

Genetic diversity within *Echinococcus multilocularis* isolated from clinical and environmental material in Poland – preliminary investigations

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Echinococcus multilocularis, etiological agent of alveolar echinococcosis, one of the most serious parasitic diseases of humans, is widespread in the northern hemisphere. Main endemic areas are located in Asia (China and Siberia) and central Europe.

The goal of this preliminary study was evaluation of genetic diversity of *E. multilocularis* isolated from clinical and environmental material collected in Poland. Material for analysis consisted of 22 *E. multilocularis* isolates: 14 clinical samples (archival intra-operative material), 3 isolates obtained from plants (n=1), soil (n=1) and fox feces (n=1), as well as 5 adult tapeworms collected from intestine of one fox. Most of the samples originated from northeastern Poland.

Analysis of the multilocus microsatellite EmsB was performed to assess genetic diversity of *E. multilocularis* derived from clinical and environmental samples. PCR with fluorescently labeled primers followed by capillary electrophoresis and determination of size of PCR products by comparison to internal size standard was conducted for all isolates. A dendrogram was constructed from EmsB amplification data in order to demonstrate genetic distances between the samples.

The most numerously represented genotype (6 clinical isolates) was similar to one of the most common European profiles. The second genotype (2 clinical and 1 environmental isolates) seems to belong to the same cluster as the second most common European profile. All remaining isolates represented unique profiles. Our preliminary results demonstrate high genetic diversity within Polish isolates of *E. multilocularis*.

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