

The "One Health – One Medicine" new concept and meat zoonotic parasites in Romania

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In Romania, the zoonotic parasites transmitted through food prevalence are based on the environmental conditions, human behavior, and socio-economic levels. Species of parasites from *Toxoplasma*, *Taenia* and *Trichinella* genera represent the most important food-borne parasitic zoonosis, especially of those transmitted via meat. Infection with *Toxoplasma gondii* is one of the most common parasitic infections of humans and animals, with nearly one-third of the human population having been exposed to this parasite. *T. gondii* is divided in three lineages (I, II, III) with different pathogenicity. In Romania, seroprevalence of anti-*T. gondii* antibodies in humans was found to be of 59.5%. Serological studies of animals have revealed that the seroprevalence in backyard pigs is 20.3-40.8%, in wild boars about 16%, in sheep 46.3-83.6%, in lambs 4.1-17.5%, and in goats 49.8% to 79.5%. However all the studies are limited to serological epidemiology and few are based on molecular epidemiology and on identifying the risk factors. By genotyping, *T. gondii* type II (in cats, pigs, goat-kids, wild carnivores - *Felis silvestris*, *Vulpes vulpes*, *Mustela nivalis*, and raptors – *Strix aluco*) and III (in cats and corvids - *Corvus frugilegus*, *Corvus cornix*, *Pica pica*) were identified for the first time in Romania, in recent years. The data regarding the epidemiological situation in Romania on muscular cysticercosis in pigs and bovines, and for taeniosis and cysticercosis in humans is scarce.

Trichinellosis was a serious public health problem for a long period in Romania, with the highest number of cases in the world according to the International Commission on Trichinellosis. The level of *Trichinella* spp. infection in animals is around 0.01% in indoor pigs, 0.07% in backyard pigs and 0.5% in wild boars.

In the future, further studies must be focused on molecular epidemiology of these food-borne parasitic infections (*Toxoplasma gondii*, *Taenia* (*Cysticercus*), *Trichinella* spp.) with emphasis on public health issues to determine human infection risk and design the measures for controlling the food-chain contamination.

Key words: meat-borne parasites, *Toxoplasma* sp, *Taenia* (*Cysticercus*) spp, *Trichinella* spp,

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