

Clinical Management of Mycotic Endometritis in Cows

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ABSTRACT: Out of 168 turbid uterine discharge samples from endometritic cows at estrus that had failed to conceive despite three or more attempts of retained artificial inseminations or natural services a total 27 (10.5%) mycotic isolates were recorded and identified. Out of these cows diagnosed for suffering from fungal endometritis, 16 animals were infused 0.15 solution of Lugol's Iodine intrauterine daily for three days. Iodine was found clinically efficacious in the treatment of fungal endometritis where out of 16 cows, 12 exhibited clinical recovery in terms of clearing of discharges and 6 cows conceived following first insemination

Keywords— Endometritis, Mycotic, Fungal, Lugol's iodine.

I. INTRODUCTION

Mycotic endometritis is becoming a matter of concern in repeat breeder cows now a days. The increase in the prevalence of mycotic endometritis has been attributed to several reasons including regular and indiscriminate use of I/U antibiotics, postpartum uterine contamination and compromises in hygienic during AI procedures (Thakur, 2003).

Isolated fungi and yeast from endometritic cows (Vicek *et al.*, 1989, Dascanio *et al.*, 2000). Since yeasts are widely distributed in the soil animal excreta, in the vegetative parts of plants and in substances that contain sugars (Hensyl and Oldham, 1892) they may gain entry into the genital tract. The primary objective of this investigation was to isolate mycotic flora from repeat breeder cows suffering from endometritis. Only the mycobiological findings with clinical evaluation of Lugol's iodine treatment.

II. MATERIALS AND METHODS

This study involved 168 cows with turbid uterine discharge at uterus that had failed to conceive three or more attempts of repeated AI or natural services. The discharges had slight, moderate or high turbidity with whitish or yellowish flakes at the time of estrus. The mucus discharge samples were aspirated from the uterus of cows at the time of their presentation for treatment and later sent to the laboratory for mycological investigation following standard isolation method. Fungal isolation Sabouraud's Dextrose agar (SDA) spot inoculation technique was employed and the plates were checked every 24 hours for microbial growth. Plates revealing fungal growth were examined carefully for the pattern of hyphae emanating from the spot inoculated. For microscopic examination, the fungal culture was stained as wet mount with lactophenol cotton blue stain. Identification of fungal agents was made on the basis of colony characteristics and staining reaction (Larone 1993) observed under the microscope. Out of 27 cows diagnosed suffering from fungal endometritis, 25 ml of 0.1% solution of Lugol's iodine was infused intrauterine once daily for 3 days in 16 animals. The treatment was started on day 0. Efficacy of Lugol's iodine was assessed in terms of betterment of discharge from the last estrus along with fungal isolations from the post-treatment discharge samples. The cows exhibiting post-treatment clinical cure underwent fertility assessment on single insemination basis.

III. RESULTS

Out of 168 uterine discharge samples from endometritic cows, a total of 27 (10.5%) mycotic isolates were recorded and identified. The different genera were *Geotrichum spp.*, *Cephalosporium spp.*, *Candida tropicalis spp.*, *Mucor spp.*, *Verticillium spp.*, *Aspergillus fumigatus*, *Aspergillus ochraceus*, *A.niger* and *Rhizopus spp.* Intra-uterine infusion of 0.1% Lugol's iodine was found clinically efficacious in the treatment of fungal endometritis where out of 16 cows, 12 exhibited clinical recovery in terms of clearing of discharge and 6 cows conceived following first insemination

IV. DISCUSSION

Mycotic endometritis in mares has gained considerable clinical interest in recent years (Rocha,2008) however reports in cattle are scanty. Some researches (Patgiri and Uppal, 1983; Sirohi and Khar, 2000) recorded near matching fungal endocervicitis. Vivek *et al.*, (1989) recorded pathogenic and potentially pathogenic fungi in the complicated to the extent of 22% and 11%, respectively. According to another report, cows with endometritis had exclusive infection with candida spp to the extent of 8.7% (Sood *et al.*,2003). Iodine compounds have been successfully used by Kremlev and Banakova (1979) to treat mycotic endometritis Singh (1996) observed effects of 0.1% Lugol's iodine in repeat breeder cows which was manifested as clearing of abnormal vaginal discharge in post treatment estrus. Morrow (1980) also suggested Lugol's iodine infusion as the first choice in repeat breeding cases without a clear cut diagnosis of uterine infection. Considering the observation in this study 0.1% lugol's iodine can be successful and inexpensive therapeutic option for the management of suspected fungal endometritis.

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