Morphological And Molecular Study of Echinococcusgranulosus Strains Isolated From stray dogs in Tabriz In 1392

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Introduction:

Hydatidosis is considered to be a neglected cyclo-zoonotic disease in northwestern Iran where caused by metacestode of dog tapeworm *Echinococcusgranulosus*. Although human hydatidosis is a high public health priority in the region, however there is no more known concerning the various features in stray dogs. Therefore, the aim of this study was to investigate the morphometric and molecularof adult *E. granulosus* in order to determine the *Echinococcus* strains taxonomy and genotypic feature of isolated infected stray dogs in Tabriz city.

Materials & Methods:

In this descriptive study, a total of 51 collected stray dogs (24 males and 27 females) were examined macroscopically during 2013in Tabriz city. The parasites were distinguished by morphometric diagnostic keys including small and large hook length, blade length, gravid proglottides and mitochondrial cytochrome oxidase 1 sequences.

Results:

16 (31.3%) out of 51 collected stray dogs were infected with *E. granulosus*. The measurement results of rostellar hook morphology and gravid proglottides were unambiguously shown an intraspecies variation range among isolates ($p<0.05$).

Interestingly, the average ratios of blade length to total length in both large and small hooks were explicitly different compared with previous studies which had conducted on metacestodescolices merely. The phylogenetic analysis of *cox1* sequence revealed firmly the G1, G3, and G6 genotypes along with mixed infection. Based on analyzed sequences 15 haplotypes were identified.

Conclusion:

This is the first simultaneous investigation which is developed by employing both morphometric and molecular characterization on adult *E. granulosus* in Iranian stray dogs. It can reflect a better understanding of adult *E. granulosus*features which should be considered precisely in taxonomy, biology and monitoring of infected stray dogs in, northwestern Iran.

Key words:*Echinococcusgranulosus*, dogs, G1-G6 genotypes, Morphometric, Iran.