



**SEROPREVALENCE & TRENDS OF TRANSFUSION TRANSMITTED INFECTIONS IN  
A TERTIARY CARE HOSPITAL**

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**INTRODUCTION**

Blood products are like double edged sword. Blood transfusion is linked to many of complications, some life threatening and life saving at same time. Transfusion Transmitted Infection (TTI) screening is vital step in pre-transfusion tests.<sup>[1]</sup> Risk of TTI is a major drawback of transfusion. Vigilant donor selection helps improve blood safety. The prevention of transfusion-transmitted infection (TTI) is based on the exclusion of potential blood donors who are not fit and well, the education of donors to exclude themselves if they are at risk of contracting TTIs, the laboratory screening of all blood donations for evidence of infection with a range of potential TTIs, physical removal of white cells in those cases where the agent is cell associated, viral inactivation procedures for pooled plasma derivatives, detection of viral genomes in plasma pools and the avoidance of unnecessary transfusions.<sup>[2]</sup> Rapid testing is done for emergency purposes such as shortage of platelet concentrate, negative blood group units, SDPs, whole blood requirement, shortage of red cell concentrate.

**Aims**

1. To study prevalence, trends and sex distribution of TTI
2. To determine reasons for rapid testing.

**METHOD**

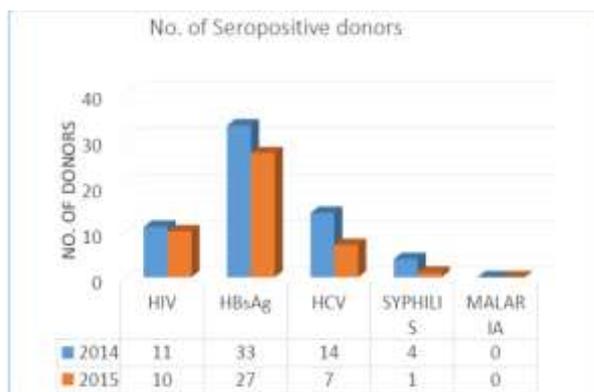
Records of AD Gorwala Blood bank, Karamsad were reviewed retrospectively from Jan '14 to Sept '15. Strict donor selection criteria was employed, and all units screened for TTI using 4<sup>th</sup> generation enzyme-linked immunosorbent assay (ELISA) kits for HIV(Human Immunodeficiency Virus), hepatitis B surface antigen (HBsAg), and hepatitis C virus (HCV). Screening for syphilis was performed with Rapid Plasma Reagin (RPR) test and thick smear microscopy for malarial parasite. Prevalence and trends of TTI were assessed and reasons for rapid tests was done.

**RESULTS AND DISCUSSION**

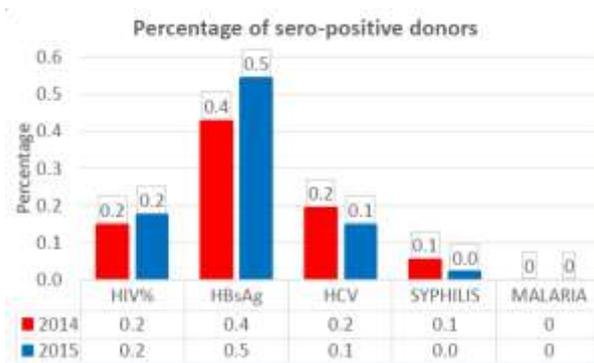
Out of 12178, (0.64%) donors, male (96.15%) were seropositive and showed prevalence of 0.21%,0.52%,0.20%,0.04% and 0% for HIV, HBsAg, HCV, syphilis and malaria, respectively. Hepatitis B was found to be more prevalent amongst seropositive donors. Year 2015 showed decreasing trends in all transfusion transmitted infections as compared to year 2014 as shown in graph 1. Although the no. of seropositive donors are more in 2014, the percentage in 2015 is less as the study period is only 9 months as compared to 12 months in 2014 as shown in graph 2.

Thus, Rapid tests account for 5.18% with main reason

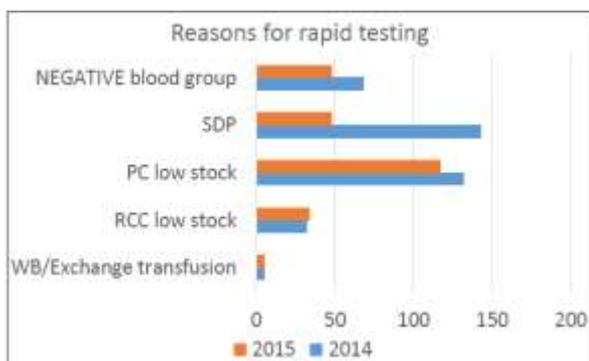
being low stock of PC in 2015 & SDP in 2014. The least common reason was need for Exchange Transfusion/WB as shown in graph 3.



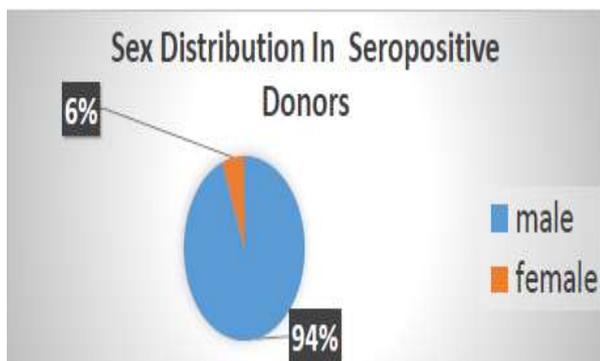
**Graph 1: No. of seropositive donors.**



**Graph 2: Percentage of seropositive donors.**



Graph 3: Reasons for rapid testing.



Graph 4: Sex distribution of seropositive donors.

#### CONCLUSION

- Prevalence of TTI was 0.97%.
- Concealed medical history by donors is a great threat to safety of blood supply.

#### REFERENCES

1. Virginia Vengelen-Tyler. Technical Manual committee, chapter 28, Infectious complications of Blood Transfusion, American Association of Blood Banks (AABB), 1999; 13: 601.
2. Barbara JA "Prevention of infections transmissible by blood derivatives." National Blood Service, North London, Colindale, U.K, 1998; Mar, 1998; 19(1): 3-7.