

High risk of hepatitis E virus (HEV) infection among HIV-infected patients in Spain

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Objective: We investigated the prevalence of anti-HEV IgG in 448 HIV-infected patients and determined the role of age, gender and CD4 counts in the detection of anti-HEV IgG antibodies in blood. **Methods:** Serum samples from 448 HIV-infected patients of Ramón y Cajal Hospital (Spain) were included. Age, gender and CD4 counts were assessed in all patients. Alanine aminotransferase levels (ALT) and clinical symptoms were recorded in all anti-HEV IgG positive individuals. Acute hepatitis E infection was defined when HEV-RNA and/or anti-HEV IgM was present. Anti-HEV IgG antibodies were detected in serum by a commercial enzyme immunoassay (EIA). All positive samples were further studied for the presence of anti-HEV IgM antibodies. Positive results by EIA were confirmed by Immunoblot assay. HEV RNA was detected by RT-PCR in all anti-HEV IgG positive serum samples. **Results:** 353/448 (78.7 %) of HIV patients were male. The median age was 46.3 (range 21-80). 31 patients (6.9%) had a CD4 count below 200 cells/mm³ (mean 542.9, range 3.15-1397). Anti-HEV IgG were detected in 10% (42/417, 95% C.I. 7.1 -13) of patients with >200 CD4 cell/mm³ and in 9.7% (3/31, 95% C.I. 0.9-20) of patients with <200 CD4 cells/mm³. No difference in seroprevalence between both groups was observed (p>0.01). According to gender, anti-HEV IgG were found in 35/353 (9.9%) males and 10/95 (10.5%) females. No difference in seroprevalence between these groups was observed (p>0.01). The overall prevalence of anti-HEV IgG was 10% (45/448, 95% C.I.7.2 -12.8). Anti-HEV IgM were detected in 3/45 anti-HEV IgG positive patients (7%) suggesting acute or recent infection, but HEV RNA was not present in these samples. 6/45 (13%) anti-HEV IgG positive patients had ALT levels twice above normal. Anti-HEV IgM or HEV RNA was not detected in these 6 individuals. HEV RNA was present only in 1/45 of anti-HEV IgG positive samples but the ALT value in this patient was not elevated. No patients presented clinical symptoms related to viral acute hepatitis. **Conclusion:** The prevalence of anti-HEV IgG antibodies was 10% in HIV-infected patients, a high seroprevalence completely different from that observed in other considered high risk groups. Therefore HIV-infected patients can be considered a risk group for HEV infection. There was no difference in seroprevalence according to age, gender and CD4 count. Asymptomatic HEV infections exist in HIV-infected individuals and chronic hepatitis E is a rare event in this high risk group.

Table2. Prevalence of anti-HEV IgG antibodies among different groups of population in Spain according to references 8, 9, 10, 11

	Number of samples	Prevalence
Blood donors	863	2.9%
Haemodialysis patients	63	6.3%
HCV post transfusionally infected children	42	0%
Sub Saharan immigrants	90	5.5%
Pregnant women	1,040	3.6%
HIV infected patients (Madrid)	447	10.2 %
HIV infected patients (Cataluña)	238	9%