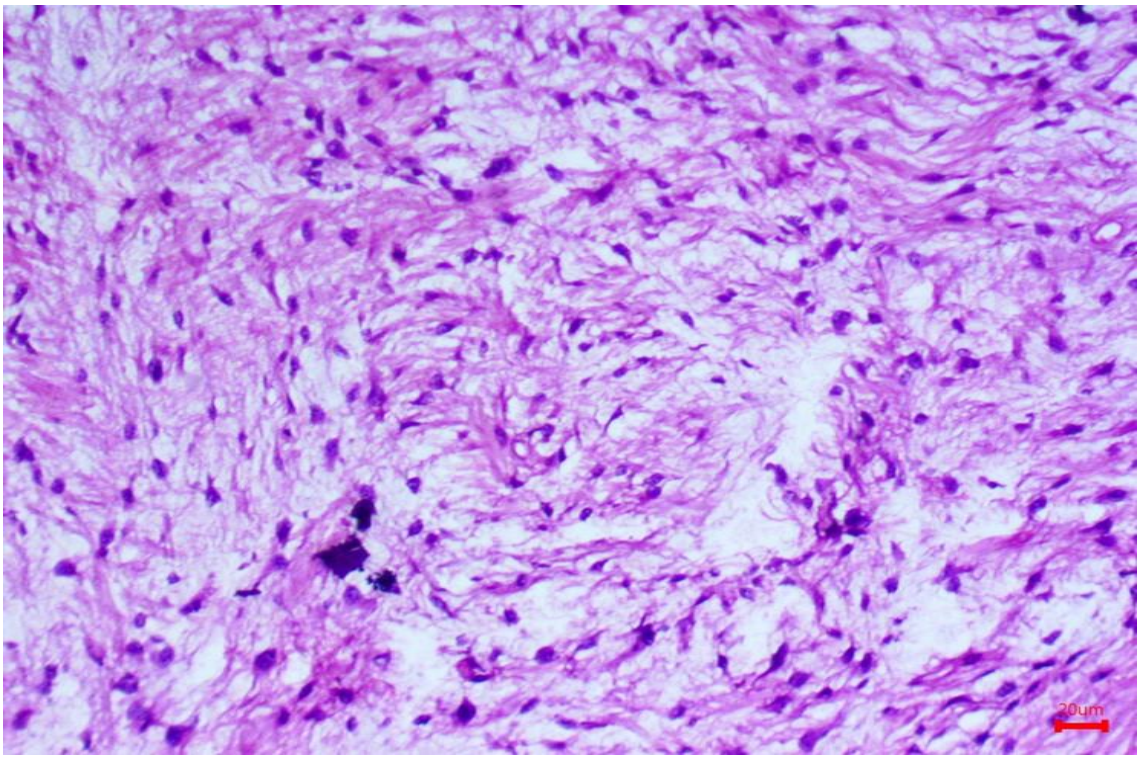
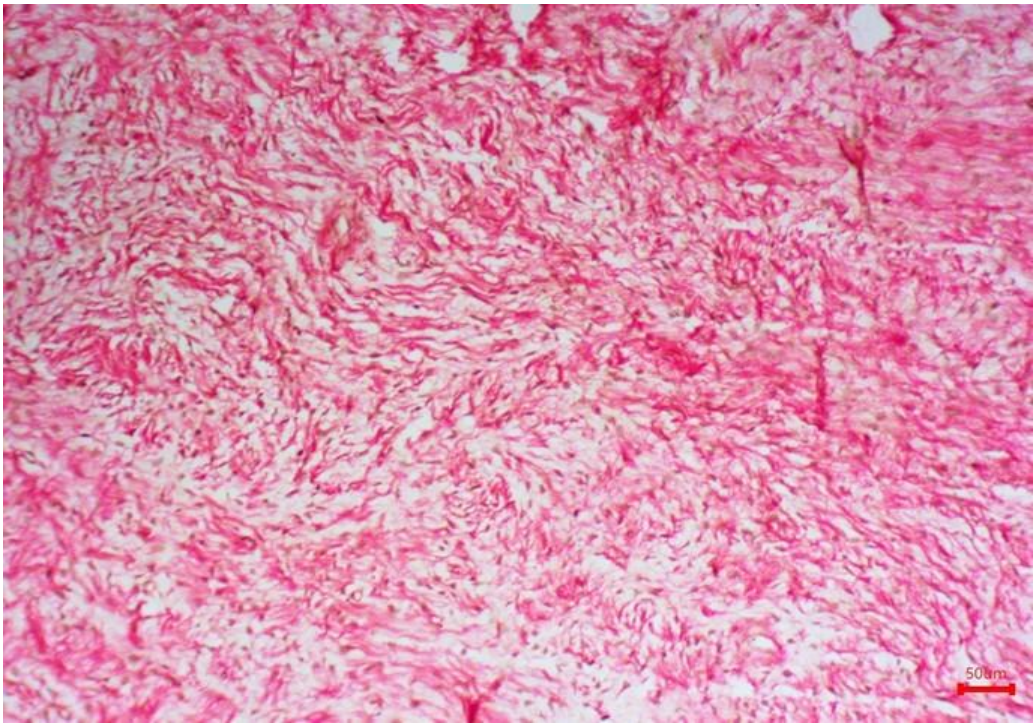


Fig.3 Heifer-Fibroma- Red colored neoplastic fibrocytes Picrosirius red Scale bar 50µm



Based on the gross, histology and special staining, the mass was confirmed as dermal fibroma of the left paralumbar region.

Cutaneous fibroma is common in dogs and it was reported in other animals (Goldschmidt and Hendrick, 2002). Solitary mass of cutaneous fibroma in the skin of right hindlimb of one year old male Korean Indigenous cattle was reported (Jang *et al.*, 2008). The present case was recorded in two years old Jersey cross breed heifer while previous author was recorded the tumors in various age group from nine months to seven years in female cattle (Vijayakumar *et al.*, 2020)and also it was reported in one year old male Korean Indigenous cattle in the dermal region (Jang *et al.*, 2008). The present case was reported in female. The presence of tumor in the dermis region is in agreement with earlier report [3]. Microscopic findings of the present case is in accordance with the earlier reports(Goldschmidt and Hendrick, 2002; Jang *et al.*, 2008;Vijayakumar *et al.*, 2020).

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How to cite this article:

Pazhanivel, N., R. Sarangabani, R.Saahithya, Dasari Priyanka Swami and Ganne Venkata Sudhakar Rao. 2021. Cutaneous Fibroma in a Jersey Cross Breed Heifer. *Int.J.Curr.Microbiol.App.Sci.* 10(03): 1476-1479.
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