Hepatitis E – a neglected disease in Norway

Hepatitis E is a major global public health problem. Each year, at least 20 million people are infected, more than three million become ill (1) and around 50 000 die (2).

The existence of a new virus with many of the epidemiological and clinical characteristics of the hepatitis A virus was first suggested following a waterborne outbreak in the Kashmir valley in India in 1978 (3). A few years later, the Soviet doctor Mikhail S. Balayev demonstrated a faecal-oral infection route by drinking a faecal extract from infected soldiers in a military camp in Afghanistan. One month later, he experienced stomach pains and vomiting, followed by fever and jaundice, and the research team found virus-like particles in his faeces (4). In 1990 this new virus was cloned, sequenced and given the name hepatitis E virus (5).

Today we know that at least four types of hepatitis E virus exist. Genotypes 1 and 2 only infect humans and cause epidemics and sporadic cases in developing countries, primarily via polluted drinking water. With few exceptions the illness is self-limited and benign in otherwise healthy patients, but pregnant women have a reported mortality rate of 15–25% in the third trimester (6). In patients with chronic liver disease, superinfection with hepatitis E virus can produce decompensated liver failure and death (7).

Hepatitis E virus genotypes 3 and 4 are zoonotic viruses. These produce sporadic disease in humans and can also cause outbreaks in industrialised countries. Infection probably occurs mainly through animal food products that are insufficiently heat-treated, for example meat from pigs, wild boar and deer (8). The virus may also potentially be transmitted through blood transfusion (9). Infection with genotype 3 is usually asymptomatic, but acute hepatitis and extra-hepatic manifestations occur. Chronic hepatitis E has been described in patients with immunological failure, particularly in the case of organ transplant patients (10).

Until recently, hepatitis E was perceived as a rarely imported disease in Norway (11). However, in recent years there have been reports from many European countries of a high seroprevalence and cases of genotype 3 disease, for example from Denmark and Sweden (12). In Norway, antibodies against hepatitis E have been found in 14% of Norwegian blood donors (13) and in more than 75% of pigs tested (14). Hepatitis E virus was detected in 8% of samples from sewage treatment plants, primarily genotype 3, which is similar to the virus found in pigs (15). In this issue of the Journal of the Norwegian Medical Association, Alexander Løvdahl & Joakim Øverbø report on the first case of acute hepatitis E following infection in Norway (16). Insufficient knowledge about the disease makes it highly probable that many cases are wrongly diagnosed, for example as toxic hepatitis.

Hepatitis E has been given low priority by the Norwegian health authorities, and we know too little about its prevalence and significance in this country. The disease is not monitored by the Norwegian Surveillance System for Communicable Diseases, and the risk of transmission via blood transfusion is inadequately assessed. The National strategy to combat viral liver infections (hepatitis) devotes little attention to hepatitis E – apart from pointing out that the Norwegian Food Safety Authority must help to increase knowledge of food products that can spread hepatitis E infection (17). This makes an important contribution, but it fails to indicate any drive to enhance knowledge about the significance of the disease here in Norway.

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References