Medical Xpress

1 in 3000 blood donors in England infected with hepatitis E

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The first systematic analysis of hepatitis E virus (HEV) transmission by blood components indicates that about 1 in 3000 donors in England have HEV in their plasma. The findings, published in *The Lancet*, suggest that around 1200 HEV-containing blood components (eg, red cells, platelets, and fresh frozen plasma) are likely to be transfused every year in England.

The study retrospectively screened 225 000 individual blood donations collected in south east England between Oct, 2012 and Sept, 2013 for HEV RNA. 79 donors were found to be currently infected with genotype 3 HEV (that can spread directly from animals to humans)—a prevalence of about 1 in 2848. The 79 donations had been used to prepare 129 blood components, 62 of which had been transfused. Follow-up of 43 exposed recipients showed transmission had occurred in 18 (42%) patients.

"HEV genotype 3 infections are widespread in the English population, including blood donors. We estimate that between 80 000 and 100 000 human HEV infections are likely to have occurred in England during the year of our study", principal investigator Professor Richard Tedder from the Blood Borne Virus Unit at Public Health England, explained.

"Although rarely causing any acute illness, hepatitis E infections may become persistent in immunosuppressed patients, putting them at risk of future chronic liver disease, and a policy is needed to identify these persistently infected patients and provide them with appropriate antiviral

treatment. However, our study indicates that the overall burden of harm resulting from transfusion-transmitted HEV is slight. Although on a clinical basis alone there appears no pressing need at this time for blood donations to be screened, a broader discussion over harm mitigation is now required."*

Writing in a linked Comment, Professor Jean-Michel Pawlotsky from Hôpital Henri Mondor, Université Paris-Est, Créteil, France, calls for the systematic screening of blood components for hepatitis E infection to be introduced in areas where HEV is endemic, such as the European Union.

He writes, "Despite…[the] high prevalence, the high rate of transmission by infected blood or blood products, the non-negligible morbidity and mortality related to HEV infection (especially in patient populations exposed to blood or blood product transfusion), and the lack of efficient antiviral therapy, Hewitt and colleagues surprisingly conclude that "there seems no pressing need to move rapidly with the introduction of donation screening"…The potential clinical results of blood-borne HEV infection should not be downplayed; in particular, the risk of serious complications and death exists. Thus, on the basis of Hewitt and colleagues' and other studies, I believe that systematic screening of blood components for markers of hepatitis E infection should be implemented in areas where HEV is endemic (eg, the European Union), based on HEV RNA detection. No doubt this position will be debated and, whatever the experts think, a political decision will have to be made. I suspect that pooled HEV RNA testing will become obligatory in blood banks soon."

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