Journal of Entomology and Zoology Studies

Available online at www.entomoljournal.com

E-ISSN: 2320-7078
P-ISSN: 2349-6800
www.entomoljournal.com
JEZS 2020; 8(3): 1173-1174

Received: 10-03-2020
Accepted: 12-04-2020

S Raja
Assistant Professor, Veterinary College and Research Institute, Orathanadu Thanjavur, Tamil Nadu veterinary and Animal Sciences University, Chennai, Tamil Nadu, India

M Palanisamy
Professor and Head, Department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Orathanadu Thanjavur, Tamil Nadu veterinary and Animal Sciences University, Chennai, Chennai, Tamil Nadu, India

V Prabaharan
Assistant Professor, Veterinary College and Research Institute, Orathanadu Thanjavur 614 625 Tamil Nadu veterinary and Animal Sciences University, Chennai, Chennai, Tamil Nadu, India

R Rajkumar
Assistant Professor, Veterinary College and Research Institute, Orathanadu Thanjavur 614 625 Tamil Nadu veterinary and Animal Sciences University, Chennai, Chennai, Tamil Nadu, India

J Selvaraj
Professor and Head, Veterinary College and Research Institute, Orathanadu Thanjavur, Tamil Nadu veterinary and Animal Sciences University, Chennai, Chennai, Tamil Nadu, India

K Thilagavathi
Assistant Professor, Department of Veterinary Pathology, Veterinary College and Research Institute, Orathanadu Thanjavur, Tamil Nadu veterinary and Animal Sciences University, Chennai, Chennai, Tamil Nadu, India

Corresponding Author:
S Raja
Assistant Professor, Veterinary College and Research Institute, Orathanadu Thanjavur, Tamil Nadu veterinary and Animal Sciences University, Chennai, Chennai, Tamil Nadu, India

Cervical leiomyofibroma in a jersey crossbred cow: A case report

S Raja, M Palanisamy, V Prabaharan, R Rajkumar, J Selvaraj and K Thilagavathi

Abstract
A case of cervical leiomyofibroma in a 5 year old crossbred Jersey cow, an uncommon entity is described. The tumor mass was originated in the cervical rim and it was removed surgically, which weighed 24.5cm X 22.5 cm X 15cm in size and weighed 5.2 kg. The tumor was hard and firm, well circumscribed with encapsulation and it was whitish-yellow in color. The mass was diagnosed as leiomyofibroma. This tumor mass had no undesirable effects on parturition and subsequent fertility.

Keywords: Cattle, cervix, leiomyofibroma, parturition, tumor

1. Introduction
Genital tract tumors are more frequent in uterus and vulva and cervical tumors are often rare [1]. Leiomyoma, is classified as mesenchymal tumor, which is considered as benign neoplasia of smooth muscle. Occurrence of Leiomyomas is more frequently noticed in females than males [2]. Leiomyofibroma consist of a fusion of connective tissue and smooth muscle, and commonly have been reported in the reproductive tract of bitches and queens [3]. In the present case report records a case of cervical leiomyofibroma in a crossbred Jersey cow.

2. Case history and Observations
A five year old crossbred Jersey cow was presented to the Department of Veterinary Gynaecology and Obstetrics Teaching Hospital of the Tamil Nadu Veterinary and Animal Sciences University for assessment of huge mass protruding through the vulva at the time of calving and the animal delivered a live female calf with normal delivery. On general clinical examination the rectal temperature, heart rate and respiratory rate were within the normal limits. According to the anamnesis the prolapsed mass started to hang down at the second stage of labor 18h previously. Clinical examination revealed that the mass had a pedunculated origin arising from the ventral region of the cervical external os and it was confirmed the location as cervix uteri, since there is no association to the vaginal wall (Figure 1). The cow showed mild straining during urination. Blood samples were collected from the jugular vein and subjected to Haematological study as a presurgical assessment. The blood parameters were in the normal range.

3. Treatment
The animal was restrained and caudal epidural anesthesia was performed by administration of 5 ml of 2% Lignocaine Hydrochloride (Loxicard; 20 mg/ml; Neon, India). The perivulvar region was prepared for the surgery. Local infiltration of anesthesia was also performed on the cervical rim. After anesthesia the prolapsed mass was 1% potassium permanganate followed by scrubbing with 7% povidone iodine solution. An oblique incision was made around 12 cm and the tumor mass was separated and it was removed from the mucosal attachment. The surplus tissue was gently trimmed off and the cavity was flushed with 2% povidone iodine solution and simple continuous suture using chromic catgut size 2 followed by cushing suture using PGA size 2 was applied. The cervical rim was reduced to its original position. Post-operatively the dam was treated with an intramuscular injection of 5g Streptopenicillin (Dicrysticin, Zydus AHL) for 3 days and then the animal was discharged.

4. Discussion

Macroscopically the tumor mass was 24.5cm X 22.5 cm X 15cm in size and weighed 5.2 kg. In addition to that, the mass was hard, well circumscribed whitish-yellow in color with encapsulation (Figure 2). An incision from periphery to centre was made on the excised mass and tissue section was fixed in 10% Neutral buffered formalin. The tissue was paraffin embedded sectioned at 4 µm, processed as per standard staining procedures for Haematoxylin and eosin. Microscopically tumor shows irregular arrangements of smooth muscle cells and fibrocytes running in different directions which confirmed it as leiomyofibroma H E 100x (Figure 2). Mitotic figures were rare. Pleomorphism and necrosis were also absent. The histopathological characteristics were suggestive of leiomyofibroma and set apart for other benign spindle cell mesenchymal neoplasm.

Leiomyofibromas are also referred as leiomyomas, fibromyomas, myomas, fibroids and leiomyofibromatoses, are unusual nature of leiomyoma, and also have a momentous fibrous component [3]. If the smooth muscle separation is evident, then the term leiomyoma is more appropriate [3, 4]. Some researchers had dispute that an admixture of smooth muscle, collagen, and fibroblastic cells, fibroleiomyoma must be used [5]. Recently, fibroleiomyoma has been widely used [5, 6]. Estrogen is considered to be the major factor for development of leiomyofibroma [7]. Leiomyomas are the common reproductive neoplasm recorded in women and bitches, and estrogen hormone is vastly reliant in both species [8]. Because of increase concentration of estrogen hormone these cells are more reactive during pregnancy [9]. Hence, these cells may be more responsive to the increased concentrations of estrogens present during pregnancy but we cannot explain the reason why the tumor became highly enlarged especially in the last pregnancy. During parturition Cervical Neoplasm such as fibroma and leiomyoma can be mystified with vaginal prolapse [10].

Fig 1: Photograph showing tumor mass hanging through the vulva

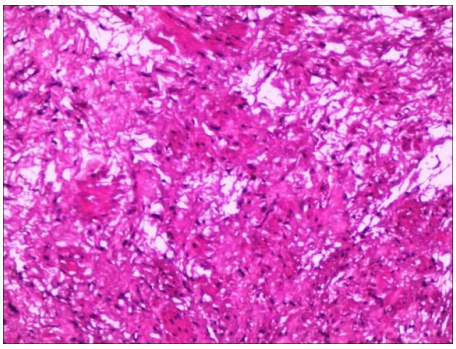

Fig 2: 100X Microscopically tumor shows irregular arrangements of smooth muscle cells and fibrocytes running in different directions

5. Conclusion

In the present case was the tumor mass would have prolapsed out during the first stage of labor and hence it would have not obstructed the delivery of calf. However there were no undesirable effects of the neoplasm during pregnancy. A confirmative diagnosis of leiomyofibroma was made based on the hematoxylin and eosin staining. However after surgical intervention no recurrence of the neoplasm was noticed and the animal was successfully inseminated in the subsequent estrum

6. Acknowledgment

The authors thank Dean, VCRI, Orathanadu and Director of Clinics, TANUVAS for the facilities provided.

7. References

1. Nielsen SW, Kennedy PC. Tumors of the genital systems. In: Moulton, J.E. Tumors in Domestic Animals. 5th ed. University of California Press, Berkeley, 1990, 479-513.
2. Sharma A, Kumar A, Imran S, Pankaj S, Asrani RK. Ultrasonographic, surgical and histopathological findings of a uterine leiomyoma in a cow. Case Reports in Veterinary Medicine. 1990; 1-4 doi:10.1155/2012/536204
3. Mueten DJ. Tumors in Domestic Animals. 4th ed. Iowa State Press, Iowa. 2002. pp.788
4. Timurkaan N, Aydin M, Yilmaz F, Cevik A. Vaginal fibroleiomyoma in a cow: A case report. Veterinarni Medicina. 2009; 54(3):138-141
5. Moulton JE. Tumors in Domestic Animals. 3rd ed. University of California Press, London, England. 1990, 101.
6. Sapundzheiv E, Pupaki D, Zahariev P *et al*. I. Fibroleiomyoma in elephant uterus. Journal of the American Veterinary Medical Association. 2007; 54:499-500.
7. Parker WH. Etiology, symptomatology, and diagnosis of uterine myomas. Fertility and Sterility. 2007; 87:725-736.
8. Lopez MJ, Prichard M, Steinberg H. Anal leiomyoma in a Holstein heifer. Canadian Veterinary Journal. 1997; 38:377-378
9. Sendag S, Cetina Y, Alana M, Ilhana F, Eskia F, Wehrendb A. Cervical leiomyoma in a dairy cattle. Animal Reproduction Science. 2008; 103:355.
10. Arthur GH, Noakes DE, Perason H. Veterinary Reproduction and Obstetrics, 6th ed. Bailliere Tindall, London, 1989.