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Some aspects related to helminthic infection in Sri Lanka

Knowledge ,attitudes and practices.

A detailed questionnaire was administered to 141 randomly selected parents or guardians of children admitted to the University Paediatric Unit, Galle.

The majority questioned were, the mothers (83% of whom 86% were house-wives) from rural areas (69%), with a educational level less than Grade 8 (55%). 31% had studied up to G.C.E. (O.L.). Most of the families belonged to the lower income groups (43% - <750/=per month; 30% 750/= - 1500/=per month.

A majority (77%) had heard about hook worms, but only 41% and 2% had heard about round worm and whip worm respectively. Anorexia (65%), abdominal pain (50%) , lying on stomach (38%) , restless at night (39%), perianal itch (24%), nausea and vomiting (24%),passing worms (27%) were the main symptoms given by the parents, as signs of worm infections.

A large number (62/141 - 44%) thought that sweets cause worms. Although 54% knew that ground itch cause worms, only a few knew of worm eggs in stools (28%), or in contaminated soil (26%). Only 14% had any idea about the infective cycle.

A score was given to their knowledge, and the average obtained by the whole group was 30%, There was no correlation of the score to the, ethnic group, environment, education of parents, or their monthly income.

Considering the practices, 94% of the adults used latrines, while 47% of the childrens' stools were thrown outside. Since the children belonged to the same families, it is unlikely to be due to unavailability of toilets but due to ignorance. A majority (85%) were given periodic worm treatment, at least every 6 months. But only 47% of them had experienced perianal itching, while 46% had passed worms at least once (32% -both symptoms). 38% of the children had never passed worms nor had perianal itching.

Conclusions;

Regular periodic worm treatment in 85%, without any organized programme is encouraging, though the more important aspect of health education appears to be grossly inadequate. More than 1/3 (38%) getting regular worm treatment, do not really need it, since they have never passed worms nor had perianal itch.

Prevalence of helminthiasis in urban slums.

In contrast to the mostly rural population in the above study, the urban slum population of Galle, has a high prevalence in intensity of helminthiasis (Figs. I & II).

It is also interesting to note, the low prevalence of hookworm (17%), though most (77%) parents in the above study, knew about hookworm, while only 2% had heard of whipworms.

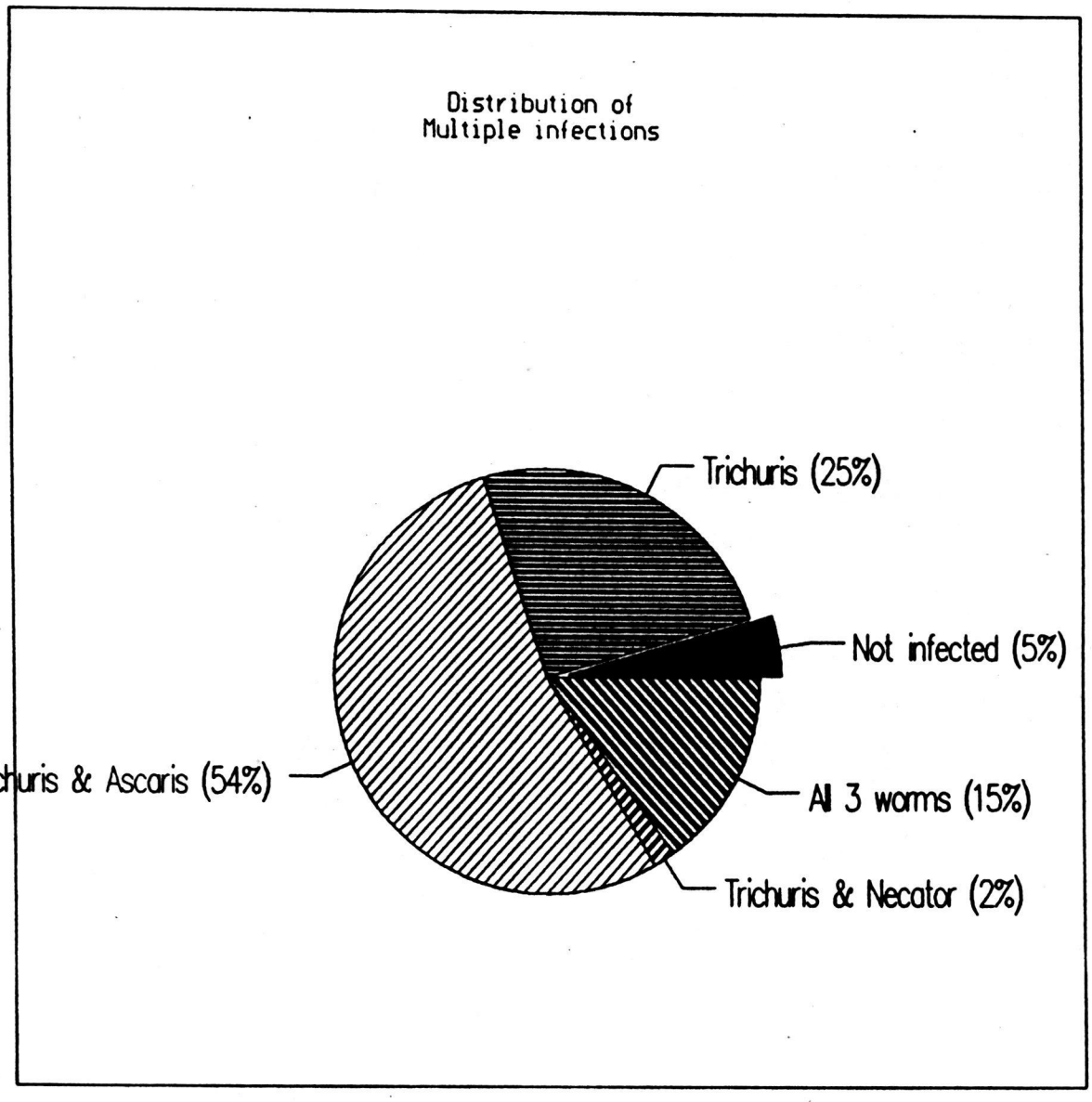
Periodic mass treatment of slum communities;

Three or four monthly periodic mass treatment of slum communities with mebendazole, has shown an initial drop in the intensity and prevalence of helminthic infections. But there does not appear to be any progressive reduction in the intensity or prevalence, with continued mass treatment.

Conclusions

The children in slum populations belong to the very low income groups, and malnutrition and recurrent infections are common features. It is likely that mass treatment projects are ineffective in the long term due to the following probable reasons.

(1). Poor knowledge of the infective cycle - leads to poor preventive measures.
(2). Improper sanitary conditions related to poor socio-economic status - leading to contamination of environment.
(3). Recurrent infections of the gastrointestinal tract and associated protein calory malnutrition which leads to reduced effectiveness of drugs (benzimidazoles)
(4). Other nutritional deficiencies (eg. Zn^{++} , Vit A) may influence the reinfection and response to anthelmintics.


Distribution of
Multiple infections
Trichuris (25%)
Not infected (5%)
All 3 worms (15%)
Trichuris & Necator (2%)
Trichuris & Ascaris (54%)

Severity of geohelminth infection

Galuala, Galle, Sri Lanka