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## Letter to the Editor

### Seroepidemiology of hepatitis E virus in Western Iran

Dear Editor,

Hepatitis E is transmitted through water and contaminated food, and the clinical presentation can vary from an asymptomatic infection to a fulminant disease. The results of seroepidemiological studies revealed a 10% to 35% prevalence rate in developing countries. Hepatitis E has been considered the most prevalent cause of acute hepatitis in adults in Asia, and the second cause (after hepatitis B) in the Middle East.<sup>1</sup> Several studies in Iran show a seroprevalence of 7% to 12%.<sup>2</sup> Considering its transmission through contaminated water, and its epidemic history in Western Iran,<sup>3</sup> studying the prevalence of hepatitis E in Khorramabad (Western Iran) seems appropriate, because the results of such a study can aid future health programs in this city.

This cross-sectional study was conducted during four months in 2009. It included subjects above 20 years of age, with a mean age of 36 years. A multiphase sampling method was applied and 400 subjects were selected from 19 active health centers (226 females and 174 males). Out of 400 subjects, 31 cases, including 17 females (7.5%) and 14 males (8%) were positive for hepatitis E virus (HEV), showing an overall prevalence rate of 7.8%. However, no significant difference was observed between these groups, the same as found in Tehran and Tabriz.<sup>2</sup>

The mean age of the HEV-negative subjects (369 cases) was 34.8 year, and that of infected cases (31 cases) was 49.7 years. The highest HEV infection rate was found in the 40-59 age group (61.25%). Sixteen cases (4%) reported a blood transfusion history, out of whom three (18.8%) were HEV-positive. Fisher's exact test did not show any significant relationship between the two variables ( $p = 0.118$ ).

A direct relationship was found between an increase in age and infection rate in this study, the same as found in a study on the overall population of Iran;<sup>2</sup> therefore, the 40-59 age group should be specifically examined in subsequent similar laboratory and clinical studies.

Since the lowest availability to pure water has been reported in Lorestan,<sup>2</sup> and due to the history of epidemics of the disease in the neighboring province of Kermanshah<sup>3</sup> and in the city of Shahre Kurd,<sup>4</sup> possible outbreaks must

be considered and necessary instructions and preventive measures have to be provided.

Moreover, since the major mode of transmission is fecal-oral, it is necessary to promote hygiene, and appropriate hygienic sewage disposal in cities is the first priority.

This present study was conducted in an urban area that has a better sewage disposal system than rural areas. Therefore, it is estimated that the prevalence in the whole province may be even higher. Consequently, it is recommended that studies should be performed in the rural areas of the province and the country as a whole to examine water sources for HEV infection.

In addition, studies have shown that HEV transmission is possible through blood transfusion. More studies are needed to confirm this fact.

Routine examination of icteric and patients with hepatic diseases is recommended to prevent the virus from spreading to others, particularly pregnant women, due to high lethality; secondary preventive methods including vaccination should be sought along with primary preventive measures.<sup>5</sup>

#### Conflict of interest

All authors declare to have no conflict of interest.

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