PREVALENCE OF HELMINTH PARASITES OF CAMELS *(Camelus dromedaries)* IN THE ANSEBA REGION OF ERITREA IN NORTH EAST AFRICA

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Despite the susceptibility of camels to parasitic infections, they may not usually die or manifest obvious clinical signs. However, the slow, constant drain in their health often means a substantial loss in income to the farmers, camels being an important animal in Eritrea located in North East Africa. Hence the present study was undertaken to monitor the prevalence of gastrointestinal parasites of camel in and around Zoba Anseba region of Eritrea. Camels of different villages of Zoba Anseba were screened for the study. A total of 230 faecal samples were collected and examined for observing the prevalence of gastrointestinal parasitic fauna in the area during 2009 & 2010. The samples were collected from both male and female camels of different age groups. The faecal samples were collected in polythene bags and brought to laboratory for examination and examined by both sedimentation and floatation techniques. All the parasitic eggs were identified on the basis of morphological features given by Soulsby, 1968 and 1982. The data was subjected to statistical analysis using standard't'test (Snedecor and Cochran, 1967).

Out of the 230 faecal samples collected, 106 (46.08%) were found positive for different types of helminth eggs. Most of the camels were showing mixed type of infection with two or three species of helminth parasites. The parasites identified on the basis of morphology of ova were Strongyle sp 98 (92.45%), Trichuris sp 21 (19.81%) *Moniezia sp* 9 (8.49%) *and Fasciola* sp 2 (1.88%). Since mixed infection was observed with two to three species of helminths, the percent positivity was calculated from the total positive cases.

Out of 106 camels positive for different type of parasites, 60(56.60%) were males and 46(43.39%) females. The males were found more susceptible due to the fact that they are used for draught purpose and hence more exposed to parasitic infections(although the data were not significant statistically).The prevalence rate of different helminths are given in Table.

According to Gebrehiwet (1998), the prevalence of diseases in camels was highest in the rainy season(47.7%) and lowest in the dry season (19.2%). Parsani *et al* (2008) had

Table. Prevalence rate of different helminthes

Species	% Positive in Males	% Positive in Females	% Positive in Young	% Positive in Adults
Trichuris	14 (13.20 %)	7(6.60 %)	4 (3.77 %)	7(6.60 %)
Moniezia	6 (5.66 %)	3(2.83 %)	6(5.66 %)	3(2.83 %)
Fasciola	2 (1.88 %)	0(0.00 %)	0 (0.00 %)	2(1.88 %)
Strongyle	54(50.93%)	44(41.49%)	28(26.4%)	70(66.03%)

Null Hypothesis: There was no significant relation between the mean effects of males and females due to different Parasitic infections, t = 0.728, Probability = 0.48 and Probability > 0.05 hence not significant at 5% level of significance. Agewise , out of 106 positive camels, 35 were young ones (<3 years) (33.01%) and 71 were adults(>3 years) (66.98%)

recorded the common gastro intestinal nematodes of camels as *Haemonchus, Nematodirus, Nametodirella, Trichostrongylus, Strongyloides, Ostertagia, Marshallagia, Cooperia, Trichuris and Camelostrongylus* from the camels of Rajasthan, India. They have also observed maximum prevalence with these parasites during rainy season. Mostly the area under Zoba Anseba remains dry and gets maximum rainfall during July and August which frames the baseline for the infection in animals. The present study is also in agreement with the findings of Parsani *et al* (2008). Further, Manefield and Timson(1997) reported that camel was the least likely of all domestic livestock to suffer from heavy burdens of helminthes although low grades of nematode infection were common, during high rainfall. In the neighboring Eastern Sudan, *Haemonchus* spp and *Trichostrongylus* spp were among the commonest helminths species found (Fadle *et al* ,1992). In the present study the *Trichuris* was found as high as 19.81% and is in agreement with that of Manefield and Timson(1997).

In the present study only one camel was found positive for *Fasciola* which might be due to the fact that the camel migrated from another Zoba, as Zoba Anseba has no or meagre availability of surface water. Gebrehiwet (1998) also observed that camels move in Eritrea during early morning hours and late evening. During this time, the infective third stage larvae actively move up on the leaves and camels acquire infection while browsing.

Summary

The prevalence of helminth parasites in the camels of Zoba Anseba was studied. For the study a total of 230 fecal samples were collected and investigated. The investigation showed an infection rate of 46.08%. The helminthe ova identified were Strongyle 98 (92.45%), Trichuris sp 21(19.81%) *Moniezia sp* 9(8.49%) *and Fasciola* sp 2 (1.88%). Mixed infection with two to three species of helminths was recorded. The infection rate due to various helminths in males and females as well as young ones and adults were non significant (P > 0.05).

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