

**Seroprevalence
of hepatitis B,
hepatitis C, Human
Immunodeficiency Virus
surface, and syphilis
among blood donors:
A 6-year report from a
sentinel site in Western
Himalayas, India**

Sir,
Transfusion-transmitted infections (TTIs) continue to be a threat to safe transfusion practices. A 6-year

record-based retrospective study was conducted in a tertiary care teaching hospital located in the rural hilly area of Kangra valley of Western Himalayas, India. The records were retrospectively evaluated with respect to screening outcome for hepatitis B surface antigen (HBsAg), anti-HIV, anti-hepatitis C virus (HCV), and VDRL. HIV status of donors was determined by screening for antibodies to HIV-1 and HIV-2 by third-generation rapid immunochromatography sandwich assay. HBsAg and anti-HCV antibodies were determined using commercially available qualitative immunochromatographic assay kits. Antibodies to syphilis were tested in donor samples using qualitative solid phase immunochromatographic assay. The percentage and proportions for each variable were calculated.

A total of 27,995 blood donations were recorded. Among them, 26,306 (94%) were males and 1689 (6%) were females. 13,705 (49%) were

Table 1: Yearly distribution of blood donors in the study population

Year	Total	Male			Female		
		Total	Voluntary	Replacement	Total	Voluntary	Replacement
2008	2936	2759	849	1910	177	169	8
2009	3007	2856	1042	1814	151	145	6
2010	4004	3764	1857	1907	240	230	10
2011	4537	4095	1992	2103	442	434	8
2012	6239	5895	3449	2446	344	311	33
2013	7272	6937	2897	4040	335	330	5
Total	27,995	26,306	12,086	14,220	1689	1619	70

Table 2: Year-wise seroprevalence of transfusion-transmitted infections among blood donors

Year	Total donations	HBsAg (%)	HCV (%)	HIV (%)	VDRL (%)	HCV + HBsAg (%)	HIV + HBsAg (%)	HCV + HIV (%)
2008	2936	28 (0.95)	10 (0.34)	10 (0.34)	1 (0.03)	0	0	0
2009	3007	10 (0.33)	14 (0.46)	4 (0.13)	0	1 (0.03)	1 (0.03)	0
2010	4004	23 (0.57)	17 (0.42)	7 (0.17)	0	1 (0.02)	0	1 (0.02)
2011	4537	20 (0.44)	4 (0.08)	3 (0.06)	0	0	0	0
2012	6239	27 (0.43)	3 (0.04)	3 (0.04)	3 (0.04)	0	0	0
2013	7272	30 (0.41)	11 (0.15)	2 (0.02)	7 (0.09)	0	0	0
Total	27,995	138 (0.49)	59 (0.21)	29 (0.10)	11 (0.03)	2 (0.007)	1 (0.003)	1 (0.003)

HBsAg=Hepatitis B surface antigen; HCV=Hepatitis C virus

voluntary donations and 14,290 (51%) were replacement donations. Yearly distribution of blood donations is shown in Table 1, and yearly distribution of detected seropositivity is given in Table 2.

Although various studies on TTI in blood donors are available from different regions of the country, data from a rural area of India are sparse.^[1-4] The aim of the present study was to know the seroprevalence of transfusion transmissible infections in donors in the Northern hilly state of Himachal Pradesh, India, located in the Western Himalayas. The advantages of this study are that no previous data are available from this rural area for comparison and analysis of time trends which can be derived from this 6-year observation. Further this study will be a reference for future studies to look into the time trends for TTIs from this rural area.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Sujeet Raina, Sunil K. Raina¹, Rashmi Kaul², Vandana Sharma³

Departments of Medicine, ¹Community Medicine, ²Pathology and ³Blood Bank and Transfusion Medicine, Dr. Rajendra Prasad Government Medical College, Tanda, Kangra, Himachal Pradesh, India

Address for correspondence:

Dr. Sujeet Raina,
C-15, Type-V Quarters, Dr. RPGMC Campus, Tanda, Kangra,
Himachal Pradesh, India.
E-mail: sujeetrashmishera@yahoo.co.in

REFERENCES

1. Sonwane BR, Birare SD, Kulkarni PV. Prevalence of seroreactivity among blood donors in rural population. *Indian J Med Sci* 2003;57:405-7.
2. Giri PA, Deshpande JD, Phalke DB, Karle LB. Seroprevalence of transfusion transmissible infections among voluntary blood donors at a tertiary care teaching hospital in rural area of India. *J Family Med Prim Care* 2012;1:48-51.
3. Sood S, Malvankar S. Seroprevalence of hepatitis B surface antigen, antibodies to the hepatitis C virus, and human immunodeficiency virus in a hospital-based population in Jaipur, Rajasthan. *Indian J Community Med* 2010;35:165-9.
4. Dhruva GA, Agravat AH, Pujara KM. Seroprevalence of HIV, HBV, HCV and syphilis in blood donors in Saurashtra region of Gujarat: Declining trends over a period of 3½ years. *Online J Health Allied Sci* 2012;11:5.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:



Website:

www.ijstd.org

DOI:

10.4103/0253-7184.167194

How to cite this article: Raina S, Raina SK, Kaul R, Sharma V. Seroprevalence of hepatitis B, hepatitis C, Human Immunodeficiency Virus surface, and syphilis among blood donors: A 6-year report from a sentinel site in Western Himalayas, India. *Indian J Sex Transm Dis* 2015;36:220-1.