

HYDATIDOSIS IN MAN

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Hydatidosis is a zoonotic disease caused by the larval stage (a metacestode) of a tapeworm, *Echinococcus granulosus*. Dog and other carnivores are its definitive hosts while ungulates like cattle, buffalo, sheep and goats are the intermediate hosts. Man is its accidental host. A very high incidence (20 to 59%) of the disease in meat animals (Munir, 1980; Pal and Jamil, 1986; Iqbal *et al.*, 1989; Khan *et al.*, 1990) and dogs (Baig *et al.*, 1985) poses a potential threat to human health. This report describes the seroprevalence of hydatidosis in patients referred to pathology department of Pakistan Institute of Medical Sciences (PIMS).

A total of 129 sera of patients referred to pathology department of PIMS for liver function tests were collected. These samples were stored at -20°C before use. All the samples were subjected to indirect hemagglutination (IHA) test using Echinococcosis kit (Behring, Marburg, Germany). At first stage, qualitative test was carried out as per instructions of the manufacturer. Briefly, 5µL of test serum was introduced into each well of a V shaped polystyrene microtitration plate. Thereafter, into each well, 100 µl of IHA reagent was added. It was mixed on a vibrator and allowed to stand at room temperature and read after 2-3 hours. The samples found positive in qualitative test were run for quantitative test. For quantitative test, serum was prediluted 1:8 with tris buffer. A 2-fold serial dilution of the serum was made and 25 µL of IHA reagent was then added to each well. It was mixed well on a vibrator, left at room temperature and read after 2-3 hours.

Of 129 test sera, 16 were found positive to Echinococcus antigen in qualitative test. Unclear (±) reaction was observed in 10 cases while rest of the sera were found negative. However, on quantitative test, only one serum sample was found positive (titre 1:128) to Echinococcosis. No other confirmatory test could be done.

Hydatidosis is of cosmopolitan distribution with different prevalence rates in various parts of the world. Reported incidence rate ranges from 1.2 in Iran to 23

per 100,000 persons in Sardinia area of Italy. Although high prevalence rates in Pakistan have been reported in slaughtered animals, data on incidence in humans in Pakistan is not available. Junejo *et al.* (1996) reported 54 cases of cystic hydatidosis diagnosed by ultrasound examination during July, 1990 to August, 1993. This reflects the need to do a comprehensive survey of hydatidosis in various regions of Pakistan in particular in communities prone to this infection.

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