Original Research Paper

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Pathology

BLOOD DONATION PRACTICES IN RURAL SOUTH INDIA;A RETROSPECTIVE 3 YEARS STUDY

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KEYWORDS : Blooddonation, Famale Donors, Infectious Disease

INTRODUCTION:

Blood donation is a major concern to the society as donated blood is life saving for the patients who need it. Blood transfusion is becoming a crucial component in the management of patients presenting with accident injuries, surgical conditions, malignancies, pregnancy complications, and other medical conditions [1,2].Need for blood varies from high income countries from middle and low income countries. In high income countries accidents,surgical procedures,malignancies are more common indications. In middle and low income countries pregnancy complications and childhood anaemia's are more common indications. WHO estimates that at least 1% of the population need to donate blood to meet the minimum requirement of blood for a country [1].

According to 2018 statistics India has a shortfall of 1.9 million units of blood.

Globally 112.5 million blood units were collected,out of which 11.1 million is contributed. In India Tamilnadu ranks third in having more number of blood banks followed by Maharastra and Uttar Pradesh.

AIM:

To study about the patterns of blood donation, problems of blood donation in a tertiary care hospital, Tirunelveli,Tamilnadu.

DURATION:

3 Years Retrospective study.

PLACE OF STUDY:

Department of Transfusion Medicine and Immunohaematology

METHODOLOGY:

3 Years statistics from Department of Transfusion Medicine were collected. Various characteristics of blood donors like age ,sex,address were collected.

Type of blood group and frequency of blood donation are also documented.

Variables were consolidated and results tabulated.

OBSERVATION AND RESULTS:

The total number blood units collected during the years 2014,2015,2016 were as follows

s.no	YEAR	NO. OF UNITS COLLECTED
1.	2014	8108
2.	2015	7927
3.	2016	8009

The average age of blood donation is 31 years(age range 18yrs-46yrs)

The male to female ratio of blood donation was tabulated as follows

s.no	YEAR	MALES	FEMALES
1	2014	7569(93.4%)	539(6.6%)
2	2015	7616(96%)	311(4%)
3	2016	7748(96.7%)	261(3.3%)

- Most common blood group donated was B positive followed by O positive
- Total number of camps conducted in the three years was around 367(avg-122/year)
- The number of blood units collected were more in camps compared.around 3/4th of the blood was collected from camps only
- Most of the camps were conducted in nearby colleges

s.no	YEAR	NO. OF UNITS FROM CAMPS	NO. OF UNITS FROM HOSPITALS
1	2014	6107(75%)	2007(25%)
2	2015	5850(74%)	2077(26%)
3	2016	5226(65%)	2783(35%)

Number of blood units wasted were tabulated as follows

s.no	YEAR	2014	2015	2016
1.	**HIV**	0.08%	0.07%	0.03%
2.	**HBV**	0.3%	0.3%	0.4%
3.	**HCV**	0.2%	0.2%	0.1%
4.	**MALARIA**	0.25%	0.01%	0.001%
5.	**SYPHILIS**	0.04%	0.03%	0%
6.	**LEAK**	0.01%	0.1%	0.06%
7.	**LYSED**	0.01%	0.06%	0.07%
8.	**LOW COLLECTION**	0.8%	0.75%	1%
9.	**EXPIRY**	3.15%	0.5%	0.3%

DISCUSSION:

In the demographic data of our donors, female donors were found to be very few in number as compared to males, which was similar to the findings of a study which was done by Gillespie et al., [3]. The reasons for the less percentage of female donors could be a low donor turnover and temporary deferral conditions like low haemoglobin values, low weight, and fear of pain. In a study which was done by Hollingsworth, female donors constituted only 1% of the donor population [4]. In our study, the donor population was characterized by increased numbers of young donors who were in the age group of 18-25which was similar to the findings of the studies which were done by Allain et al., [5] and Hinrich et al[6].The higher willingness to donate blood among the younger age groups may be attributed to the direct effect of the better educational background of the younger age groups rather than to their age.

Prevalence of infectious disease like HIV,HBV,HCV,syphilis and malaria are serious problems in blood transfusion.

The prevalence of HIV,HBV,HCV,Syphilis is compared with a 3 year study in Vadodara district of Gujarat[7] which shows relatively lesser prevalence of these infectious disease in our district

S.NO		VADODARA GUJARAT	TIRUNELVELI, TAMILNADU
1.	HIV	0.3%	0.06%
2.	HBV	0.86%	0.34%
3.	HCV	0.21%	0.17%
4.	SYPHILIS	0.26%	0.02%

The other reasons for wastage of blood products are due to expiry.leak which could be minimised in future.

CONCLUSION:

Creating opportunities for blood donations by conducting many blood donation camps may provide a solution for our blood demand.Encouraging female donors choosing appropriate healthy female donors may solve the problems of blood requirements in future.

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