IJAR 18(1), 1997; 41-43

Effect of EXAPAR on some parameters of reproductive efficiency in buffaloes.

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ABSTRACT

Herbal uterine cleanser and restorative Exapar (Dabur Ayurvet Ltd.) was evaluated in 10 buffaloes which were about to calve. Exapar treated group showed statistically significant improvement in (i) No. of services per conception and (ii) No. of buffaloes becoming pregnant from all inseminations. Other parameters like (i) time taken for the expulsion of placenta, (ii) days taken to show first post partum heat and (iii) average days open were also studied.

Buffaloes have been known for their relatively poor reproductive efficiency. The major limiting factor for improving the fertility of this species is its long postpartum intervals. It is of prime importance that the involution of the uterus should ideally be completed in 28 to 45 days post-partum in buffaloes (Jainudeen, 1986). Delayed involution of uterus due to any of these reasons i.e. retention of placental membranes, prolapse, metritis or pyometra not only results in reduction of milk yield, but also affects the fertility thereby causing severe economic losses to the farmer (Sane *et al.*, 1994). Keeping this in view, a polyherbal veterinary formulation, EXAPAR* was used to study its effect on the induction of post-partum estrus and subsequent conception in buffaloes, for improving the overall reproductive health.

MATERIALS AND METHODS

The trial was conducted at the Institute's buffalo herd. Twenty Murrah buffaloes (*Bubalus bubalis*) in different lactations, about to calve, were selected for the study. Prophylactic dose of Exapar was given to 10 buffalo cows @ 50 ml per day, for a period of 2 to 4 days, from the time they started showing the physical signs of calving like relaxation of the pelvic ligaments, generalized expansion of the birth canal and the softening of the cervix to the time they calved. The other group of 10 buffaloes served as untreated control. Parameters recorded for both the groups were: (i) time taken for the expulsion of placenta, (ii)days taken to show first post partum heat, (iii) conception rate, (iv) number of services required per conception and (v) average days open.

Milk production and also the number of days taken to reach the peak for all the animals was recorded. All the animals were observed for a period of six months from the day of calving. The data obtained was statistically analyzed using students 't' test, as per Snedecor and Cochran (1967).

RESULTS AND DISCUSSION

Eight of the ten buffaloes, treated with prophylactic dose of Exapar exhibited heat as compared to six of the ten animals kept as control. The average time taken to expel the fetal membranes was 3.10 hrs in treated group as compared to 5.03 hrs in the control group (Table 1).

* Product of Dabur Ayurvet Limited, 22 Site IV, Sahibabad - 201010 (U.P.)

All the Exapar treated buffaloes became pregnant (100%), while only 50% of the animals became pregnant in the control group. For the Exapar treated group, average number of services required per conception was just 1.75 as compared to 4 for the control group.

The administration of Exapar helped in reducing the average days open from 89.33 days (as in controls) to 75.12 in Expar treated animals. No significant difference between the milk yield and the days taken to achieve peak yield in both the groups i.e. control vs Exapar treated groups was observed.

According to a recent study (Singh and Sahni, 1995), anestrus and irregular estrus cases accounted for 69.4% of the reproductive problems in buffaloes indicating dysfunctions of the ovaries. Quite high incidence of anestrus has been reported earlier by Purbey and Agarwal (1982). Anestrus can be seen in many situations following abortion, stillbirth, dystocia, prolapse, retained fetal membranes and metritis. Jain and Pachlaug (1995) reported that 75% of the retained fetal membrane cases culminate in metritis. As the incidence of retention of placenta was less than 3% in the herd, the apparent role of Exapar was to assist in early expulsion of placenta, regulation of lochial discharge, early involution of uterus, in improving conception and thereby, improving fertility.

The beneficial effect of Exapar seen in this trial seems due to the unique combination of potent medicinal herbs, with documented action profile like *Aloe barbadensis* (Gupta, 1972), *Aristolochia indica* (Chopra *et al.*, 1982), *Gloriosa superba* (Tewari *et al.*, 1967), *Lepidium sativum* (Nadkarni, 1954), *Leptadenia reticulata* (Satyavati *et al.*, 1976), *Peganum hartmala* (Kapoor, 1990), *Plumbago zeylanica* (Kapoor, 1990), *Rubia cordifolia* (Nadkarni, 1954), to name a few. These constituent herbs of Exapar, possess proven secretory, uterine stimulative, tonic, ecbolic and emmenagogic action and thus help in expulsion of placenta, and post partum cleansing for timely involution of uterus.

From the results of the present study, it is concluded that Exapar is a potent herbal preparation which is efficacious in improving the reproductive health of the buffaloes through early expulson of placenta, involution of uterus, reducing the period of post partum anestrus and improving conception.

Table 1. Effect of EXAPAR in improving post-parturient reproductive health in buffaloes.

	GROUPS	
	Control	Exapar Treated
No. of buffaloes returning to heat	6/10 (60%)	8/10 (80%)
Av. no. of days taken to come in heat	50.0	55.6
Av. time taken for the placental expulsion	5.03 hrs	3.10 hrs
No. of buffaloes pregnant from 1st insemination	3/6	4/8
No. of buffaloes pregnant from all inseminations	3/6 (50%)	8/8 (100%)*
No. of services per conception	4.00	1.75*
Av. days open	89.33	75.12

* Significant at p=0.05.

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