

A B S T R A C T

A study to determine the current status of enteric parasitic infections in children in three institutions of Trinidad and Tobago was initiated in 1977. The three institutions, represented distinct populations, namely the mentally retarded, the physically handicapped and the socio-economically deprived. A total of 450 children was involved in this study, which provided both qualitative and quantitative data.

Faecal samples were collected from each participant, from which fifty (50) milligram portions were subjected to the formol-ether concentration technique and examined for ova, cysts and larvae, and these quantified. Cultures were also set up as a diagnostic aid with regard to helminth larvae present in the faecal concentrates.

The highest prevalence rate of intestinal parasites was found at the institution for the mentally retarded, and this was in agreement with data obtained by other workers throughout the world. The data showed that intestinal parasitism is common in this particular group, both in children and adult populations. Next in order of prevalence was the residents of the orphanage (48%) and then the physically handicapped group (23%).

The intensity of infection was also highest in the mental retardates, which reflected on the ingestion of large numbers of embryonated ova and viable cysts.

The drug mebendazole, a broad spectrum anthelmintic was used to treat the various helminth infections, the most prevalent being that caused by Trichuris trichiura, the intensity of these infections being monitored before and after mebendazole treatment. The pattern which emerged was that one month after drug therapy, most faecal samples were either completely negative or ova counts were extremely low. Four to six months after administration of the drug however, the ova counts had reverted to or exceeded their former levels, thus indicating that transmission had taken place. A change in the physical environment at this institution, appeared to have modified this situation by the elimination of embryonation sites, with a subsequent reduction in the intensity of infection.

Unlike the mental retardates, the intensity of infection at the other two institutions was low, except for one heavy hookworm infection at the orphanage. These low intensity infections may be an indication of a low level of environmental pollution, coupled with a higher level of personal hygiene and sanitation in these two populations.

The helminths found in this study were Ascaris lumbricoides, Trichuris trichiura, Strongyloides stercoralis and Hookworm, the prevalence of these organisms varying from institution to institution. Amongst the protozoa the following organisms were found, Entamoeba coli, Entamoeba histolytica, Entamoeba hartmanni, Endolimax nana and Iodamoeba buetschlii, representing the amoebae, whilst the only flagellate found was Giardia intestinalis.

The intensity of these infections varied throughout the institutions, being highest at St. Ann's Hospital, where ova counts of 3,000 ova/50mgm of faecal sample were frequently encountered. With regard to the protozoal cysts these were graded on the number of cysts per high power field as being heavy, moderate, light and rare. Many heavy Giardia intestinalis, Entamoeba coli, Endolimax nana and Iodamoeba buetschlii infections were met.

This study is of relevance in that it highlights areas often neglected by the medical authorities, attention being focused in these areas only when some precipitating factor, such as the outbreak of diarrhoea occurs. Recommendations were made which at best could bring about total eradication or else reduce prevalence rates and intensity of infection to tolerable levels, that is to levels comparable to that of the community at large.

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