

## CYSTICERCOSIS: CURRENT SITUATION IN LATVIA

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**INTRODUCTION.** The term cysticercosis refers to foodborne zoonotic infections with larval tapeworms. The importance features of these zoonoses are that the larvae are meat-borne and the adult stage develops only in the intestine of the human host. *Taenia saginata* (beef tapeworm) and *Taenia solium* (pork tapeworm) are the most important causes of taeniasis in humans. Cysticercosis is a tissue infection with the larval cysticercus or metacestode stage, and occurs most commonly in pigs and cattle. Bovine cysticercosis, a cosmopolitan disease caused by *T. saginata*, leads to economic losses due to carcass devaluation at slaughter. Sanitary inspection at slaughterhouses, the routine diagnostic method in Latvia, lacks the necessary sensitivity to detect the mildly infected cattle.

In time period from 2009 there are no positive findings for bovine cysticercosis. However, during time period from 2003 there are seven human taeniasis/cysticercosis cases diagnosed in Latvia.

The aim of present study was to assess the knowledge of meat inspectors through questionnaires about cysticercosis and its causative agent, mainly *T. saginata* (*Cysticercus bovis*). However, preliminary studies of *T. saginata* cysticercus seroprevalence in cattle were set up.

**MATERIALS AND METHODS.** Questionnaire with 16 questions was developed for meat inspectors to assess their knowledge about cysticercus biology, factors affecting transmission, experience in diagnosing pathogen during routine sanitary expertise in cattle.

For seroprevalence study cattle blood samples were collected within other National surveillance programs. All animals were older than 24 month of age from different sex and breeding type.

Viable metacestodes of *Taenia* spp. bovine serum samples were prepared with the use of a monoclonal antibody-based sandwich ELISA developed in Institute of Tropical Medicine, Department of Biomedical sciences Veterinary Helminthology, Antwerp, Belgium.

**RESULTS.** Overall 96 respondents, mainly meat inspectors, filled anonymous questionnaires. During their practice 36.5 % of respondents at least once have detected viable cysts in cattle (10.4%) or pigs (20.8%) or in both (6.3%). Meanwhile, 81.3% of respondents consider that there is a risk for humans to acquire cysticercosis/taeniasis infection in Latvia via consumption of pork, beef or both.

Seroprevalence study is still ongoing.

**CONCLUSIONS.** It would be useful to improve the detection sensitivity of infected carcasses by investigating the use of risk-based meat inspection procedures and to improving awareness of taeniasis/cysticercosis among veterinarians, meat animal producers and the public through information and reiterative education.