Efficacy of Levamisole and Albendazole Against Gastro Intestinal Nematodiasis in Calves

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Gastrointestinal nematodiasis (GIN) is a major cause of concern in calves, as they result in loss of condition, anemia, scours and death in severe infestation. Adult cattle compared to young calves less than one year age suffer less as they develop immunity with age and exposure to the parasite (Moss 2009). Several anthelminthic drugs with different degrees of efficacy are available to treat this malady. In the present study, the comparative efficacy of levamisole and albendazole in the treatment of gastrointestinal nematodiasis in naturally infected calves has been evaluated.

Materials and Methods

Twenty one calves aged 5-9 months belonging to Livestock Research station, Palamaner, Chittoor district, A.P., which revealed nematode ova of one or more species on faecal examination were selected for the present study. On coproculture the larva identified belonged to strongyloides spp, and strongylus spp. The calves selected were randomly distributed into 3 groups viz, group 1, 2 and 3.

The eggs per g (EPG) value of the calves present in all the 3 groups were estimated during pretreatment on 0 day and post-treatment on day 3, 7, 14, and 28.

Calves in group 1 were given levamisole (Levis, 30% w/w w.s.p;polyvet Hyderabad) orally @ 7.5 mg/kg bw while calves in group 2 were administered albendazole (Albensole 2.5%w/v suspension, Hindustan therapeutics, Hyderabad) orally @ 7.5 mg/kg bw. Calves in group 3 were kept as untreated control

The efficacy of the drugs was evaluated based on faecal egg count reduction (FECR) post-treatment using standard formula (Soulsby, 1982) on days 3, 7, 14 and 28.

Results and Discussion

Pre-treatment EPG of group 1 on day 0 was 1386. On day 3, 7, 14 and 28 post-treatment with levamisole the EPG noticed was 156,29,0 and 0 with a reduction of 88.74, 97.90, 100 and 100 percent of nematode ova respectively. In group 2 the mean EPG observed pre-treatment on day

<table>
<thead>
<tr>
<th>Group</th>
<th>Drug</th>
<th>Dose rate &amp; route</th>
<th>No. of calves</th>
<th>Mean EPG on day</th>
<th>% efficacy (on day 28)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>Levamisole</td>
<td>7.5 mg/kg, bw orally</td>
<td>7</td>
<td>1386 (88.74)</td>
<td>156 (97.90)</td>
</tr>
<tr>
<td>2</td>
<td>Albendazole</td>
<td>7.5 mg/kg, bw orally</td>
<td>7</td>
<td>1414 (83.80)</td>
<td>229 (93.91)</td>
</tr>
<tr>
<td>3</td>
<td>Untreated</td>
<td>——</td>
<td>7</td>
<td>1357 (83.80)</td>
<td>1414 (93.91)</td>
</tr>
</tbody>
</table>
0 was 1414. On post-treatment with albendazole the mean EPG observed on day 3, 7, 14 and 28 was 229, 86, 57 and 29 with a reduction of 83.80, 93.91, 95.96 and 97.94 percent respectively. The mean EPG of group 3 kept as untreated control was 1357 on day 0 and it increased steadily to 1414, 1443, 1471 and 1486 on day 3, 7, 14 and 28 respectively. Both the drugs used in the present study were effective against gastrointestinal nematodes in calves in different degrees. Levamisole administered to calves @7.5 mg/kg bw orally in comparison to albendazole@7.5 mg/kg bw orally revealed 100% efficacy on day 14 as against 95.96% exhibited by albendazole. Though remarkable reduction in EPG was seen in albendazole treated group also, it remained infested even on day 28 with an efficacy of 97.94% coproculture of nematode ova. Post-treatment in group 2 on day 14 revealed larva of *strongyloides* spp.

Talabi *et al.*, (2002) in their study on comparative efficacy of levamisole and albendazole against gastrointestinal nematodes in calves observed 96.10% and 67.38% efficacy respectively. William and Broussard (1994) reported that levamisole was 100% effective in elimination of nematode ova 7th day post-treatment. Todd and Mansfield (1982) and Anwar *et al.*, (1996) reported albendazole to be 100% effective against gastrointestinal nematodes in calves.

**References**


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**Role of Linoleic Acid on the Reproductive Performance of Desi Turkey Breeders*  

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Fertility has always been a major concern for native turkey breeder managers. Linoleic acid was known to affect fertility and hatchability (Pappas, 2005; Midilli *et al.* 2009) in birds.

**Materials and Methods**

Twelve desi tom turkeys and thirty six breeder hens were randomly divided into three equal...