

UTERINE LEIOMYOSARCOMA IN THREE CAPTIVE WILD LIONS (*PANTHERA LEO*)

JAYASREE N.^{1*}, CH. SRILATHA², N. SAILAJA³, R. VENU⁴ AND W.L.N.V. VARAPRASAD⁵

*Department of Veterinary Pathology
Sri Venkateswara Veterinary University, Tirupati - 517 502*

Received: 18.06.2016

Accepted: 25.06.2016

ABSTRACT

Three lions showed the presence of creamy white pus in the uterus and thickening of uterine wall. The grayish white small to big sized hard masses present on the uterine body and horns were diagnosed as leiomyosarcoma on histopathological examination with parallel and interlaced arrangement of smooth muscle fibres and cigar shaped hyperchromatic nucleus.

Keywords: Leiomyosarcoma, Lion, *Panthera leo*, Tumour, Uterus

INTRODUCTION

Uterine leiomyosarcoma are rarely noticed in all species, but seems to be common in cats (Hulland, 1990). As maintaining fertility in zoo felids is essential for captive breeding programs, it is important to study the development of smooth muscle neoplasms. In fact, the morbidity and mortality resulting due to leiomyosarcomas was of concern in these valuable species (Chassy *et al.*, 2002). Therefore, the present study describes the gross and histopathological features of uterine leiomyosarcoma.

CASE HISTORY AND OBSERVATIONS

The carcasses of three lionesses (age 15-20 year) from S.V. Zoological Park, Tirupati were presented with the history of emaciation, distended abdomen and creamy white discharge from vagina since several months (Figure 1a). At necropsy, the bulky uterus with a grayish white big sized hard mass was observed on left uterine horn (Figure 1b) in one lioness and numerous small to big sized masses on the body and horns of the uterus in other two lionesses (Figure 1c). Uterus was filled with creamy white pus and the uterine wall was thickened in all cases.

TREATMENT AND DISCUSSION

Representative tissue samples of hard masses were fixed in 10% buffered formalin and were presented for histopathological examination using 5 µm thick sections and Haematoxylin and Eosin stain. Uterine leiomyosarcomas were revealed in all the three lionesses. The tumour masses had parallel and interlaced arrangement of smooth muscle fibres, the cells were elongated with thicker chromatin and cigar shaped hyperchromatic nucleus with anisokaryosis and abnormal mitotic figures. Moreover, the uterine mucosal epithelium was desquamated with extensive infiltration of neutrophils in mucosa and submucosa. Interglandular fibrosis with cystic dilatation was also observed (Figure 1d). Similar histopathological findings and similar predilection sites for uterine leiomyosarcoma were reported earlier (Chassy *et al.*, 2002). Leiomyosarcomas may arise from either leiomyomas or de novo from transformed myometrial cells (Silverberg, 1971). In the present study, advanced age was the risk factor for the development of leiomyosarcoma as reported earlier (Kumar, 1989).

REFERENCES

Chassy, L.M., Gardner I.A., Plotka, E.D. and Munson, L. (2002). Genital tract smooth muscle tumors are common in zoo felids but are not associated with

^{1,5}Ph.D Scholar, ²Professor and University Head, ⁴Assistant Professor, ³Associate Professor, Department of Veterinary Pathology, Sri Venkateswara Veterinary University, Proddatur; *jayasreedyvvu@gmail.com



Figure 1: a) Carcass of lioness with distended abdomen, b) Uterus filled with creamy pus and a large greyish white mass on uterine horn, c) Bulky uterus with small to large sized greyish white nodules with irregular surface on uterus, d) Parallel and interlaced arrangement of smooth muscle fibres (H&E, x70).

melengesterol acetate contraceptive treatment. *Vet. Path.*, **39**: 379-385.

Hulland, T.J. (1990). Tumors of the muscle. In: *Tumors in Domestic Animals*, ed. Moulton, J.E., 3rd ed., University of California Press, Berkeley, CA, pp 88-101.

Kumar, S. (1989). Zoo animals not spared from cancer. *J. National Cancer Institute*, **81**: 1691-1692.

Silverberg, S.G. (1971). Leiomyosarcoma of the uterus: a clinicopathologic study. *Obstet. Gynecol.*, **38**: 613-628.