B. CHANDRA PRASAD¹*, B.MANASA¹ and MANDA SRINIVAS²

Department of Veterinary Clinical Complex

¹Department of Veterinary Gynaecology and Obstetrics, NTRCVSc, Gannavaram

Sri Venkateswara Veterinary University, Tirupati (Andhra Pradesh) India

Received : 21.02.2019; Accepted : 25.02.2019

SUMMARY

An Ongole cattle aged about 8 years in fifth parity was presented to Department of Veterinary Gynaecology and Obstetrics with the history of continuous bleeding for the past 15 days from the vagina. Per vaginal examination confirmed the presence of large mass prolapsed through the external os of the cervix. Growth was excised and sent for histopathological examination. Based on arrangement of fibrocytes and collagen fibres, the cervical growth was identified as fibroma.

Keywords: Cervical tumour, Fibroma, Ongole cow,

Tumours are very rare in female reproductive tract of large animals mostly. Neoplasm is a growth of new cells that proliferate without control, serves no useful function and has no orderly arrangement (Vegad, 2007). The aetiology of tumours is a subject of study and increased hormonal levels is one of the assorted reason (Liehr, 2001). Fibroma is a benign neoplasm of mesenchymal origin and account for more than 20% of the skin tumours in cattle (Tyagi and Singh, 1993). The tumor masses in cervix and vagina seldom obstruct the birth canal and are usually noticed subsequent to parturition when they prolapse out.

An Ongole cattle aged about 8 years in fifth parity was presented to Department of Veterinary Gynaecology and Obstetrics with a history of continuous bleeding for the past 15 days through vagina. The animal had calved one year back and had been inseminated for four times after the last calving and the last insemination was performed nearly six months back. Heart rate and respiratory rate were within physiological limits, whereas, rectal temperature was recorded as 103.4°C. The animal exhibited severe tenesmus during urination. Per rectal examination revealed presence of large mass at the cervical region occupying entire cervix and protruding in to vagina and uterus (Fig-1). Passage of uterine catheter in to the cervix revealed of partially dilated cervix which could be traversed with great difficulty and the body of uterus was also thickened and enlarged. Ultrasonographic examination showed echogenic image extending through the cervix in to the uterus. Haematological examination revealed TLC as 8500/cmm, Haemoglobin as 9.6%, PCV as 31%, Neutrophlis as 46%, Lymphocytes as 47%, Eosinophils as 4% and Monocytes as 3%. Under epidural anaesthesia with 5 ml of 2% inj. Lignocaine hydrochloride, tissue sample of the growth was excised per vaginally by using punch biopsy and sent for histopathological

examination. Bleeding was controlled by placing the cotton soaked in the adrenaline solution for 30 minutes. Animal was treated with Streptopencillin 5g. for three days.

Impression smears and biopsy sample were collected in 10% formalin for the histological examination. Impression smears were stained with Leishmans stain and preserved tissues were processed by paraffin embedding technique. Tissue sections of 4 to 5 micron thickness were cut and stained with Haematoxylin and Eosin method. Cytological examination of the impression smear revealed the presence of spindle cells with elongated nucleus and prominent nucleoli (Fig.2). Histopathological examination revealed the presence of numerous plump fibroblasts with dense collagen fibers along with blood vessels and few inflammatory cells (Fig.3). The neoplastic cells were spindle shaped with elongated nucleus running in different directions. Fibrocytes were hyperchromic. The cytological and histopathological findings were suggestive of cervical fibroma.

The incidence of mesenchymal tumors arising from the reproductive tract of large animals is relatively low, when compared with small animals (Saut *et al.*, 2013). The incidence of pedunculated tumors in the cervix of bovine genital system is rare. Tumors of the cervix occurs very occasionally leiomyomas, to lesser extent, fibromas are the most common (Noakes *et al.*,2009). Fibromas are kind of mesenchymal tumours and normally hard, white and spherical in nature, either solitary or multiple, containing dense mass of collagenous fibrous connective tissue (Mc Entee and Nielsen, 1976).

Fibromas are benign, hard, white, spherical tumours of the uterine wall and occasionally occur in bitches and cows. They may be single or multiple and consist of dense masses of collagenous fibrous tissue.

^{*}Corresponding author : cpmail1@rediffmail.com





Fig. 2: Spindle cells with prominent nuclei

Fig.1: Large tumour mass occupying cervix Fibroma is a benign neoplasm of mesenchymal origin and account for more than 20% of the skin tumours in cattle (Tyagi and Singh, 1993). Fibromas and fibrosarcomas are uncommon neoplasms in large animals and arise from dermal or subcutaneous fibroblasts. Their presence in the cervix may either interfere with conception or lead to difficulty at the time of parturition depending upon size, type of tumour, location in the birth passage and its invasion from other tissues. (Umamageswari et al., 2015).

REFERENCES

- Liehr, J.G. (2001). Genotoxicity of the steroidal oestrogens oestrone and oestradiol: possible mechanism of uterine and mammary cancer development. Human Reprod. Update 7: 273-281.
- Mc Entee, K. and Nielsen, W. (1976). Tumours of the female genital tract. Bull. World Healt. Org. 53:217-226

Fig. 3: Fibroblasts with dense collagen fibers

- Noakes, D.E., Parkinson, T.J. and England, G.C.W. (2009). Veterinary reproduction and obstetrics. 9th Edn., Saunders Elsevier, China, 141-142.
- Saut, J.P.E., Oliveira, P.M.D., Nasciutti, N.R., Medeiros, A.A., Magalhães, G.M., Tsuruta, S.A., Hanna, P. and Headley, S.A. (2013). Vaginal leiomyosarcoma in a cow from Uberlândia, Minas Gerais, Brazil. Cinc. Rural. 43: 897-901.
- Tyagi, R.P.S. and Singh, J. (1993). Ruminant Surgery. 1st Edn., CBS Publishers and Distributors, New Delhi, p. 414.
- Umamageswari, J., Das, A.K., Balasubramanian, S., Krishnakumar, K., Mohan, P. and Arunmozhi, N.(2015). A rare massive cervical fibroma in a buffalo. Indian J. Anim. Reprod. 36(1): 3.
- Vegad, J.L. (2007). A text book of veterinary general pathology. Internationals Book Distributing Co, Lucknow. p 277.