Epidemiological Study, Health Behaviour Associated With Parasite Infection (Liver And Intestinal Fluke) And Impact Of Health Educational Programmes

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Abstract

Food-born trematode infections such as opisthochiasiasis are major causes of morbidity in Asia. This present study was performed in order to determine the prevalence of infection with liver fluke, *Opisthorchis viverrini* and other intestinal parasites in five areas of Khukan district, Si Sa Ket Province, Thailand. Data regarding socioeconomic characteristics and the health behavior of the population were thought to be useful in the development of a strategy to control and eradicate parasitic infections in a cost-effective manner. Stool samples were collected from 774 subjects including all age-groups from below 10 years of age to more than 60 years. The prevalence of infection varied in the 5 investigated areas and ranged from 7% to 13.6%. The majority of detected parasites (61 cases, 7.9% percent) were *O viverrini*. Males were significantly more often infected than females (p=0.03). And the prevalence of infection significantly increased by age (p=0.003) and lower educational level (p=0.03). The hand cleaning behavior was not significantly associated with the prevalence of infection (p=0.44). Subjects who claimed to wash their hands always tended to be even more often infected than subjects who only wash hands sometimes (10.1 percent and 7.7 percent, respectively).

These results indicate that Opisthochiasis is still a public health problem in Khukan district and that the disease is more restricted to populations of lower education. However, hand cleaning behavior and personal hygiene do not seem to play that crucial role in the transmission of the disease as previously thought. Further studies on social habits are required and might offer the possibility of targeted treatment and education of predisposed groups or communities.

A study impact of health educational programmes on the prevalence of enterobiasis in schoolchildren from Thailand was undertaken to determine if education in addition to medical treatment of enterobiasis could make a difference to the rates of infection. A total of 777 children (399 male and 378 female) from eleven elementary schools in five districts of Samut Prakan Province, Thailand were examined between December 2000 and March 2002. In five of the eleven schools studied, medical treatments were applied, followed by a programme of educating the
children in the prevention of infection. Children in the remaining six schools received medical treatment only. Infection in children from schools which received supplementary education was shown to decrease from 18.0% (77/427) to 8.7% (37/427) with a non-reinfection rate of 80.5% (62/77). In students from schools receiving medical treatment only, the infection rate decreased from 21.4% (75/350) to 19.4% (68/350) with a non-reinfection rate of 50.7% (38/75). The study therefore showed that educating high risk individuals played a key role in the prevention of enterobiasis. Data regarding epidemiologic characteristics and the health behaviour of the population were thought to be useful in the development of a strategy to control and eradicate infections in a cost-effective manner. The investigation was performed with the help of local public health department officials.

The main strategies for this control are comprised of 3 interrelated approaches, namely: (1) treatment of positive cases with albendazole for eliminating human host reservoir; (2) health education for a promotion of well personnel hygiene behaviour to prevent infection; and the improvement of hygienic defecation for the interruption of disease transmission. As a result, the annual positive rates had subsequently decreased to 19.4% in the year 2002.