Human parasitology in Czechoslovakia

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In order to give an overview of current initiatives in human parasitology in Czechoslovakia, this article will be divided into two parts: the domestic situation, and activities connected with other countries. Being a federal republic, different historical, cultural and economic backgrounds exist between the Czech and Slovak Republics, which are also reflected in endemicity of geohelminthes.

The prevalence rate of geohelminths in children in East Slovakia, previously the poorest region in the whole of Czechoslovakia, was 31.9% for Trichuris trichura and 21.2% for Ascaris lumbricoides (GIBODA, 1981). In the Czech Republic 197 754 persons underwent faecal examination during 1989; 0.2% of them were positive for Ascaris and 0.1% were positive for Trichuris (Cervová, personal communication). Familial clustering of geohelminth infections, with the mean prevalence rate 7 times higher than the overall average, was confirmed in areas of high as well as low endemicity (GIBODA, 1981; PALIČKA, 1972).

Entamoeba vermicularis does not display such dramatic differences between the regions, and its highest prevalence among children in day-care centres and kindergartens was 20–78% (KLOBUŠICKÝ et al., 1986; STÉRA et al., 1988).

In 1974-1983, the mean prevalence of human taeniasis was 4.9 per 100 000 inhabitants in Slovakia (population over 5 million). Steak tartare, or other raw meat preparations, were the source of infection in more than three-quarters of the cases (STRAKA et al., 1985). In 1989, 247 cases of taeniasis were diagnosed in the Czech Republic (population over 10 million).

Larval toxocariasis is the most widespread tissue helminthiasis in Czechoslovakia. Using an enzyme-linked immunosorbent assay with excretory/secretory antigen from larval Toxocara canis, the seropositivity in the 1–10 years age group was 16%, whereas in the 16–60 years group it was 25.7% (UHLIKOVA & HÚBNER, 1983). Trichinellois occurs only in East Slovakia as sporadic epidemic outbreaks.

The prevalence of giardiasis ranges from 9% in women working in agriculture to 68% in women in prison. In men with non-specific urethritis, and in partners of women with T. vaginalis, the prevalence rate was 26% (VALENT & KLOBUŠICKÝ, 1988). The Czechoslovak contribution to Trichomonas research is mainly in the elucidation of the role of hydrogenosomes in metabolism (ČERKASOV et al., 1978) and the mechanism of the anaerobic resistance of Trichomonas to metronidazole (KULDA et al., 1984).

The first epidemic of amoebic meningoencephalitis in Europe, with the largest number of infected persons from one source, was described by CERVA et al. (1968).

To estimate the prevalence of toxoplasmosis, seroepidemiological studies, using an intradermal test with toxoplasmin, were performed. In 5735 Czech subjects not at special occupational risk, the mean positivity rate was 32.1% (JIRA & ROSICKÝ, 1983). Using the same test in Slovakia, CATAR (1961) found 44.5% mean positivity.

Our wide experience with tropical medicine started in the 1950s, mainly through foreigners arriving in Czechoslovakia. Up to now 3000 Czech and Slovak physicians have undertaken medical service in more than 40 tropical and subtropical countries. Most of them underwent the training courses of tropical medicine and hygiene organized since 1961 in Prague and since 1970 in Bratislava, at the Departments of Tropical Medicine in the Postgraduate Schools of Medicine and Pharmacy in both cities.

The first programme launched with Czechoslovak staff in tropical countries was a hospital in North Korea in the middle 1950s; later, from 1957 to 1963, work extended to Haiphong, Vietnam (ŠERÝ, 1960, 1961). In the hospital in Takeo, Cambodia, fully supported with staff, drugs, and equipment by the Czechoslovak government, more than 200 physicians and nurses worked in rotation during 1980–1985. The possibility of biological control of human schistosomiasis was studied in Egypt (BARUS et al., 1974; MORAVEC et al., 1974). Surveillance and control of infectious diseases were undertaken in Vietnam (ŠERÝ, 1988; ŠERÝ et al., 1988). The susceptibility of Plasmodium falciparum to antimalarials was studied in Cambodia (GIBODA & DENIS, 1988). The epidemiology of intestinal parasites, with special attention to the small flukes, was studied in Laos (GIBODA et al., 1991a; 1991b). Twenty epidemiologists from Czechoslovakia were engaged in the World Health Organization smallpox eradication programme.

The parasitological examination of foreigners arriving from tropical and subtropical countries, and Czechoslovak citizens returning after a long-term stay in the tropics, was obligatory in Czechoslovakia; some results have been published elsewhere (MIROVSKY et al., 1987; BANDOUCHOVÁ et al., 1988; Bálint et al.,...


