reaction-restriction fragment length polymorphism (PCR-RFLP) assay in Assamese population.

**Results:** Out of 70 cases of chronic liver disease (HBV & HCV) 67.14% patients showed SNP for XRCC3 Thr241Met out of which 32.85% were homozygous (C/C), 50% were heterozygous (C/T) and 17.14% were mutated (T/T). Whereas out of 20 Hepatocellular carcinoma cases 30% were homozygous (C/C), 35% were heterozygous (C/T) and 35% were mutated (T/T). No significant association of SNP's was observed with duration of alcohol consumption, raised transaminase, low platelet count, HBsAg and Anti HCV status. The indigenous food samples were examined by HPLC technique which did not reveal significant aflatoxin content.

**Conclusions:** The XRCC3 codon 241 polymorphism displayed a relationship with HCC and in chronic hepatitis B & C. Codon 241 mutation was significantly increased in patients of HCC and in chronic HBV or HCV. There is increased risk for the individuals with XRCC3 CT genotype [OR = 2.43 (1.17–5.03), $p = 0.01$*] and TT genotype [OR = 4.17 (1.30–13.34), $p = 0.01$*]. Hence, presence of mutation in the codon of XRCC3 TT genotype in patients of chronic HBV and HCV could indicate the likelihood of progression to HCC.

## CONFLICTS OF INTEREST

The authors have none to declare.

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### 4

## COST-EFFECTIVENESS OF GENERIC PAN-GENOTYPIC SOFOSBUVIR/VELPATASVIR VERSUS GENOTYPE-DEPENDENT DIRECT-ACTING ANTIVIRALS FOR HEPATITIS C TREATMENT

Amit Goel [1], Qiushi Chen [2], Jagpreet Chhatwal [2], Rakesh Aggarwal [1,*]

[1] *Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India*
[2] *Harvard Medical School, Boston, USA*
*E-mail address:* aggarwal.ra@gmail.com (R. Aggarwal).

**Background and Aims:** Treatment of HCV infection with low-cost generic direct-acting antivirals (DAAs) available in India and other developing countries needs determination of HCV genotype ('genotype-dependent' regimens). Generic velpatasvir, a DAA that obviates the need for genotype determination ('pan-genotypic' regimen) recently became available but is costlier. We aim to evaluate the cost-effectiveness of genotype-dependent versus pan-genotypic DAA treatments in India.

**Methods:** A previously-validated microsimulation model, adapted to Indian population, was used to compare the costs and long-term outcomes of three scenarios: no treatment, and treatment with genotype-dependent and pan-genotypic regimens. Input parameters were derived from literature. Using a payer's perspective and life-time time horizon, quality-adjusted life years (QALYs), total costs, and incremental cost-effectiveness ratio (ICER) were calculated. Both deterministic and probabilistic sensitivity analyses were also conducted.

**Results:** At the current price (US$ 223 for 4 weeks), pan-genotypic regimen was cost-saving compared to no treatment. Compared with genotype-dependent regimens, it increased QALYs by 0.92 and increased costs by US$ 107, but was deemed cost-effective with an ICER of US$ 242 per QALY gained. Probabilistic sensitivity analysis also supported the cost-effectiveness of pan-genotypic regimen. At the reduced price of US$ 188 for 4 weeks, the pan-genotypic regimen will become cost-neutral to genotype-dependent regimens (current price: US$100 for 4 weeks).

**Conclusions:** At current prices, velpatasvir-based pan-genotypic regimen is cost-effective for HCV treatment in India where generic drugs are available. A reduction in the prices of pan- genotypic regimen has the potential to make its use cost-saving, while simplifying treatment in community-level programs aimed at HCV elimination.

## CONFLICTS OF INTEREST

The authors have none to declare.

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### 5

## SEROPREVALENCE OF HEPATITIS C VIRUS ANTIBODY IN THE INDIAN POPULATION: A SYSTEMATIC REVIEW AND META-ANALYSIS

Amit Goel [1], Nicole Seguy [2], Rakesh Aggarwal [1,*]

[1] *Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India*
[2] *World Health Organization Country Office, New Delhi, India*
*E-mail address:* aggarwal.ra@gmail.com (R. Aggarwal).

**Background and Aims:** Burden of hepatitis C in India, a populous country, has not been estimated. We therefore undertook a systematic review of the available data on anti-HCV seroprevalence in the Indian population.

**Methods:** We searched several publication databases for English language papers that reported data on anti-HCV seroprevalence from India, and also identified other unpublished sources of such data. Data on groups likely

to represent seroprevalence in general population and in selected high-risk groups were extracted and subjected to meta-analysis.

**Results:** Of the 3995 published papers and 95 additional data sources identified, 327 were selected; these provided 414 anti-HCV seroprevalence data points. Pooled anti-HCV seroprevalence rates in community-based studies (4 studies from 3 states/union territories), blood donors (175 studies all 35 states/territories) pregnant women (15 studies from 6 states) were 0.85% (95% CI: 0.00%–3.98%), 0.44% (0.40–0.49) and 0.88% (0.21–1.90), respectively. Among groups considered at high risk of HCV, pooled anti-HCV seroprevalence rates were as follows: people living with HIV (40 studies from 17 states: 3.51% [2.43–4.76]), persons on maintenance hemodialysis (37, 13, 19.23% [13.52–25.65]), people who inject drugs (46, 14; 44.71% [37.50–52.03]), multi-transfused persons (38, 12; 24.06% [20.00–28.36]), persons with sexually-transmitted diseases (7, 5; 4.10% [0.98–9.04]) and those with high-risk sex behavior (6, 5; 4.06% [1.79–7.10]).

**Conclusions:** Community-based data on HCV seroprevalence in India were limited. Large amount of data on blood donors and pregnant women were found, with pooled anti-HCV seroprevalence rates of 0.44% and 0.88%, respectively. Among groups considered at increased risk of HCV infection, anti-HCV prevalence among persons living with HIV and those with sexually-transmitted diseases or high-risk sex behavior, though higher than in the general population, were lower than those reported from other countries. By comparison, the anti-HCV prevalence rates were higher in persons with injection drug use, and those receiving hemodialysis or frequent transfusions.

## CONFLICTS OF INTEREST

The authors have none to declare.

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## 6

## PREVALENCE OF HEPATITIS E VIRUS VIREMIA AND ANTIBODIES AMONG HEALTHY BLOOD DONORS IN INDIA

H.J. Vijay, Harshita Katiyar, Amit Goel, Atul Sonker, Vishwajeet Yadav, Sadul Sapun, Rajendra Chaudhary, Rakesh Aggarwal *

*Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India*
*E-mail address:* aggarwal.ra@gmail.com (R. Aggarwal).

**Background and Aims:** Hepatitis E virus (HEV) is transmitted primarily through contaminated water and food. Recently, HEV viremia in blood donors and transfusion-related transmission of HEV have been reported, leading to calls to screen donated blood for this virus. However, these data are from regions where genotype 3 HEV in predominant. In India, where human infections are caused only by genotype 1 HEV, the frequency of subclinical HEV viremia is unknown.

**Methods:** Minipools of sera prepared from three donor units each from a blood bank in Lucknow, India were tested for HEV RNA using a sensitive amplification-based assay. A randomly-selected subset was also tested for IgG anti-HEV antibodies using a commercial (Wantai) immunoassay.

**Results:** Sera from 1799 donors (median [range] age: 30 [18–63] years; 1746 [97.0%] men) were collected (June–July 2016: 900; November–December 2016: 899). Of these, 17 (0.95%), 16 (0.90%) and 3 (0.17%) tested positive for HBsAg, anti-HCV and anti-HIV antibodies, respectively. None of the donors tested positive for HEV RNA. Of 633 randomly-selected donors (age: 30 [18–63] years, 613 [96.8%] male) tested for IgG anti-HEV, 383 (60.5%) tested positive. Seropositivity rate increased with age, being 70/136 (52%), 177/299 (59%), 100/154 (65%), 30/34 (88%) and 6/10 (60%) in the 18–24, 25–34, 35–44, 45–54 and 55 years age groups, respectively.

**Conclusions:** In healthy blood donors from northern India, HEV viremia is infrequent though anti-HEV antibody prevalence is high. This suggests that asymptomatic HEV viremia may be less frequent in areas with genotype 1 predominance than those with genotype 3 predominance.

## CONFLICTS OF INTEREST

The authors have none to declare.

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## 7

## IMMUNE RESPONSES TO HEPATITIS B VACCINATION IN HBSAG-PATIENT WHO CLEARED SERUM-HEPATITIS B SURFACE ANTIGEN AND NOT DEVELOPED ANTI-HBS ANTIBODY

Anant Kumar Singh *, B.K. Agrawal

*Arvind Hospital, Patna, India*
*E-mail address:* anant.kumarsingh@rediffmail.com (A.K. Singh).

**Background and Aims:** Seroprotection after a primary vaccine series is suboptimum in this group of patients. Limited data are available on the effect of revaccination of non-responders.

**Methods:** The immune responses to hepatitis B vaccine were studied in 24 hepatitis B surface antigen (HBsAg)