CORRESPONDENCE

Hepatitis E in Germany—an Under-Reported Infectious Disease

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Current Data

Hepatitis E is relevant in the context of blood transfusions (1). In addition, and in order to contribute to the discussion surrounding the safety of blood products, we wish to draw attention to recent data on transfusion associated hepatitis E. We have shown recently that low concentrations of hepatitis E virus (HEV)-RNA of 120 international units (IU)/ml in the plasma of an asymptomatic multiple donor were sufficiently high to result in chronic HEV infection in an immunosuppressed recipient (2, 3). The transmitted infectious dose was calculated for the first time and was 7056 IU HEV-RNA in the transfused platelet apheresis preparation. A further possible transmission occurred in a child from the same donation (2). The conclusion is, firstly, that a low concentration of HEV can be enough to cause HEV infection, and, secondly, that highly sensitive PCR methods are required to detect HEV-RNA in blood donors. Vollmer et al. showed that PCR based HEV screening with sufficiently high sensitivity is possible and can easily be integrated into existing test algorithms (3).

Studies imply that 1600–5900 HEV-RNA positive blood donations are to be expected in Germany per year (1–3). Multiple donations during the viremic phase and dividing the blood product among several recipients increase the risk of infection even more. Although immunocompromised patients are a relevant recipient group for blood products, the disease burden of transfusion associated hepatitis E is not comprehensively known. The reasons include a perception that underestimates hepatitis E (4). For the purposes of a safe provision of blood products and in view of the risk of severe disease courses, the obvious step seems to be to introduce HEV screening, in analogy to hepatitis C and HIV. Evidence based data on the relevance, cost effectiveness, and feasibility of HEV screening in blood donors are, however, still lacking.

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Conflict of interest statement
The authors declare that no conflict of interest exists.

In Reply:

We thank our colleagues for their important comments. In recent years there have been numerous reports of hepatitis E virus (HEV) transmission through transfusions of blood products (1). Furthermore, the prevalence of HEV-RNA in blood products has been studied in several Western countries. The viral load in the respective blood product is associated with the risk of establishing infection; the case from Freiburg is consistent with the findings of a large prospective study from the UK (2). The study showed that low potentially infectious HEV-RNA contaminations can occur even in the absence of HEV specific antibodies and that direct testing for HEV-RNA is therefore required in every case, in order to prevent cases of HEV transmission. With regard to pooled plasma products it is necessary to point out that the standard protocols for viral inactivation (intercept method and solvent-detergent method) do not inactivate HEV in all cases (3). The clinical importance of transfusion-associated HEV infection is currently the subject of controversial discussion. Individuals receiving blood products can always become infected with HEV by various other ways and at any time, even if the blood products were tested for HEV-RNA. On the other hand, the consequences of undetected acute or chronic hepatitis E can be severe in individual cases. In our opinion, HEV-RNA testing of blood products is indicated if the intended recipients are immunocompromised or have chronic liver disease. It should also be borne in mind that HEV infection can potentially trigger numerous extrahepatic manifestations—for example, Guillaine-Barré syndrome or brachial plexus neuropathy (amyotrophic neuralgia). Prospective studies are needed to investigate if these rare disease entities can be prevented by means of stringent prevention of HEV transmission through blood products.

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