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Updated status of cystic echinococcosis in humans and livestock in Turkey

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Cystic echinococcosis has been frequently reported in different regions of Turkey. Based on the official announcements of the Ministry of Health, a total of 52 000 patients (3 257 patients per year) underwent surgery for cystic echinococcosis between 1990 and 2005 in the country. The annual incidence of cystic echinococcosis has been reported as 0.8-2.0/100 000, whereas the rate was supposed to be higher (6.4/100 000) in some regions. Although a total of 14 789 surgically confirmed cystic echinococcosis patients were reported between 2001 and 2005, the seroprevalence of human cystic echinococcosis has been estimated to be between 2.7%-14.6% in different parts of Turkey. A cross-sectional ultrasound-based study recorded abdominal cystic echinococcosis in 53 out of 8 618 healthy people screened in 2014-2015. There are many studies about molecular characterization of *Echinococcus* (*E.*) *granulosus sensu lato* in Turkey. It has been reported that *E. granulosus sensu stricto* (formerly G1-G3 genotypes) was the dominant species responsible for human cystic echinococcosis in Turkey. The G6 and G7 genotypes of *E. canadensis* also have been confirmed in human isolates. There have been many prevalence studies on cystic echinococcosis of farm animals in Turkey over the past years. Depending on the geographical area and specimens evaluated, the prevalence of cystic echinococcosis in livestock hosts ranged from 3.5% to 58.6%. However, the published studies showed that the prevalence of cystic echinococcosis could be ranged between 3.50%-70.91% in sheep, 1.60%-25.11% in goats, 3.00%-46.41% in cattle, and 10.24%-41.10% in buffaloes, respectively. A large part of genotyping studies at the molecular level, especially in livestock, have shown that *E. granulosus s.s.* (G1-G3 genotypes) is the most prevalent species responsible for cystic echinococcosis infection in sheep, cattle, goat, and camel. The G7 genotype of *E. canadensis* was found less frequently in sheep. Additionally, the G1 genotype of *E. granulosus s.s.* and the G4 genotype of *E. equinus* have been confirmed in horses.

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