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SHORT COMMUNICATION

UTERINE LEIOMYOMA IN TWO ZOO FELINES

SUMMARY: Two cases of uterine tumour in large zoo felines are described. Gross and histopathological changes were similar to those of leiomyoma.

Key words: uterine leiomyoma, felines

INTRODUCTION

Leiomyoma is a rare smooth muscle tumour occurring mostly in the musculature of tubular and hollow organs such as the digestive, urinary and genital tracts. It originates from the smooth muscle wall of these organs and may occur as solitary or multiple foci. The tumour has been reported in cattle (Rathor and Singh, 1978), buffaloes (Singh *et al.* 1988) horses (Grant, 1964), dogs and cats (Osborne *et al.*, 1968) and the jaguar (Maryamma *et al.*, 1974). This report describes leiomyoma in the uterus of two zoo felines.

MATERIALS AND METHODS

Two large female zoo cats, an 18-year old African lion (*Panthera leo*) and a 25-year old leopard (*Panthera pardus*) died from unrelated causes. Postmortem examinations revealed nodular growths on the uterine wall of both animals. Tissue samples from the tumour were fixed, embedded in paraffin, stained with haematoxylin and eosin (H & E), Van Gieson's and Masson's trichrome stains.

RESULTS

Gross Pathology

Case I (African lion): The mass on the uterus was situated almost midway between the uterine body and the ovary. It was elliptical, slightly lobulated measuring 15 cm in diameter (Fig. 1). The mass was firm, pale reddish brown in colour and mottled with petechial haemorrhages. The cut surface was fleshy and yellowish white with a few islands of whorled tissue (Fig. 2). The mass had projected mainly outward, but had also constricted the lumen of the uterus. The mucosal and serosal surfaces were intact.

Case II (Leopard): Four small-sized nodules, 5-7 cm in diameter, were present. Three of the nodules were located close to each other on the body of the uterus while the fourth was located adjacent to the ovary (Fig 3). The cut surface was fleshy, white and lamellated. The masses remained enclosed within the uterine musculature and had projected outwards.

Histopathology

The mass from both cases consisted of long sweeping smooth muscle fibre bundles that interlaced irregularly and tended to intersect each other at different angles (Fig. 4). Connective tissues were scanty and mostly interspersed between muscle fibres. This was clearly demonstrated by the Van Gieson's and Masson's trichrome stains. The cells were long and spindle-shaped with central cigar-shaped nuclei. Some of the normal smooth muscle fibres adjacent to the border of the growth had undergone pressure atrophy. No mitotic or invasive characteristics were observed.

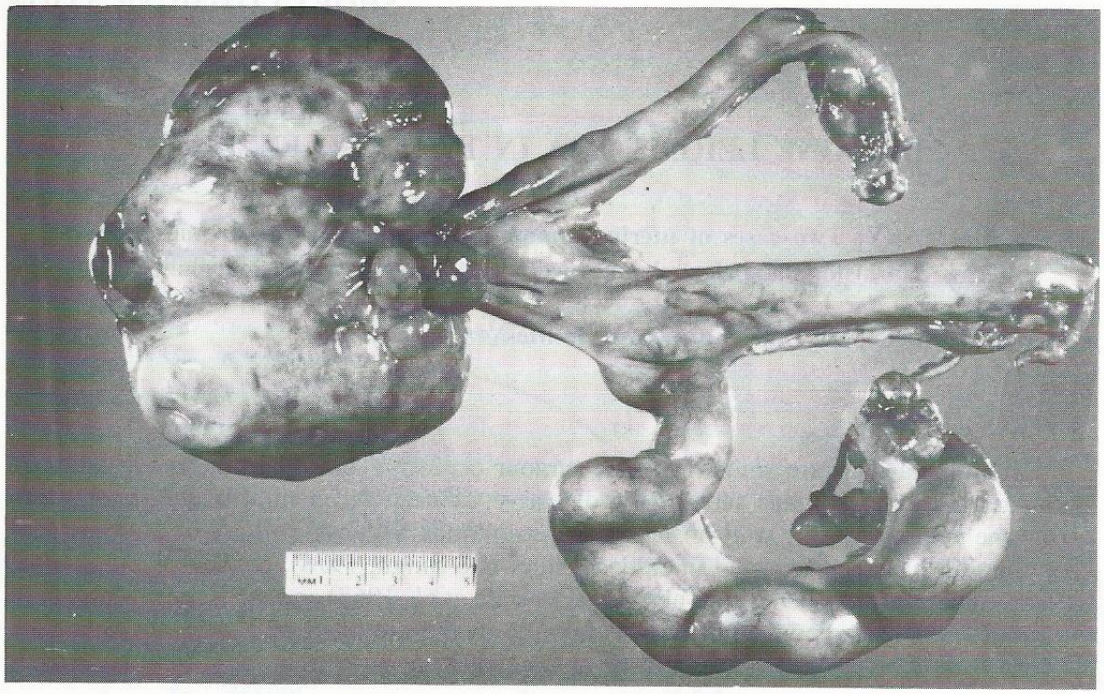

FIG. 1: The large globose tumour in the uterus of an African lion

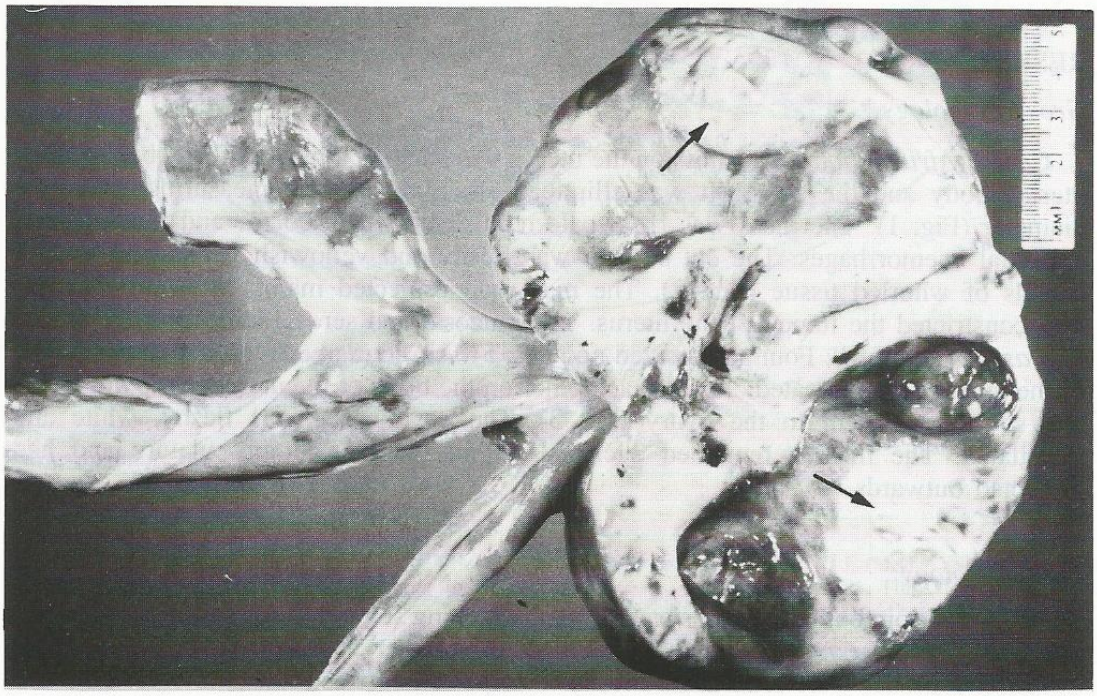

FIG. 2: Cut surface of the tumour mass showing fleshy nature with islands of whorled tissue (arrow)

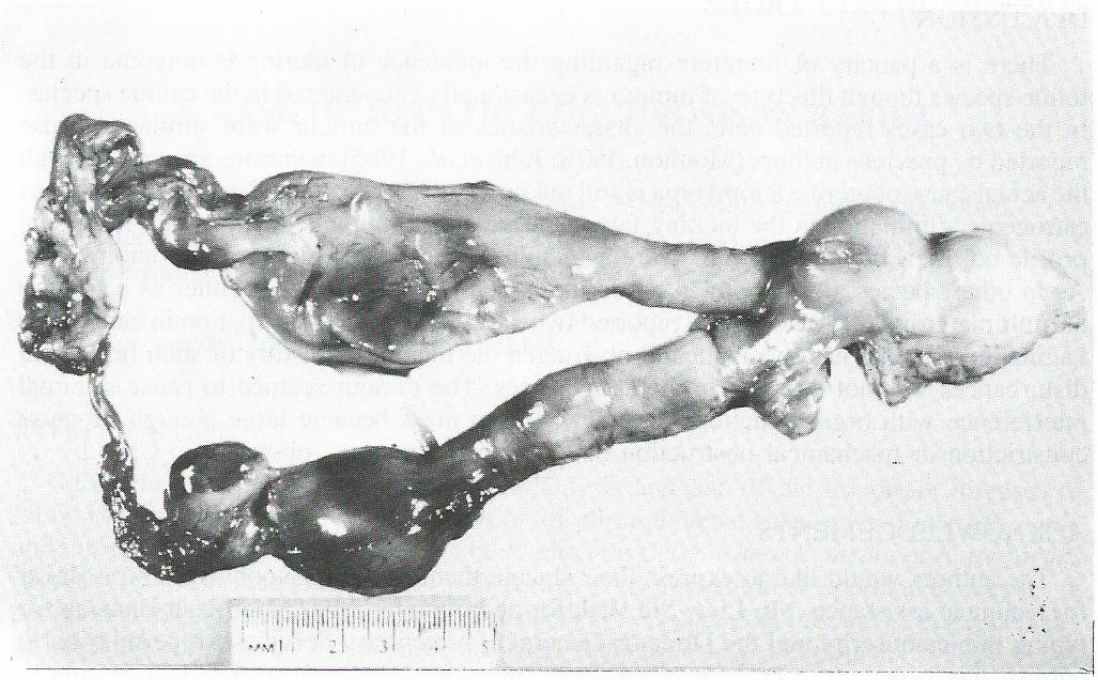

FIG. 3: The tumours in the uterus of a leopard

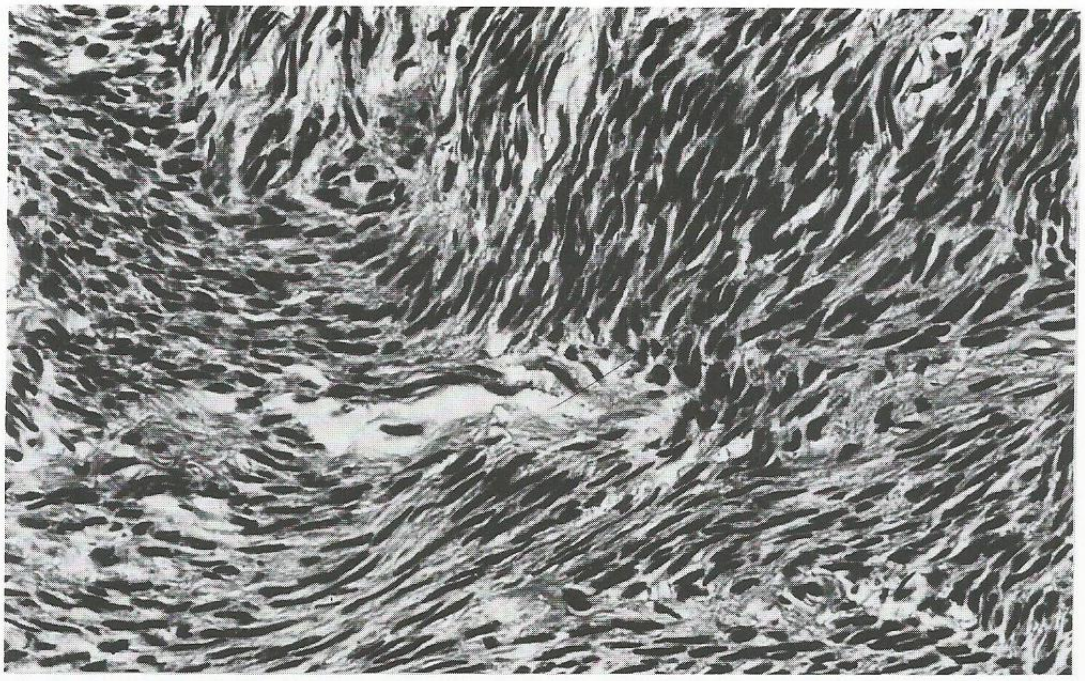

FIG. 4: Interlacing bundles of smooth muscle fibres. (× 400)

DISCUSSION

There is a paucity of literature regarding the incidence of uterine leiomyoma in the feline species though this type of tumour is occasionally encountered in the canine species. In the two cases reported here, the characteristics of the tumour were similar to those reported by previous authors (Moulton, 1978; Jubb *et al.*, 1985) in various species. Though the actual cause of uterine leiomyoma is still unknown, it has been postulated that continuous estrogenic stimulation is the inciting factor. In the above animals, neither their hormonal profile nor their breeding records were available to relate to the cause of the leiomyoma. As in other species, the tumour in the feline is benign and can occur either as a solitary or multiple growth. Wolke (1963) reported two cases of chronic constipation in cats where vaginal leiomyoma had mechanically obstructed the rectum. A history of such functional disturbances was not reported in the above cases. The tumour seemed to cause minimal interference with organ functions except when the mass became large enough to cause constriction or mechanical obstruction of the uterine lumen as observed in Case I.

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AZIZ, H.A and LOGANATHAN, P.

Veterinary Research Institute
31400 Ipoh, Perak, Malaysia.

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RINGKASAN

LEIOMYOMA PADA RAHIM DUA EKOR HAIWAN ZOO

Dua kes barah pada rahim haiwan zoo dilaporkan. Perubahan-perubahan kasar dan histopatologi adalah menyerupai leiomyoma.