

## Abstract

### Introduction:

Human and animal cystic echinococcosis caused by the *Echinococcus granulosus*, is a smallest cestode with medical importance. The parasite is present and reported in most of the regions of the country. Azerbaijan area is known for high rate of infection. The aim of the present study was to ascertain the genotype(s) of the parasite responsible for human hydatidosis East Azarbaijan, Iran, 2013.

### Materials and method:

To study the transmission patterns of *E. granulosus*, genotypic analysis was performed on hydatid cysts obtained from 55 paraffin blocks of cystic echinococcosis patients that have been surgically operated (91-92 years) in Emam Reza hospital of Tabriz city, North West of Iran. The patients' demographic variable obtained from their hospital documents and Hydatid cyst samples confirmed by pathology and were chosen for the study. PCR-RFLP method was done using ITS1 region specific primers. PCR products were studied by electrophoresis and then were digested using *HpaII* and *RsaI* restriction enzymes.

### Results:

All the studied samples identified as sheep strain (G1). Twenty nine (52.72%), 16 (29.1%), 3 (5.45%), 3 (5.45%), 1 (1.81%), 1 (1.81%) and 1 (1.81%) out of 55 hydatid cysts were located in lunge, liver, spleen, kidney, heart, pancrease, brain and femore, respectively. The frequency of hydatidosis observed higher in patients from rural area ( $P=0.013$ ; OR= 0.599; 95%CI: 0.28, 1.27).

### Conclusion:

Based on the results of the present and the previous studies we can conclude that the majority of hydatidosis in East Azarbaijan Province are caused by sheep strain (G1) of *E. granulosus*, which indicates the sheep-dog cycle in the studied area.

**Key words:** *Echinococcus granulosus*, Hydatidosis, G1, Hydatid cyst, Iran