

Short Communication

Prevalence of Transfusion Transmitted Disease among Blood Donors in Sree Balaji Medical College and Hospital - A 2 Years Study Report

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Abstract: The aim of the study was to find out the prevalence of transfusion transmitted infection among blood donors at Sree Balaji Medical College and Hospital. A total of voluntary blood donors were analyzed over a period of 2 years (May 2013-April 2015). Prevalence of transfusion transmitted infection of total donors were 3356. Prevalence of Hepatitis B positivity was highest 40 cases (1.19%), followed by 11 cases of HCV(0.32%), 8 cases of VDRL (0.23%) and one case of HIV(0.02%). Prevalence was more in male donors. Extensive donor selection and screening procedures will help in improving the blood safety.

Keywords: Hepatitis, Human Immunodeficiency Virus

INTRODUCTION

Blood transfusion is an integral and life saving procedure. Hepatitis B, Hepatitis C, HIV and Syphilis are major public health problem in developing countries. Blood transfusion is a potential route of transmission of these transmitted transfusion disease (TTI)[1]. Screening of blood is now mandatory and is undertaken routinely in blood banks. Transfusion during serologically window period still poses a threat to blood safety in environments where there is high rate of TTIs.

METHOD AND MATERIALS

The present study was carried out in Blood bank at SBMCH. A total of 3356 donors were analyzed for the prevalence of transfusion transmitted infection over a period of 2 years from May 2013-April 2015. These include replacement donors who donated for ailing patients and were family members, close relatives

and friends of the recipients. Basic information regarding age, sex, occupation, no. of previous donations and previous illness was obtained. All samples were screened for hepatitis B surface antigen (hepacard, ELISA), HCV(ELISA), syphilis(RPR), HIV (TRI-Dot, ELISA) were performed.

RESULTS

A total of 3356 donors were studied. Among that, Hepatitis B surface antigen is positive for 40 cases (1.19%), followed by 11 cases of HCV(0.32%), 8 cases of VDRL (0.23%) and one case of HIV(0.02%). The most common age group is being 30-40 years. The results of seropositive samples for HBsAg, HCV, HIV, and VDRL are shown in Table 1 & 2. Hence this study was carried out to highlight the importance of screening among blood donors. The seropositive cases were confidentially and informed to take a necessary treatment. The infected samples are discarded as per the biological rule.

Table 1: Blood transfusion cases 2013-2014

| AGE | MALE | FEMALE | Hb's Ag* | HIV* | HCV* | VDRL* |
|-----------|------|--------|----------|------|------|-------|
| <20yrs | 170 | 2 | 1 | - | - | - |
| 21-30 yrs | 879 | 11 | 10 | 1 | 2 | 3 |
| 31-40 yrs | 348 | 5 | 5 | - | 2 | - |
| >40 yrs | 107 | 2 | - | - | 1 | - |
| Total | 1504 | 20 | 16 | 1 | 5 | 3 |

Positive cases*

Table 2: Blood transfusion cases 2014-2015

| AGE | MALE | FEMALE | Hb'sAg* | HIV* | HCV* | VDRL* |
|-----------|------|--------|---------|------|------|-------|
| <20yrs | 267 | 9 | 1 | - | 1 | - |
| 21-30 yrs | 985 | 15 | 10 | - | 1 | - |
| 31-40 yrs | 411 | 13 | 12 | - | 4 | 1 |
| >40 yrs | 129 | 3 | 1 | - | - | 4 |
| Total | 1792 | 40 | 24 | | 6 | 5 |

Positive cases *

DISCUSSION

Transfusion of blood and its components is lifesaving as well as it has life threatening hazards [2,3].

Our results showed that high positivity for Hepatitis B virus (1.19%), similar results found by Arora *et al.* [4], Sawke *et al.* [5] and Chandra *et al.* [6] which shows 1.7%, 2.9% and 5%.

Seroprevalence of HCV is 0.32 %, which is less compared to other studies such as Kulkarni *et al.* [7].

This study highlights 0.23% prevalence of syphilis infection, which is high compared to study done by Kulkarni *et al.* [6] which showed 0.04%.

Seroprevalence of HIV is 0.02% in our study which is in contrast to other studies such as Arora *et al.* [3], Sawke *et al.* [5] and Mujeeb *et al.* [7] which was observed to be 0.3%, 0.5%, and 0% respectively.

Majority of the donors were males, which is comparable to the study done by Kulkarni *et al.* [7], Rao, *et al.* [9] and Arora *et al.*[4].

CONCLUSION

Transfusion of blood and its components is a double edge weapon as it is a life saving measures and some of the problems as transfusion transmitted disease etc. Hence a safe blood transfusion should be practiced by careful screening of donors and complete serological investigation of collected blood .By doing the complete serology workup of donated blood will find out the possible transfusion transmitted disease and judicious use of transfusion of blood will lead to safe blood transfusion practice.

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