Efficacy study of HimROP VET LIQUID in the management of retained placenta and post-parturient septic metritis in bovines

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INTRODUCTION
Retention of fetal membranes (afterbirth) is observed more frequently in cattle, especially in dairy cattle, than in other animals. Normally, a cow’s placenta is expelled within a 12-hour period after calving. If any part of afterbirth is held for longer periods, it is considered to be pathological or abnormal. Research has consistently shown that those animals with antibiotics "dumped" into the uterus will have delayed uterine involution, increased days to first service and increased number of services per pregnancy. Metritis and pyometra are more common occurrences in those cows that are indiscriminately treated with antibiotics in the uterus. "Cleaning" a cow or "pulling" the retained placenta can result in the ripping of the lining of the uterus with permanent damage leading to infertility (Laven and Peters, 1996). Manual removal, however, has been opposed as it may favour the entry of infection, which may be more harmful (Singh, 1974).

Aim of this trial was to study the efficacy of HimROP VET LIQUID, a polyherbal formulation [mainly contains Moringa oleifera (Shigru), Adhatoda vasica (Vasaka), Gloriosa superba (Kalihari), Ruta graveolens (Sudapa), Peganum harmala (Harmala), and Cyperus rotundus (Musta)] of The Himalaya Drug Company, Bangalore, in the management of retained placenta as ecbolic in dairy cows.
MATERIALS AND METHODS
Twenty cows of different breeds and age group were divided into Group I (Retained placenta, n=15, 100 ml HimROP VET LIQUID, bid., 1st day followed by 100 ml once daily for 3 days); Group II (Septic metritis, n=5, 50 ml HimROP VET LIQUID, b.i.d. for 5 days). Time taken for expulsion of placenta membranes was recorded.

RESULTS
In Group I (Retained placenta), 60% of cows had their placenta expelled in less than 12 hours, 13.33% in 12-24 hours and 26.6 % in more than 24 hours (Figure 1). Overall, 73.33% cows expelled placenta within 24 hours of HimROP VET LIQUID treatment. Manual removal was easy, the adhesions between maternal and placental carencals were loose and placenta became soft in cases where cows failed to expel placenta within 24 hours of treatment.

In Group II (septic metritis), no antibiotics were administered throughout the study period. In all cases, there was a drop in milk yield. All cows regained their normal production in 3 days and lochia expelled in 3-5 days. All the animals recovered for 5 days treatment.

DISCUSSION
HimROP VET LIQUID consists of the extracts of Moringa oleifera, Adhatoda vasica, Gloriosa superba, Ruta graveolans, Peganum harmala and Cyperus rotundus. The leaves of Moringa oleifera plant show strong antibacterial activity against Micrococcus pyogenes var. aureus, Escherichia coli and Bacillus subtilis (Caceres et al., 1991). Vasicine is an alkaloid from Adhatoda vasica showing uterine stimulant activity. It was observed that uterotonic action of vasicine is mediated through the release of prostaglandin (Gupta et al., 1978). Gloriosa superba is useful in increasing the force of contraction of uterus (Chopra et al., 1958; Chunekar, 1969). Teweri et al., (1967) reported the presence of strong ecbolic activity in fresh juice of rhizome of this plant. Water-soluble portion of the alcoholic extract of Gloriosa superba has shown strong oxytotic effect in isolated uterus of guinea pigs, rabbit (non-gravid and gravid uterus of different stages), dogs and human beings (Tewari et al., 1972). Hot water extract of Ruta graveolens was reported to be active in inducing abortion in 12-24 hours after ingestion and aqueous extract of the seed showed uterotonic activity (Kong et al., 1989). The therapeutic value of Peganum harmala is attributed to the presence of alkaloids, harmine and harmaline. It has antibacterial and antiprotozoal activity (El Saad and El- Rifaie, 1980).
The unique combination of herbs present in HimROP VET LIQUID contributed towards ecbolic and uterine cleansing activity in post-parturient retained placenta and septic metritis cases. All the cows tolerated the therapy very well. No untoward effects were noticed throughout the study period.

CONCLUSION
The results of the study show that, HimROP VET LIQUID is effective and safe as an ecbolic, uterine cleanser and uterine tonic in post-partum uterine health of bovines.

REFERENCES
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Figure 1: Duration required to expel retained fetal membrane