Study of the Efficacy of Herbal Formulation HIMFERTIN VET Capsule for the Management of Anestrous Cows

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ABSTRACT

The study was conducted to know the efficacy of herbal formulation HIMFERTIN Vet capsule for Management of anestrous cows. Based on the results of induction of estrus and the time required for the manifestation of estrous after administration of this treatment, it appears that HIMFERTIN VET capsule is safe and efficient in induction of estrous in postpartum anoestrous cows.

The successful economics of dairy cattle production lies in ensuring proper and optimal reproductive rhythm of each individual cow in the herd, within the normal physiological range. Anestrous is a major problem faced by the cattle owners both in farm and field conditions. The main reason for anoestrus in cows is due to nutritional deficiencies, as the farmers cannot meet the nutritional requirements of their herds due to their poor economical conditions. Any deviation or prolongation in the breeding rhythm results in progressive economic loss due to widening of dry period, reduced calving and lactation during the life span of cow. Since hormonal therapies for anoestrus is costly, non-hormonal polyherbal preparations are widely employed in the treatment of anoestrus and postpartum anoestrus.

The objective of the present study was to evaluate the efficacy of polyherbal formulation HIMFERTIN VET capsule which consists extracts of *Cyperus rotundus* (Musta), *Moringa pterygosperma* (Shigru), *Zingiber officinale* (Sunthi), *Allium cepa* (Palandu), *Symplocos racemosa* (Lodhra), *Cicer arietinum* (Chanaka) and powder of Mukta Sukti to induce oestrus and conception in the management of anoestrus crossbred cows.
MATERIALS AND METHODS
A total of 36 anoestrus cows were selected from rural individual farmers over a 3 month period. Cows were supplemented with normal concentrate, hay and green fodder throughout the study period. These cows were examined by rectal palpation to monitor the activity of ovaries regularly. They were also closely observed for signs of oestrus. The trial consisted of 2 groups: In group I, ten animals were assigned without any treatment and were kept on normal feeding regimen; In group II, twenty six cows were treated with HIMFERTIN VET @ 3 capsules, daily for 2 days and examined for ovarian activity. Those that did not come to heat were given repeat treatment (after 10 days) with HIMFERTIN VET capsules and examined for ovarian activity.

RESULTS AND DISCUSSIONS
The table shows the results of HIMFERTIN VET capsule for oestrus and fertile oestrus induction in anoestrus cows. Twenty three out of 26 (88.46%) cows in group II exhibited oestrus, with a mean time interval of 9.65 days. Subsequent to gyneco-clinical examination, 23 cows bred, out of which 14 cows (60.86%) conceived. All the 10 cows from untreated control group did not exhibit clinical signs of oestrus nor any ovarian activity.

The beneficial effect of HIMFERTIN VET capsule is due to the synergistic action of its constituents.

Table I

<table>
<thead>
<tr>
<th>Effect of HIMFERTIN VET capsule in estrous induction in anestrous cows</th>
<th>Control group</th>
<th>Treatment group</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of total cows</td>
<td>10</td>
<td>26</td>
</tr>
<tr>
<td>Estrous induced/ exhibited (Nos.)</td>
<td>Nil</td>
<td>23</td>
</tr>
<tr>
<td>Estrous induction rate (%)</td>
<td>Nil</td>
<td>88.46</td>
</tr>
<tr>
<td>Cows conceived (Nos.)</td>
<td>Nil</td>
<td>14</td>
</tr>
<tr>
<td>Conception rate (%)</td>
<td>Nil</td>
<td>60.86</td>
</tr>
<tr>
<td>Mean time interval for oestrus induction (days)</td>
<td>Nil</td>
<td>9.65</td>
</tr>
</tbody>
</table>

*The Himalaya Drug Company, Makali, Bangalore*
Tubers of *Cyperus rotundus* are credited with anti-inflammatory, estrogenic, antibacterial and stimulant properties. Cyperene I is reported to be responsible for estrogenic activity. The tubers are rich in Cu, Mg, Mn and Ni. Presence of these minerals substantiates its emmenagogue and stimulant properties (Singh *et al.*, 1970; Puratchikody *et al.*, 2001; Radomir *et al.*, 1956; Lohar *et al.*, 1992).

The *Moringa pterygosperma* is known to possess aphrodisiac property. The plant is reported to contain minerals and vitamins. Leaves have been found to contain calcium, phosphorus and insoluble oxalate. The presence of considerable amount of calcium indicates contractile activity on uterine muscles. It is reported for its use in homeopathic medicine for the treatment of partial impotency (Makkar *et al.*, 1996; Ray *et al.*, 2004; Singh *et al.*, 1976; Prakash *et al.*, 1988).

Rhizome of *Zingiber officinale* is useful as an adjuvant to many tonic and stimulating remedies. The rhizomes are thermogenic (produce heat in the body), aphrodisiac and contain traces of iodine and fluorine (Suekawa *et al.*, 1984; Ahmed *et al.*, 2000).

*Allium cepa* possess tonic, stomachic, diuretic and appetite improving properties. Hot water extract of bulb consumed orally by humans for its aphrodisiacal property. The bulbs are bactericidal. They inhibit the growth of *Bacillus subtilis, Micrococcus pyogenes var. aureus, Escherichia coli, Pseudomonas pyocyaneus* and *Salmonella typhi*. They are the natural source of quercetin, and also contain stigmasterol, cholesterol, β-sitosterol, kaempferol, quercetin, and quercetin-3-glucoside. The phenolic acids reported to be present are p-hydroxybenzoic acid, protocatechuic acid and vanillic acid. The extract prepared from the onion skin has pronounced antioxidant properties (Griffiths *et al.*, 2002; Nandan Kumar, 2002; Nandan Kumar 2002a).

*In vivo* extract of *Symplocos racemosa* @ 500, 1000 and 2000mg/kg body weight oral administration for 6 days on serum follicle stimulating hormone (FSH) and leutinizing hormone (LH) levels in immature female Sprague-Dawley rats under basal conditions significantly stimulated serum FSH level (*p*<0.016) along with the rise in LH level (*p*<0.001). Histological studies revealed enhanced folliculogenesis, presence of mature follicles and detached oocytes, which are the result of increased FSH and LH levels. Further, an increase in the weight of ovaries of treated animals was found to be due to a surge in FSH levels (Bhutani, *et al.*, 2004).

The fruits and seeds of *Cicer arietinum* contain isoflavones biochanin A and formononetin which are estrogenic and also show hypolipidemic activity. The anti-stress, anti-hyperlipidemic and stamina building activity of *Cicer arietinum* is attributed to the
presence of pangamic acid (Vitamin B15)(91.1-528.6 mg/100g) and a free nucleotide, theophylline-9-β-D-glucopyranosyl-6'-monophosphate. The fruits and seeds of Cicer arietinum are stimulant, tonic, aphrodisiac, anthelmintic, and useful in bronchitis and biliousness. The seed oil exhibits estrogenic activity because of the presence of β-sitosterol (Sharma, 1979; de Pascual-Teresa et al., 2004; Gopalan et al., 1991; Singh et al., 1983).

The main component of Mukta Sukti is calcium, present as calcium carbonate. Also magnesium, oxide of iron, alumina and silica are present. These minerals are required for the toning up of muscles. Bhasma is reported to have aphrodisiac property (Kulkarni et al., 2002; Chauhan et al., 1998).

The herbs of HIMFERTIN VET capsules contribute towards ovarian activity and uterine tonicity.

REFERENCES


