Molecular Epidemiology of Hepatitis E Virus in Israel

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Hepatitis E Virus

RNA Virus
~7.2 Kb length
3 ORF's-ORF 1,2,3
4 genotypes identified for HEV

Genotype 1 and 2 are restricted to human

Genotypes 3 and 4 are zoonotic and have a broader host range

Interspecies transmission has been demonstrated for HEV genotypes 3 and 4
HEV Prevalence in Israel

October 1996-February 2013

• Total 580 samples tested for HEV-RNA

• 51 were positive for HEV-RNA 51/580 (8.8%)

• 14 samples sequenced (6 travel related, 4 foreign workers and 4 non travel related)
Distribution of HEV genotypes (I)
Distribution of HEV genotypes (II)
Distribution of HEV genotypes (III)
Serologic diagnosis
anti HEV IgG and anti HEV IgM

316 samples tested for anti-HEV IgG and anti-HEV IgM

10 samples
- HEV-RNA (-)
- Anti HEV IgG (+)
- Anti HEV IgM (+)

10 samples
- HEV-RNA (-)
- Anti HEV IgG (+)
- Anti HEV IgM (-)

Group 1

Group 2
conclusions

• HEV RNA is identified in Israel, in both travelers and non-travel-related patients.

• All samples identified as genotype 1a

• Diagnosis of HEV infection should be confirmed by evidence for both HEV RNA and serological tests for anti-HEV antibodies
Co-Workers

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