STRATEGIC TREATMENT OF SCABIES IN CAPTIVE CAMELS
(Camelus dromedarius)

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Sarcoptic mange in camels caused by Sarcoptes scabiei var cameli is considered to be one of the most serious, contagious, zoonotic (Singh and Veer, 2005) and debilitating disease affecting both dromedary (Arabian and Bactrian camels) & llamas (Higgins, 1983). Ivermectin has been reported to be effective against ectoparasites of domesticated animals including camel following parenteral administration (Hassan et al., 1989 and Makkar et al., 1991). This paper presents treatment of sarcoptic mange in camels under captive conditions using Ivermectin.

Three adult camels (two females and one male) weighing about 400-600 kg body weight reared under captive conditions at Adhiparasakthi Charitable Medical Educational & Cultural Trust farm, Melmaruvathur, Kancheepuram district had anorexia, debility, alopecia, intense pruritus and was not amenable to antibiotic therapy.

Clinically camels were weak, emaciated and had itching, pruritus, biting and rubbing against objects and were totally restless. The lesions were scattered throughout the entire surface of the body with involvement of head, face, neck brisket region, thighs, inguinal region, perineal region and root of the tail etc., Keratinisation, thickening, corrugation & wrinkling of the skin, exudation, bleeding, fissured skin & scab formation were also noticed. Alopecia was severe on legs, head, neck, trunk, abdomen, flank, perineum etc.

Deep skin scrapings until bleeding (about 10% of the total area) of any skin lesions at periphery were taken from each animal, processed with 10% KOH solution and were examined as per routine parasitological procedures. Sarcoptes scabiei var cameli mites were identified on the basis of their characteristic morphological features (Georg, 1985). Blood samples were collected from jugular vein in vacutainers containing EDTA for haemogram and without EDTA for biochemical assay.

Ivermectin was administered at the dose rate of 200 µg / kg body weight by subcutaneous route at the base of the neck at fortnightly intervals until sixty days of infestation along with parenteral

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administration of 10 ml E care Se injections for eight weeks. Benzyl benzoate paint was applied topically for the first week and it was followed by tetmasol soap bath sprays and oral administration of zinc containing tonics. The camels were clinically examined to assess the efficacy of Ivermectin based treatment.

The living mite count was severe on “0” day, moderate on 30th day, mild on 45th day and was totally zero on 60th day of drug administration. Usage of Ivermectin for treatment of Sarcoptic mange at a dose rate of 200 µg / kg body weight against Scabies in camels was reported by Singh et al., (2001).

The effects of therapy on skin as observed in these camels, marked clinical improvement in appearance with reference to skin texture, healing of skin lesions (i.e.,) disappearance of crusts, wrinkles, falling of scabs, skin folds becoming less and subsequent appearance of fresh shiny skin with glossy hair 1-3 mm long prior to second treatment absence of tissue swelling because of injections, disappearance of clinical signs of itching with parasitological cure noticed by 56 days was supported by Makkar et al., (1991), Parmar and Veer Singh (2005) and Reis opferman (1985).

Mean Haematobiochemical values in Scabies affected Camels.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>WBC</th>
<th>Lymphocyte (%)</th>
<th>Monocyte (%)</th>
<th>Neutrophils (%)</th>
<th>Eosinophils (%)</th>
<th>RBC</th>
<th>Hb</th>
<th>PCV</th>
<th>Total protein g/dl</th>
<th>Albumin g/dl</th>
<th>AST (IU/L)</th>
<th>ALT (IU/L)</th>
<th>BUN (mmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Treatment</td>
<td>23.1</td>
<td>52</td>
<td>3</td>
<td>39</td>
<td>6.5</td>
<td>4.8</td>
<td>10.5</td>
<td>20.1</td>
<td>4.2</td>
<td>2.5</td>
<td>42</td>
<td>32</td>
<td>6.2</td>
</tr>
<tr>
<td>Post Treatment</td>
<td>18.1</td>
<td>42</td>
<td>3</td>
<td>52</td>
<td>3</td>
<td>6.5</td>
<td>12.7</td>
<td>25.8</td>
<td>7.2</td>
<td>4.3</td>
<td>30.1</td>
<td>13.6</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Haematobiochemical profile revealed a decrease in haemoglobin, total erythrocyte count, packed cell volume and lowered value of total proteins and albumin simulating to findings already recorded by Parmar et al., (2005). An increase in total leukocyte count, eosinophils, lymphocytes, AST, ALT and urea observed were supported by findings of Gorak Mal et al., (2006) in camels infested with mange (Table).

The post treatment haematological and biochemical values were within the normal reference ranges to those reported elsewhere for the dromedary, (Basudah, 2007 and Schalm et al., 1975.)
Clinical recovery was apparent in all the three treated camels. This proved Ivermectin along with hygienic management of farm premises was 100% efficient.

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REFERENCES


