THERAPEUTIC MANAGEMENT OF NECROTIC VAGINITIS IN A JERSEY CROSS BRED COW

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ABSTRACT

In a normal cow, the vulva provides an effective protective barrier to vagina and uterus from ascending infection. When the animal is fed with excess estrogenic compounds like mouldy maize and barley, it may result in relaxation of pelvic ligaments followed by edema of vulva and vulvo vaginitis. Fusiformis necrophorum is the likely cause of necrotic vaginitis and result in excess of exhaustive straining and may end up with toxemia. Present study is a case of necrotic vaginitis presented to Teaching Veterinary Clinical Complex with the history of mucopurulent vaginal discharge for the past five days. The animal was treated with antibiotic based on culture and sensitivity and therapeutic management using sulfanilamide powder and shark liver oil as intra-vaginal emollient with uneventful recovery.

Keywords: Cow, necrotic vaginitis, therapeutic management

INTRODUCTION

Vulva comprises of two labia, dorsal and ventral commissure. Vulval lips are placed together without any gap between two lips, which helps in protection from direct contact to environment. Vestibule has several circular and sphincter muscle which closes the genital canal. During parturition vestibule acts as a point of contraction in expelling the fetus. Consequently, after difficulty in parturition with trauma, laceration, excessive pressure and abrasion of vulvar and vaginal walls may predispose to vaginitis followed by necrotic vaginitis. Vaginitis occurs often with or without metritis (Roberts, 1971). Usually the symptoms are observed 1 to 4 days after parturition with systemic involvement. Apart from post parturient complications, any injury to the sphincter muscle of vestibule and infectious causes like Infectious bovine rhinotachitis (IBR), Trichomoniasis, Ureaplasma sp., Haemophilus sp. and Mycoplasma sp. may cause wide range of vaginitis such as vulvovaginitis, Infectious pustular vullovaginitis, granulamitous vaginitis and catarrhal vaginitis (Brenner et al., 2009). Vaginitis results in prolonged inter-estrous interval, inter-calving period and overall decrease in milk yield. Hence it has to be addressed as economic importance.

CASE HISTORY AND OBSERVATION

A four year old Primiparous Jersey crossbred cow weighing around 220 kg was presented to the Large Animal Obstetrics
unit of Teaching Veterinary Clinical Complex with the history of mucopurulent vaginal discharge for five days. The last calving was six months before and last artificial insemination was 15 days before. On clinical examination the cow was active with rectal temperature of 102°F and shrunken vulva. On vaginal speculum examination, the mucous membrane was extremely necrosed with tissue debris which was adhered in the vaginal cavity (Fig. 1). In addition to that, accumulation of pus was also observed in the fornix region, and cervix was closed. On rectal examination, the uterus was in pelvic cavity with similar doughy uterine horns.

**TREATMENT AND DISCUSSION**

Based on the clinical observations, the condition was diagnosed as necrotic vaginitis. Whole blood was collected and sent for hematological profile and pus material was collected using a sterile sheath and sent for antibiogram.

Under low caudal epidural anaesthesia with 4 ml of 2% lignocaine hydrochloride, the vaginal cavity was douched with 0.1 per cent potassium permanganate solution to evacuate the tissue debris and pus material. Subsequently, the vaginal cavity was layered with 200 g mixture of cetrimide cream and 5 per cent povidone iodine as an emollient for first three days followed by application of sulfanilamide powder 10 g and shark liver oil as intra-vaginal emollient for five days. Initially the animal was treated with Inj. Gentamicin @ 10 mg/kg for two days. Based on the antibiogram, Ceftriaxone was administered @15 mg/kg for five more days along with Inj. Chlorpheneramine maleate 10 ml intramuscular and Meloxicam 0.5 mg/kg intravenous. Pus material in the vagina was slowly reducing and after five days there was a complete absence of vaginal discharge with evidence of clear vaginal mucous membrane (Fig. 2).

**Fig. 1. Necrotic tissue debris in vaginal cavity**

**Fig. 2. Clear Vaginal mucous membrane**

**SUMMARY**

Ureaplasma sp. cause clinical vaginitis. Mycoplasma bovigenitalium causes granulomatous vaginitis. Porphyromonas levii causes necrotic vullovaginitis in European herds after migration of dairy animals (Blum et al., 2008). Often these infections could have been transmitted from the infected bull. As the semen used for artificial insemination is from the graded semen station, the infectious cause due to venereal transmission is limited in this case. The presence of cocci colonies in aerobic culture indicates that there may be a chance of ascending infection or contamination of vagina due to improper insemination practices.

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