

Comparative efficacy of ivermectin (inj. vermic), fenbendazole (peraclear) and albendazole (almex-vet) against gastrointestinal nematodiasis in goats

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ABSTRACT:

This study aimed to evaluate the efficacy of ivermectin, fenbendazole and albendazole against gastrointestinal nematodes in naturally infected goats of government goat development farm, Sylhet, Bangladesh. The study included 50 black Bengal breed of which 30 were naturally infected and randomly selected 20 on the basis of their weight and egg count. Twenty black Bengal goats of 13-15 month old irrespective of sex infested with gastrointestinal nematodes were selected for this experiment and randomly divided into four equal groups (group A, B, C and D) where each group consisted of 5 goats and goats of group D were kept as control group. One injectable ivermectin (200µgkg⁻¹ body weight, S/C) preparations (Techno Drugs Limited, Bangladesh) and two solid fenbendazole, albendazole (7.5 mgkg⁻¹ body weight, orally) preparations (Techno Drugs Limited and Square Pharmaceuticals Ltd, Bangladesh) were used for positive control of gastrointestinal nematodes as group A, B and C. Goats of group D was kept as control without giving any treatment. Before trials (day 0), total egg count, blood samples and initial body weight were recorded. During the study period the faecal and blood samples were collected directly from rectum and examined on 7th, 14th, 21st and 28th day using McMaster fecal egg counting method. Body weight were recorded on day 28 following the treatments. The results of the comparative efficacies of different anthelmintic of ivermectin was 100%, followed by fenbendazole 95.33% and albendazole 90.11%. McMaster fecal egg counting method disclose the percentage of *Haemonchus* spp. (15.38%), with *Trichostrongylus* spp, *Strongyloides* spp., and *Cooperia* spp. also present. The body weight of the treated animals were slightly increased which were significant ($p < 0.05$). After treatment with ivermectin, fenbendazole and albendazole, Total Erythrocyte Count (TEC), Hemoglobin (Hb) content and Packed Cell Volume (PCV) were increased significantly ($p > 0.05$ and $p < 0.01$) in goats but Erythrocyte Sedimentation Rate (ESR) and Total Leukocyte Count (TLC) were decreased significantly ($p > 0.05$) in all treated goat and body weight was increased significantly ($p < 0.01$) on day 28. The farm management practices along with results of the present study revealed the efficacy of multiple anthelmintics against gastrointestinal nematodes in goats. Additional detailed studies are required to clarify the current status of the efficacy of the anthelmintics widely used in different agro ecologies, animal species, and livestock management systems in Bangladesh .

Keywords:

Comparative efficacy, Gastrointestinal nematodes, Goats and Sylhet.