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THE EFFECT OF CIPROFLOXACIN AND TINIDAZOLE COMBINATION ON REPEAT BREEDING IN BOVINES

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ABSTRACT

The experiment was conducted, 66 bovines 53 buffaloes, 13 cows were noted with history of cycling normally without any clinical abnormalities and returned to oestrus even after three or more consecutive insemination. The animals were treated with Ciprofloxacin and Tinidazole combination after confirming as repeat breeders based on consistency and pH of vaginal discharges. The animals were inseminated on subsequent oestrous. The conception rates were 73.58% and 84.62% respectively for buffaloes and cows.

KEYWORDS: Bovine, ciprofloxacin, tinidazole, repeat breeding, oestrus.

INTRODUCTION

Resumption of cyclic activity after calving is influenced by nutrition, body condition, suckling, lactation, breed, age, month of calving, uterine pathology and debilitating disease. Repeat breeders are animal cycling normally without any clinical abnormalities, but fail to conceive even after at least two successive inseminations. They have clinically normal reproductive tract oestrous cycles and oestrous periods (Roberts, 1971).It is well established that poor nutritional status and Negative Energy Balance are responsible for the majority of anoestrus cases in both dairy and beef cattle. Sagartz and Hardenbrook (1971) reported endometritis in 77% infertile cows. In another study Hartigan *et al.* (1972), it was observed that 50% of genital tract obtained from an abattoir showed histilogical evidence of endometritis 12.5% subclinical endometritis is a major to the repeat beeder syndrome of bovines (Noakes *et al.*, 2001) and it is major economic loss in dairy farms. Uterine infections with a varity of antiseptic and antibiotic solutions have been tried (Oxender and Seguin, 1976). The present study was carried to evaluate the efficacy of ciprofloxacin and Tinidazole I/U infusion to repeat breeder bovines.

MATERIAL AND METHOD

The study was conducted in a Government veterinary hospital Chilla Allahabad, Uttar Pradesh, India during the period of 2013-2014 year. The total bovine 66, buffaloes 53, cows 13. These animals were classified as repeat breeders based on cycling normally without any clinical abnormalities and repeated heat after three or more consecutive services. The animals had history of normal oestrus cycles with turbid and thick vaginal discharge at the time of oestrus. Vaginal discharge in buffaloes was examined and in case, if it was absent, then transrectal uterine massage was done to stimulate the discharge vaginal discharge and PH before the treatment and after treatment at subsequent oestrus. repeat breeder bovines were treated with Ciprofloxacin and Tinidazloe combination @ 60 ml I/U at alternate day for three times.

RESULT AND DISCUSSION

Vaginal discharges observed in all animals of present study were turbid, thick and mucopurulent discharges due to uterine and cervical infection (Saini *et al.*, 1995; and Single *et al.*, 2004). Uterine and cervical infection suggests that during parturition, the physical barrier of the cervix, vagina and vulva are compromised, normally these infections are cured naturally by rapid involution of the uterus, discharges of the uterine contents and mobilization of the host defence including mucus, antibodies and phagocytes. Periparturient complication like retained placenta, dystocia, twins, dead foetus, milk fever, etc., increases the risk of uterine infection because they delay involution and reduces the bovine ability to control uterine infections. Rearing in unhygienic condition and insemination in non sterile condition also cause uterine infection. Increases of pH 7.5-8.0 of vaginal discharges were in agreement with previous studies in cattle with endometritis (Saini *et al.*, 1995; and Single *et al.*, 2004). This could be due to bacterial contamination of uterine fluids and the increased pH is not suitable for survival of spermatozoa and embryo in the uterus (Robert, 1986; and Sheldon *et al.*, 2008). However during infection bacterial toxin binds directly to uterine epithelial and stromal cell to stimulate the release of prostaglandins E2 which is luteotropic and may prevent luteolysis (Bogan *et al.*, 2008). After treatment with Ciprofloxacon and Tinidazloe combination, vaginal discharges were observed clear and transparent at next oestrus. pH of (7.0- 7.2) similar findings was also reported by (Singh *et al.*, 2009) per rectal examination after 2-3 months revealed that out of 46 animals 36 have conceived (82.2%). Among the bovines, higher conception rate was observed in cows (84.62%) than buffalos (73.58%). Conception rate was also higher in naturally bred animals 82.2% than artificial inseminated

(71.6%). These results are close agreements with the observations of Dash *et al.* (2004) and Pandve *et al.* (2005) as they have reported 80% and 82.5% conception rate with ciprofloxacin respectively.

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