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RESEARCH PAPER

Effect of mineral supplementation on involution and post-partum oestrus in Red Kandhari cows

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ABSTRACT

For the present study advance pregnant Red Kandhari(10 M) cows were selected from Red Kandhari Research and Instructional farm, College of Veterinary and Animal Sciences, Parbhani. Group-I (n=7, treatment group) animal showing Ca and P level below normal range and group-II (n=7, control group) include those animals showing serum Ca and P level within normal range. Group-I cows were given orally mineral supplement (Avion powder) 250 g before and after 7 day of parturition. The uterine involution was recorded as (30.28±0.74, 36.71± 0.56 days) while post-partum oestrus was observed (54, 67) days from group-I and group-II, respectively. So, it can be concluded from the results that average days required for involution of uterus and post-partum oestrus was found non-significant between the two groups, but slight less days required for process of involution and post-partum oestrus in group I than Group II observed.

Key words : Cows, Mineral supplementation, Involution, Post-partum oestrus

Expulsion of placenta within the stipulated period is important for the subsequent reproductive efficiency as it helps in initiating involution of uterus and appearance of post partum heat (Gudi *et al.,* 1970). Delay, if any, in involution of uterus decreases reproductive efficiency by increasing calving interval resulting in reducing total calving to her credit during the reproductive life. Minerals are very much vital for maintenance of optimum production and reproductive performances in farm animals. The deficiency or even some time excess of these nutrients may impair various reproductive functions.

The present investigation was carried out to study the effect of mineral supplementation on involution and post-partum oestrus in Red Kandhari cows.

MATERIALS AND METHODS

The investigation was carried out at the Department of Animal Reproduction, Gynaecology and Obstetrics, in collaboration with Red Kandhari Research and Instructional farm, College of Veterinary and Animal Sciences, COVAS, M.A.F.S.U., Parbhani. For the present study, advance pregnant Red Kandhari (10 M) cows were selected by screening per-rectaly from Red Kandhari Research and Instructional farm, COVAS, Parbhani. Gynecological examinations of all the pregnant cows were carried out and the cows in advance pregnant phase were selected for the studies. A total of 14 animals were selected randomly irrespective of their age and parity.

Fourteen cows were divided into two groups, those animals which shown serum calcium and phosphorus level below normal range *i.e.* (9.7-12.4mg/dl and 5.6-6.5mg/dl) were taken in group I (n=7) *i.e.* and those animals which have shown serum calcium and phosphorus level within the normal range were taken in group II (n=7) and were kept as untreated control. Group I was given orally mineral feed supplement daily 250 g (Avion powder) before and after seven days of parturition.

Systemic efforts were made for Red Kandhari cows to study time required for involution of uterus and appearance of post partum ovarian activity with mineral feed supplement before and after seven days of parturition.

Involution of uterus:

Involution of uterus was monitored per rectally at 48 hourly interval of all the cases. The per-rectal examination was carried out every morning after milking the cows. The interval in days required for involution of non-gravid and gravid horn was noted.

Involution of uterus was considered complete, on the basis of the following criteria as adopted by Butch *et al*. (1955):

– When the uterus was found to have returned to its normal location in the pelvic cavity.

– The uterine horn attained approximately equal size and

– The tone of uterine musculature was flaccid as in non-gravid state