

Do small mammals contribute to the dissemination of zoonotic helminths in human environment? Study of rodents and hedgehogs.

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The aim of this study was to determine whether small mammals living in human environment could be responsible for passive transfer of infectious eggs of zoonotic helminths to humans.

Four species of small mammals were included in the presently reported study: two species of hedgehogs, *Erinaceus europaeus* (10 samples) and *E. roumanicus* (48 samples); two species of rodents, *Apodemus flavicollis* (79 samples) and *Myodes glareolus* (18 samples). All animals were captured for ecological studies and after examinations were marked and released. Faeces found in the traps were collected to the PE test tubes and kept in a fridge. Some of the rodents were re-trapped, thus the number of faecal samples and animals examined was not equal: 14 animals were examined more than once. Faecal samples from examined animals were analysed by Sheather's flotation method and the slides prepared were analysed microscopically. Detected eggs were identified on the basis of morphological features (size, shape, etc.). The picture of each egg was captured with digital camera and analysed with a computer software (Motic Images Plus). Genetic confirmation of zoonotic species is in progress.

The analyses performed showed no infective eggs of zoonotic helminths that would be transferred passively, neither by rodents nor by hedgehogs. However, in 4 faecal samples from *Apodemus flavicollis*, the eggs of *Hymenolepis* sp. were found. Rodents are potential definitive hosts for parasites of this genus, and also constitute their reservoir in the environment. Eggs of other parasites, found in rodents' faeces, included *Trichuris muris* (25.8% positive samples), *Capillaria* sp. (28.9%), and *Heligmosomoides polygyrus* (6.2%). In addition, the hedgehogs' faeces yielded eggs of *Aonchoteca erinacei* (72.4%), *Eucoleus aerophilus* (24.1%), *Physaloptera clausa* (25.9%), *Crenosoma striatum* (20.7%) and *Brachylaima erinacei* (3.5%). Parasite fauna of hedgehogs has not changed significantly in comparison to the previous research conducted in the same area.