

A Survey of Transfusion Transmitted Diseases among Blood Donors in Blood Bank, Government Royapettah Hospital, Chennai

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Abstract

Blood Transfusion is a life saving procedure but it involves the risk of transmission of certain diseases like HIV, HBV, HCV, Syphilis and Malaria. So, the donated blood is screened in the blood bank for the above diseases. A survey of the reactivity of the above disease was done at Government Royapettah Hospital for the years 2014 to 2018.

Keywords: Blood Transfusion, transmission, HIV, HBV.

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INTRODUCTION

It is our responsibility to ensure issue of safe and uninfected blood to the patients who need blood. HIV, HBV, HCV, Syphilis and Malaria are the common transfusion transmitted infections. As per National AIDS Control Organisation, the donated blood is screened for the above disease by Enzyme Linked Immunosorbent Assay (ELISA) method, the possibility of TTI among the donors are analysed to find out the commonest disease among the donors.

MATERIALS AND METHODS

This study has been done in Blood Bank, Government Royapettah Hospital, Chennai for a period of 5 years from 2014 to 2018.

The samples were screened for HIV- I & II (ELISA), HBsAg (ELISA), HCV (ELISA), Syphilis (RPR) and Malaria (Peripheral Smear Study). The reactive donors were identified; their blood was discarded as per Bio-medical Wastage norms.

RESULTS

Total donors for the 5 years period were 28,040. Among them, the donors with reactive TTI were 215, which was about 0.76%.

Table 1: Year wise statistics of TTI

Year	HIV	HBsAg	HCV	Syphilis	Malaria
2014	1	55	2	-	-
2015	1	44	1	-	-
2016	1	39	2	-	-
2017	1	34	-	-	-
2018	2	32	-	-	-
Percentage (%)	0.01	0.75	0.01	-	-

The reactivity of HIV was 0.01 % (6 donors) and HBsAg reactivity was the highest with 0.75% (204 donors), HCV reactivity was 0.01% (5 donors), Syphilis and Malaria positivity was nil.

DISCUSSION

In our study, the sero-reactivity of TTI was 0.76%. It is similar to the Hilola Fernandes [1] study

where it was 0.6%. Regarding HIV sero-reactivity, it was 0.01% similar to 0.06% noted in Hilola Fernandes [1] study and 0.23% noted in Kamarkar PR² study. HBsAg reactivity was high with 0.73% when compared to 0.34% of Hilola Fernandes [1] study, 0.82% of Kamarkar PR [2] study and 0.92% of Meena [3] study. HCV reactivity was 0.01% when compared to 0.36% of Hilola Fernandes [1] and 0.04% of Meena [3] study.

The HBsAg reactivity was in increasing trends which leads to chronic liver disease. So, the donor with HBsAg reactivity should be referred to Medical Gastroenterology and the viral load should be ascertained and follow up is very essential.

HIV reactive donors should be referred to ICTC (Integrated Counseling and Testing Centre).

CONCLUSION

Screening procedures should be standardized and mandatory for each donor. Nucleic Acid testing by viral gene amplification procedure will increase the detection of TTI accurately.

REFERENCES

1. Fernandes, H., D'souza, P. F., & D'souza, P. M. (2010). Prevalence of transfusion transmitted infections in voluntary and replacement donors. *Indian Journal of Hematology and blood transfusion*, 26(3), 89-91.
2. Karmakar, P. R., Shrivastava, P., & Ray, T. G. (2014). Seroprevalence of transfusion transmissible infections among blood donors at the blood bank of a Medical College of Kolkata. *Indian journal of public health*, 58(1), 61.
3. Meena, M., Jindal, T., Hangarika, A. (2011). Prevalence of HBV and HCV among blood donors at a tertiary care hospital in India, five year study. *Transfusion* 55(1), 198-202.