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Taeniasis/neurocysticercosis control: Medical aspects

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Neurocysticercosis due to a larval stage of *Taenia solium* is a serious public health problem across low and middle-income countries of Latin America, Sub-Saharan Africa and Asia. It is a considerable problem in Europe and the United States, caused by immigration of *T. solium* carriers from endemic countries. Neurocysticercosis has a various clinical presentation, which ranges from asymptomatic infections to fatal cases. The most common symptoms are a late-onset epilepsy or partial seizures. The control of neurocysticercosis considers two aspects of *T. solium* transmission; it may be an indirect meat-born zoonotic control measure preventing human taeniosis by limitation of cysticercosis in pigs and a direct control measure by eradication of human tapeworm carriers, being the sole faecal-borne source of cysticercosis for humans and pigs. The control measures can be realized by the organized local or regional eradication programs as well as the routine daily medical and veterinary services. There is much progress in the veterinary control measures in endemic areas. However, the medical control of neurocysticercosis is still inadequately realized in spite of the improvements in diagnosis (fecal antigen tests), new taenicides (niclosamide, praziquantel) and better understood epidemiology (focality of transmission) of human *T. solium* taeniosis/cysticercosis. Several rules are proposed to be accepted in the medical control measures: Leaving untreated any detected case of *T. solium* taeniosis, spreading neurocysticercosis, is a medical error, due to difficulties in *T. solium* diagnosis the specific anthelmintic treatment has to be considered also in a suspected case of taeniosis (eg., there is a potential carrier of a *T. solium* tapeworm in every fourth case of neurocysticercosis), any *Taenia* tapeworm infection (*T. solium*, *T. saginata*, *T. asiatica*) deserves a specific treatment in order that *T. solium* is not missed, modern or traditional taenicides has to be easily available where needed, possibly free of charge, instruction has to be elaborated how to avoid the neurologic adverse reactions to praziquantel and preserve the stability and efficacy of niclosamide, a professional training in the control of taeniosis/neurocysticercosis has to be intensified in endemic areas, especially among mental health, public health and primary health care services as well as among veterinarians preventive screening of the *T. solium* tapeworm infected immigrants or visitors to endemic countries as well as local street meat vendors and specific treatment of those with a positive fecal antigen test, have to be considered.

Biography

Zbigniew Pawlowski is a Professor Emeritus of the Medical University in Poznan, Poland. He was a Chief of the Clinic of Parasitic and Tropical Medicine in Poznan (1970-1979 and 1987-1996) and an Organizer of the Intestinal Parasitic Infection Unit at World Health Organization in Geneva (1979-1986). He was active in several international parasitic and tropical medicine institutions (long term WHO expert, honorary member of several professional societies incl. American Society of Tropical Medicine and Hygiene). He has a DTMH diploma of the Liverpool School of Tropical Medicine (1964) and was for years involved in the Association of the Directors of the European Schools of Tropical Medicine. For almost three decades, he collaborated scientifically with the Centre for Disease Control in Atlanta, US. In 1999, he was awarded Doctor Honoris Causa by Warsaw Medical University.

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