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Short Communication

Effect of pre artificial insemination administration of amoxicillin + cloxacillin on conception rate in normal and repeat breeding cross bred cattle.

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ABSTRACT

A total number of 33 animals grouped under normal and repeat breeding category were treated with single dose amoxicillin+cloxacillin combinations. The amoxicillin + cloxacillin was infused intra-uterine 8-12 hrs pre insemination during estrous to evaluate the efficacy on the conception rate in normal and repeat breeder cows. In normal animals the conception rate with pre A.I. treatment was 63.63 % as compared to 33.33 % for control group. Similarly in repeat breeding cows, the conception rate was 60.00 with pre A.I. treatment as compared to 16.66 % in control group. The differences were recorded to be non-significant.

Key word: Repeat breeder, cross-bred cattle.

Repeat breeding in cattle is an important constraint for profitable dairy industry. It affects the calving interval as well as breeding efficiency. Many non-specific infections have been associated either with fertilization failure or early embryonic mortality. Various antibiotics are in use for the treatment of uterine infection. However, indiscriminate use of antibiotic has resulted in the development of resistant bacterial strains, complicating their therapeutic efficiency.

The present study was conducted on 33 repeat breeding cross bred cattle. All the animal selected were clinically healthy and maintained under standard managemental & feeding condition. The animals were allocated to two treatment and two control groups. In the treatment groups amoxicillin + cloxacillin (2.5 gm) combination dissolved in 30 ml of distilled water was infused intra-uterine 8-12 hrs pre A.I. The animal in control group received only 30 ml distilled water intra-uterine 8-12 hr pre A.I.

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The effect of pre A.I. amoxicillin + cloxacillin combination intra-uterine infusion on conception rate were recorded 63.63 and 33.33 % in normal and control cows respectively, when amoxicillin + cloxacillin was induced pre A.I. The difference in the conception rate in normal and control animals was non- significant. In repeat breeding and control cows the conception rates were 60.00% and 16.66 % respectively. However, the difference being non-significant. The cause of repeat breeding suggested by Zemjanis (1963) and Roberts (1971), the infectious and nutritional causes are the most important. In order to overcome the problem of repeat breeding in cattle, it is important to identify the type of infections, deficiency and its proper treatment. In infectious causes, it is necessary to know the suitable antibiotic, its route and frequency of administration in normal and repeat breeding cross bred cattle. Single dose treatment and local administration with antimicrobial drugs are often discouraged for the reason of favoring microbial resistance

development against such drugs (Levy, 1998). It seems that administration of antibiotic, intrauterine pre administration before insemination possibly control the low degree of infection in the uterus to great extent by the time of fertilized ovum is available in the uterine lumen and gets favorable environment for growth (Lindley, 1954).

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REFERENCES

Roberts, S.J. (1971). Veterinary obstetrics and Genital diseases, 2nd editions, Indian reprint,.2002, CBS, publishers and distributors, Dariaganj, Delhi-110002.

Levy, S. B. (1998). The challenge of antibiotics resistant. Scientific American, March, 1998: 46-53

Lindley, D.C. (1954). J. Am. Vet. Mede. Assoc., **124**: 187-189

Zemjanis, R. (1963). The problem in repeat breeding in cattle. Mimeographed paper presented at New England Vet. Meeting. (Cited by Stephen J. Robert's, 1971, in Veterinary Obstetrics and Genital Diseases, 2nd, Indian Edition, Scientific Book Agency, 22 Raja Woodmunt street, Kolkata-1).