



Pathology

STUDY OF TRANSFUSION TRANSMISSIBLE INFECTION AMONG BLOOD DONORS AT BLOOD BANK, JHALAWAR MEDICAL COLLEGE, JHALAWAR, RAJASTHAN.

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ABSTRACT

Introduction: Blood transfusion is the process of transferring Blood components into a person's circulation intravenously, which is life-saving modality imparted to the Patients during various surgeries and in certain medical conditions like Anemia, Thalassemia, Renal Pathologies etc, but various transfusion related problems, called Transfusion Transmitted Infections (TTIs), like Hepatitis, HIV, Syphilis, Toxoplasmosis etc have also been associated with Blood transfusion Process. Rigorous testing of Blood and blood components makes them extremely safe and reduces the likelihood of a TTIs. **Aims & Objectives:** 1. Study the seroprevalence of TTIs (Viz. HIV, HBsAg, HCV, syphilis, Malaria) in Blood Donors donating the Blood at Blood Bank. 2. Study the relationship between TTIs with socio-demographic variables. **Materials & Methods:** This is a hospital based prospective study which was carried out in the Department of Pathology, JMC, Jhalawar. Material included 13047 healthy Blood samples, collected during May-2021 to april-2022, in Blood Bank, JMC and Hospital, Jhalawar. **Results:** 1. Out of 13047 blood donors, voluntary donors (72.85%) were more in comparison to replacement donors (27.15%). 2. Out of 13047 donors, 12949 (99.25%) were Male donors and remaining 98 (0.75%) were Females donors. Prevalence of blood Group in our study population was B>O>A>AB. 3. Out of 13047 donors, during study period, 376 (2.84%) blood donors had serological evidence of infection with at least one pathogen, either of HIV, HBV, HCV, syphilis and Malaria Further, Seroprevalence of HIV, HBsAg, HCV, syphilis and Malaria among study population, was resulted 0.39%, 1.83%; 0.14%, 0.49% and 0.007% respectively.

KEYWORDS : TTIs, HIV, HBsAg, HCV, syphilis**INTRODUCTION**

- Blood transfusion is the process of transferring Blood components into a person's circulation intravenously, which is life-saving modality imparted to the Patients during various surgeries and in certain medical conditions like Anemia, Thalassemia, Renal Pathologies etc
- But various transfusion related problems, called Transfusion Transmitted Infections (TTIs), like Hepatitis, HIV, Syphilis, Toxoplasmosis etc have also been associated with Blood transfusion Process. Rigorous testing of Blood and blood components makes them extremely safe and reduces the likelihood of a TTIs.

AIMS & OBJECTIVES

Study the seroprevalence of TTIs (Viz. HIV, HBsAg, HCV, syphilis, Malaria) in Blood Donors donating the Blood at Blood Bank.

Study the relationship between TTIs with socio-demographic variables.

MATERIALS & METHODS

This is a Hospital based prospective study which was carried out in the Department of Pathology, JMC, Jhalawar. Material included 13047 healthy Blood samples, collected during May-2021 to April-2022, in Blood Bank, JMC and Hospital, Jhalawar.

RESULTS**Donor Type (Replacement/Voluntary)**

Out of 13047 blood donors, voluntary donors (72.85%) were more in comparison to replacement donors (27.15%).

Table-1 Donor Type (Replacement/ Voluntary)

	Number of Cases	Percentage(%)
REP	3541	27.15
VBD	9506	72.85
Total	13047	100.00

Blood Group of Donors

Prevalence of blood Group in this study, population was B>O>A>AB.

Table-2 Blood Group Of Donors

	Number of Cases	Percentage (%)
A+ve	2609	19.96

A-ve	97	0.74
B+ve	5218	39.99
B-ve	85	0.65
O+ve	4566	34.99
O-ve	130	0.99
AB+ve	260	1.99
AB-ve	82	0.62
Total	13047	100.00

Seroprevalence OfTTI

Out of 13047 donors during study period, 376 (2.84%). Out of total study population 52 donors were found seroreactive for HIV, 240 donors were seroreactive for HBsAg, 19 donors were seroreactive for Hepatitis C virus, 64 donors were found reactive for syphilis and 1 donor was seroreactive for Malaria with percentage prevalence of HIV, HBsAg, HCV, Syphilis and Malaria 0.39%, 1.83%, 0.14%, 0.49%, 0.007% respectively.

Table-3

	Number of Cases	Percentage (%)
HIV	52	0.39
HBs Ag	240	1.83
HCV	19	0.14
SYPHILIS	64	0.49
MP	1	0.007

CONCLUSION

- TTIs were more prevalent in voluntary donors than replacement donors and to be more in Male then Female.
- Most common infection in blood donors was hepatitis B virus followed by syphilis, HIV, and HCV.
- Most common Blood group in blood donors was B group followed by O group, A group and least was AB group.

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