

## Hiv Seroprevalence in Blood Donors At A Tertiary Care Hospital of Saurashtra Region ,Gujarat (Study of Two Years)



### MEDICAL SCIENCE

KEYWORDS : Blood donation, transfusion transmitted infection, HIV

\* **Dr. Alaknanda Atara**

Tutor, Department of pathology, M P Shah Govt. Medical college, Jamnagar, Gujarat, India  
\* Correspondence Author

**Dr. Nisha Gupta**

Assistant professor, Department of pathology, C U Shah medical college, Surendranagar, Gujarat, India

**Dr. Shweta Upadhyay**

Associate professor, Department of IHBT, M P Shah Govt. Medical college, Jamnagar, Gujarat, India

### ABSTRACT

*Background: Blood transfusion is an integral part of medical and surgical therapy. Transfusion of blood and blood components, as specialized modality of patient management saves millions of lives worldwide each year and reduces morbidity. It is well-known that blood transfusion is associated with large numbers of complications, some are only trivial and others potentially life threatening, demanding for meticulous pre transfusion testing and screening. Replacement donors were considered as an indicators of trend in HIV infection in general population and these figures for blood donors can be used as a proxy for prevalence figures for general population.*

*Methods: to assess the prevalence of HIV infection among blood donors and to compare the prevalence of HIV in voluntary donors and replacement donors. Retrospective study of two years from Jan. 2011 to Dec. 2012 was done. This study was conducted at Blood bank, G G Hospital serving Jamnagar district.*

*Result: total 29297 were tested out of it 40(0.14%) were HIV positive and Anti HIV antibody seropositivity is more among replacement donors than among voluntary donors.*

*Conclusion: On comparing the data of two years, increase in number of voluntary donation and decreasing trend in seroprevalence of HIV was observed. Motivating voluntary blood donors is the most effective way of ensuring adequate supplies of safe blood on a continuing basis.*

### INTRODUCTION:

Blood transfusion is an essential part of modern health care and has also demonstrated its efficacy in secondary health care in developing countries. Used appropriately, transfusion can save life and improve health. However, it always carries potential risks for the recipient and should be prescribed only for conditions with significant potential for morbidity or mortality that cannot be prevented or managed effectively by other means<sup>2</sup>. Blood transfusion can cause infection of HIV and other viral infections. With every unit of blood there is 1% chance of transfusion associated problems including transfusion transmitted diseases<sup>1</sup>

### MATERIALS AND METHODS

This study was carried out at Blood Bank, Tertiary care centre to find out prevalence of HIV among blood donors. Total number of 29297 samples was collected from replacement and voluntary blood donors attending Blood Bank at GGG Hospital as well as camps organized by Blood Bank from January 2011 to December 2012. The samples are tested with commercially available ELISA test kit for HIV.

### RESULT

In year 2011, total number of 14700 blood donations received from 13612 (92.6%) voluntary donors and 1088 (7.4%) replacement donors, while in year 2012, total number of donation was 14597 among which 14259(97.7%) were voluntary donors and 338(2.3%) were replacement donors. That is 27871 (95.13%) voluntary donors and 1426 (4.87%) replacement out of total 29297 donations. Comparison of number of voluntary and replacement donors year wise shows increased voluntary donation in 2012. Total 29297 were tested out of it 356(1.22%) were found to be seropositive. Among them 40(0.14%) were HIV positive.

HIV	Voluntary donors	Replacement donors	Total
Positive	35(0.13%)	5(0.35%)	40
Negative	27836(99.87%)	1421(99.65%)	29257
Total	27871	1426	29297

### Table 1;Comparison of Anti HIV Antibody seropositivity among voluntary and replacement donors

In Table 1 it is observe that Anti HIV antibody seropositivity is more among replacement donors than among voluntary donors.

### DISCUSSION

The use of blood transfusion in clinical practice has brought untold benefits to countless individuals, But the risk of transmitting infectious diseases is associated with every transfusion. With the report of increase in HIV seropositivity among blood donors in the state of Tamilnadu and Maharashtra, Govt. of India recommended mandatory screening of all blood and blood products before transfusion Since July 1986<sup>2</sup>.

Present study is comparable with study of I.S. Chaitanya Kumar et al.<sup>3</sup> which show seropositivity for HIV among 166(0.10%) out of 16628 donors which suggest lower prevalence of HIV. While similar studies conducted by Sangita Patel et al.<sup>4</sup>, Rangrao H. Deshpande et al.<sup>5</sup>, Dimple Arora et al.<sup>6</sup> and shows slight higher incidence of seropositivity among total donors.

During this study, 27871 voluntary donors and 1426 replacement donors were screened for the presence of HIV for a period of 2 years (January 2011 to December 2012). Total 35 (0.13%) voluntary donors and 5 (0.35%) were positive for HIV. This clearly shows higher rate of prevalence of HIV seropositivity among replacement donor than in voluntary donors.

Similar study conducted by Sangita Patel et al.<sup>4</sup> and Dimple Arora et al.<sup>6</sup> shows comparable result, while study by Rangrao H. Deshpande et al.<sup>5</sup> show higher rate of HIV seropositivity in voluntary donors than in replacement donors.

### CONCLUSION

- On comparing the data of two years, increase in number of voluntary donation was observed.
- On comparing the data of two years, decreasing trend in seroprevalence of HIV was observed.
- Voluntary blood donation should be encouraged for pre-

vention of Transfusion Transmissible Infections (TTI's).

- The time and cost involved in screening donated blood can be reduced by an effective donor education and selection program that promotes self exclusion by donors at risk of TTI's.

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