

13th EUROPEAN MULTICOLLOQUIUM OF PARASITOLOGY

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changing climate
changing parasites




Programme
& Abstract
Book

Belgrade, Serbia
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PROGRAMME
&
ABSTRACT BOOK

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recently been reported, including one case in Denmark and two cases in Belgium. In non-endemic areas, clinicians may not be familiar with this infection, and there is usually a long disease duration before the diagnosis. Identification of cases is challenged by the absence of pathognomonic symptoms as well as unavailability of diagnostics. We therefore speculate that the actual number of HF cases could be much greater than that reported.

Material and Methods. Here, we analysed published data on animal and human fasciolosis in the region of former Yugoslavia (Bosnia and Herzegovina, Serbia, Croatia).

Results. Fasciolosis is not notifiable, which is why it is difficult to estimate the incidence. Animal fasciolosis caused by *F. hepatica* is enzootic to at least some parts of the region. Sheep and cattle are the main reservoir of *F. hepatica*, and the intermediate host is *Lymnaea truncatula*. Over the two last decades, numerous reports have demonstrated the presence of *F. hepatica* in small and large ruminants in the region. Between 1928 and 1964, 25 cases of HF were reported, mostly from Croatia. Esteban *et al.* (1998) reported of 2,951 cases of HF in Europe over a 25-year period, including 4 cases in the region.

Results. The re-emergence of HF observed over the most recent years could be explained by climate change, changes in food habits, migrations, and resistance in anthelmintic therapy. This new trend requests increasing awareness among clinical microbiologists and infectious disease specialists with regard to autochthonous HF, and should be addressed using a One Health approach.

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THE NECESSITY OF MONITORING RODENT HELMINTH COMMUNITIES IN LIGHT OF THE ONE HEALTH APPROACH

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Background. Because of globalization and urbanization, humans more frequently come into contact and cohabitate with wild animals, which leads to the possibility of pathogen transfer. Rodents commonly live near humans and domestic animals, and are well known natural reservoirs of zoonoses, including those caused by helminths. Climate changes can lead to zoonoses in previously non-endemic areas or in previously uninfected host species.

Material and Methods. Host samples were collected in areas such as picnic grounds, weekend settlements, and arable land. These are the places where humans and domestic animals can encounter infected animals or a contaminated environment, leading to pathogen transmission.

Results. During the study period, 11 host species from the families Muridae and Cricetidae were registered. Helminths were present in each host species, and five of them were infected with parasites of medical and veterinary importance. The total species diversity of helminths in Serbian rodents consists of 36 identified species. Seven of them have confirmed zoonotic potential: *Mesocestoides lineatus*, *Hymenolepis diminuta*, *H. nana (fraterna)*, *Taenia martis*, *Hydatigena taeniaeformis*, *Calodium hepaticum* and *Moniliformis moniliformis*. The dominant helminths regarding the number of infected host species and occurrence sites were *H. diminuta*, *H. nana (fraterna)* and *M. lineatus*.

Conclusion. Human travel and commerce over large distances facilitates the spread of parasites and their hosts into areas where they were previously absent. Additionally, the encroaching of human settlements into natural habitats, coupled with climate change, leads to parasites invading new hosts, including humans. All the above necessitates regular monitoring of rodent populations, the parasites they carry, and their environment. Results of these analyses must be made available to physicians and veterinarians as evidence of parasite presence in a given area, which can allow experts to anticipate the occurrence of parasitic diseases in humans, livestock and/or pets.