Hepatitis E virus as a cause of acute hepatitis acquired in Switzerland

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BACKGROUND
Autochthonous hepatitis E is increasingly recognized as zoonotic infection in western countries. Serological assays have varying sensitivity and specificity.

METHODS
We implemented molecular testing to identify and characterize acute hepatitis E acquired in Switzerland.

RESULTS
Ninety-three cases of mostly symptomatic acute hepatitis E acquired in Switzerland were documented by PCR between November 2011 and December 2016. Median HEV RNA was $7.5 \times 10^4$ IU/mL (range, 5.3 to $4.7 \times 10^7$ IU/mL). HEV genotyping was successful in 78 patients, revealing genotype 3 in 75 and genotype 4 in three patients. Phylogenetic analyses revealed a few limited geographical and temporal clusters. Of the 91 patients with available anti-HEV IgM serology, four were negative; three of these were also IgG-negative, likely as a result of immunosuppression, and one was IgG-positive, a constellation compatible with HEV reinfection. Median age of the patients was 58 years (range, 20-80 years); 71 (76.3%) were men and 49 of these (69.0%) were ≥ 50 years old. The clinical course was particularly severe in patients with underlying chronic liver disease, with fatal outcome in two patients. Six patients (6.5%) presented with neuralgic amyotrophy.

CONCLUSIONS
Nucleic acid-based diagnosis reveals HEV as a relevant cause of acute hepatitis in Switzerland. Middle-aged and elderly men constitute the majority of symptomatic patients. Testing for HEV should be included early in the diagnostic workup of acute hepatitis and of neuralgic amyotrophy, a typical extrahepatic manifestation of HEV genotype 3 infection.
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