

A RARE CASE OF MASSIVE UTERINE LEIOMYOMA IN A CROSS-BRED COW

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SUMMARY

A rare case of massive leiomyoma weighing about 38.5 Kg with dimensions of 1.75 feet (L) x 1.5 feet (W) x 1 feet (H) was reported in Jersey crossbred which was confirmed on exploratory laparotomy examination. The nature of tumour was confirmed after histopathological studies on tissues collected during exploratory laparotomy and on post-mortem examination of the animal.

Keywords : Exploratory laparotomy, Jersey crossbred, Leiomyoma.

Uterine leiomyomas are benign smooth muscle tumors generally called fibroids, originated from myometrium (Houston *et al.*, 2001; Walker *et al.*, 2001). These tumors are commonly seen in humans with reported incidence of 77% (Cramer and Patel, 1990). In animals these tumors are frequently seen in dog, cat and occasionally in cow, pig and buffaloes (Senter, 1995; Miller, 1995; Anusha *et al.*, 2012). In an abattoir study the recorded incidence was only 1 to 2 per cent of all neoplasms in cattle, sheep, buffaloes and pigs (Hulland, 1978; Anusha *et al.*, 2012). The cause of these tumors is unknown but growth is stimulated by estrogen and growth hormones and inhibited by progesterone (Moghissi, 1991).

A crossbred Jersey cow aged about 8 years was presented to Teaching Veterinary Clinical Complex with the history of mating 305 days back. As per the history given by owner, the animal had calved normally three times earlier. Animal was misdiagnosed as pregnant on 3 months post mating by local veterinary pharmacist. The feed and water intake was normal. On per-rectal examination uterus was distended wherein no fetus could be palpated. Further, per-rectal examination revealed a solid mass inside the uterine lumen almost occupying the abdominal cavity and was giving suspicion of tumor, abscess or some other growth. An ultrasound examination was done with the help of linear rectal probe by using 7.5 MHz frequency which revealed no fetal mass but indicated some solid mass in the uterus. Ultrasonography did not yield any conclusive result about the mass present in the uterus.

So, it was decided to perform ultrasound guided paracentesis with the help of fine 20-gauge hypodermic needle. The aspirate was blood mixed and was without any foul smell, which ruled out the possibility of abscess. Further to diagnose the condition, exploratory laparotomy was planned. The laparotomy was performed by giving 2 % lignocaine hydrochloride in linear fashion and incision was given on left lower flank after making the animal recumbent on right lateral recumbency. Incision on uterus

showed a very big free rounded mass inside the lumen of left uterine horn. A sample of affected tissue was collected in 10% neutral buffered formalin solution for further investigation. The site was sutured without removing the mass as it was very big, almost occupying whole of the abdominal cavity and its point of attachment was not ascertained. The post-operative treatment was done with Inj. Strepto-penicillin (Dicrysticin® 5.0 gm; Zydus AHL), Inj. Meloxicam @ 0.2 mg/kg body weight (Melonex®;



Fig. 1: Uterine tumor in crossbred Jersey cow



Fig. 2: Condensed fibrous bands of Leiomyoma

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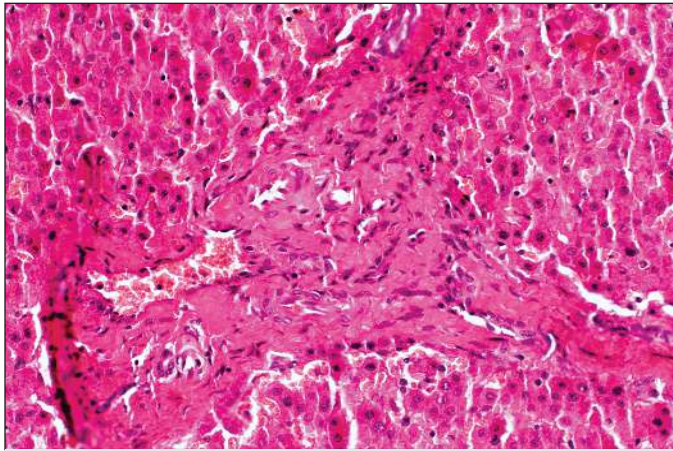


Fig. 3 : Leiomyoma in cross-bred Jersey Cow

Intas Pharmaceutical Pvt. Ltd) by intramuscular route for 5 days. Skin sutures were removed after 10 days of the operation. Animal died after two months and on post-mortem examination, a well encapsulated creamish white solid mass round in shape measuring 1.75 feet (L) x 1.5 feet (W) x 1 feet (H) and weighing 38.5 kgs in the left horn of the uterus (Fig. 1) was taken out. In present case, the cow was not showing signs of parturition even after 15 days above the expected date of calving. However, the abdomen was fully distended to same as that of advanced pregnant animal. But when the animal was examined, no fetus or fetal parts were palpated within the uterus. The large size of tumor in the cow was the cause of clinical signs and abdomen distention.

Right horn was filled with straw coloured fluid. The tissue was hard to cut and cut section revealed thick, condensed fiber bands (Fig. 2). Histologically, the mass was a leiomyoma and was composed of interwoven fascicles of long, plump spindle to strap like cells with abundant pink cytoplasm and indistinct cell borders. Collagen production was minimal. There were well-differentiated multiple layers of hypercellular and hyperchromatic interwoven bundles of smooth muscle cells. Number of nuclei also appeared in increased order. At places muscle fibers revealed a multidirectional pattern with occasional mitotic activity. Nuclei were elongated (Fig. 3). Such massive types of leiomyomas are rare in cow and in any species. Similarly, an oval massive leiomyoma measuring 45 kg was removed by Miller (1995) from a sow after euthanasia. The tumor was restricted to one horn and was firm, solid, tan white and was reported after normal farrowing. In most of the cases the signs associated with such tumors depend on the number, size and locations. Generally uterine leiomyomas were found to grow slowly and were found clinically unapparent (Moghissi, 1991).

The removal of the leiomyoma was successfully managed to restore the reproductive life in one clinical case of cow (Sharma *et al.*, 2012) and without reproductive life in bitches by various workers (Shammi *et al.*, 2010; Karagiannis *et al.*, 2011; Karunakaran *et al.*,

2013). Sharma *et al.* (2012) removed a leiomyoma of small size of 7.8 cm in diameter from right uterine horn through right flank laparotomy and the early diagnosis restored the reproductive life of the cow. In our case the uterine leiomyoma was very big and was occupying the major part of the abdominal cavity. Due to big size and unknown location of point of attachment of the growth, it was not possible to take it out from the uterus. So, due to huge size of leiomyoma the presented case was left as such without surgical removal. Such type of uterine tumors if diagnosed at an early stage could be removed easily without any interference in future fertility. These growths in the uterine lumen should be differentially diagnosed from pregnancy, abscess, pyometra and other misleading growths at an early stage. So, the present case could have survived if it was diagnosed by some experienced veterinarian at suspected 3 months of pregnancy through per-rectal examination or with the help of advanced diagnosed tools like ultrasonography.

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