

# Review of: "Porcine Blood and Liver as Sporadic Sources of Hepatitis E Virus (HEV) in the Production Chain of Offal-Derived Foodstuffs in Poland"

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Potential competing interests: No conflict of interest to declare

In this original study, Bigoraj et al. a presence of HEV in pigs' blood and in pig's liver samples with HEV RNA positivity rates of 3.4% and 1% respectively. It has been shown in different studies that HEV RNA was more likely to be shedded in the animal's faeces than in tissues such as blood, liver and muscles.

Therefore, it is less appropriate to estimate the prevalence of HEV in animals-and in humans- by the only presence of HEV RNA in blood and liver tissue and at the time of slaughter.

The detection of anti-HEV Immunoglobulin G(IgG), M (IgM) or both or detection of HEV RNA in animal faeces in addition to the other tissue as blood and liver is needed to evaluate the prevalence of HEV in pigs and other commonly infected animals such as wild boars.

However, the presence of HEV RNA in edible products from the animal has an importance in the epidemiology of transmission of the virus, especially this HEV gt3, to humans through a consumption of uncooked or insufficiently cooked products. Although HEV gt3 infection in healthy individuals can rarely cause a liver disease, cases of chronic liver disease with even rapidly progressing to liver cirrhosis have been described among patients with immunosuppression such as HIV-infected and patients with organ transplants. Moreover, cases of acute on chronic liver disease have been described in Europe when HEV gt3 infection occurred in patients with a pre-existing chronic liver disease from other causes.

Therefore, though the presence of HEV RNA in animal at the age of slaughter is low, there is a need to put in place measures to contain this zoonotic transmission to humans not only focusing on vulnerable groups of those with immune depression but also to healthy individuals who may carry the virus in their blood and transmit it though the blood donation as there is no standards to systematically screen for HEV to all donated blood across the World.

Could the vaccination of all pigs against HEV when a vaccination will be available be one of the effective solution, remains subject to debate? Meanwhile, a systematic cooking with sufficient heat to remove the virus from the food chain and a systematic screening of blood destined to patients with pre-existing chronic liver disease, those transplanted and those with immune deficiency could at least be an affordable cost-effective available solution.





