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PREVALENCE OF ABO AND RHESUS BLOOD GROUPS AMONG THE STUDENTS OF PUNJAB UNIVERSITY LAHORE

Abstract: *Aims and Objectives: To determi prevalence of ABO and rhesus blood groups among people.*

Design and duration: This is a cross sectional study done in a duration of 6 months from January 2018 to June 2018.

Setting: Study was conducted on students of Punjab university.

Materials and Methods: This study was conducted on students. Blood grouping was done in the university lab. Male and female both students were included with no age limitation. Consent was taken from all students and also from the ethical committee of the university. A performa was designed in which all relevant data was documented. P-value less than 0.05 was significant and above this non significant. Data was analyzed using Microsoft office version 2014. Statistical data was expressed in the form of tables and charts. Frequency and percentages were calculated.

Results: Total 350 cases were included in this study consisted on 150 female students and 200 male students. O-positive was found most prevalent blood group. In male students 150(75%) were rhesus positive and 50(25%) were rhesus negative. In female cases 105(70%) were rhesus positive and 45(30%) were rhesus negative. There were 103(29%) cases with O-negative blood group, 63(18%) cases with A-, 60(17%) with B+, 35(10%) with AB+, 46(13%) O-, 22(6.3%) A-, 15(4.3) cases with B-, 6(1.7%) had AB- blood group. So it was seen that AB blood group has least prevalence and O group has highest prevalence.

Conclusion: O blood group has highest prevalence as compared to other blood groups so it is easily available. AB blood group is rare. Rhesus positive group has more frequency than rhesus negative group

Key words: *ABO , Blood grouping, Rhesus blood groups.*

Language: *English*

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Introduction

Human blood can be studied on the basis of various blood grouping systems. In this study we used 2 blood grouping systems ABO and rhesus system. O blood group has highest prevalence as compared to other blood groups so it is easily available. AB blood group is rare. Rhesus positive group has more frequency than rhesus negative group. Blood groups are determined by presence of specific antigen on RBCs. There are many antigens on red cells which form different blood groups but in health system we usually use these two systems. Blood grouping is necessary when we need to donate blood to someone then blood grouping of donor and receiver is done and cross matching is also done. This study was conducted on students. Blood grouping was done in the university lab. Male and female both students were included with no age limitation. Consent was taken from all students and also from the ethical committee of the university. A

performa was designed in which all relevant data was documented. P-value less than 0.05 was significant and above this non significant. Data was analyzed using Microsoft office version 2014. Statistical data was expressed in the form of tables and charts. Frequency and percentages were calculated.

Materials and methods

This study was conducted on students. Blood grouping was done in the university lab. Male and female both students were included with no age limitation. Consent was taken from all students and also from the ethical committee of the university. A performa was designed in which all relevant data was documented. P-value less than 0.05 was significant and above this non significant. Data was analyzed using Microsoft office version 2014. Statistical data was expressed in the form of tables and charts. Frequency and percentages were calculated. O blood group has highest prevalence as compared to other blood groups so it is easily available. AB blood group is rare. Rhesus positive group has more frequency than rhesus negative group. Blood groups are determined by presence of specific antigen on RBCs. There are many antigens on red cells which form different blood groups but in health system we usually use these two systems.

Result

Total 350 cases were included in this study consisted on 150 female students and 200 male students. O-positive was found most prevalent blood group. In male students 150(75%) were rhesus positive and 50(25%) were rhesus negative. In female cases 105(70%) were rhesus positive and 45(30%) were rhesus negative. There were 103(29%) cases with O-negative blood group, 63(18%) cases with A-, 60(17%) with B+, 35(10%) with AB+, 46(13%) O-, 22(6.3%) A-, 15(4.3) cases with B-, 6(1.7%) had AB- blood group. So it was seen that AB blood group has least prevalence and O group has highest prevalence.

Table 1. Rhesus blood group distribution according to gender

Rhesus blood group	Females		Males	
	Frequency	Percentage	Frequency	Percentage
Rhesus positive	105	70%	150	75%
Rhesus negative	45	30%	50	25%
Total	150	100	200	100

Table 2. Distribution of ABO and Rhesus blood group systems among the students

Blood group	Frequency	Percentage
O+	103	29.4
A+	63	18
B+	60	17
AB+	35	10
O−	46	13
A−	22	6.3
B−	15	4.3
AB−	6	1.7
Total	350	100

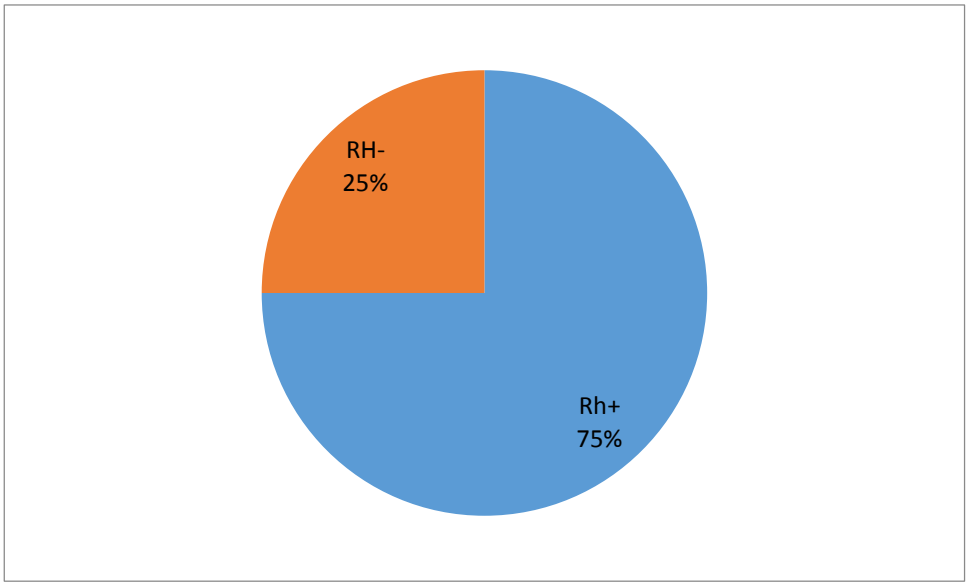

Figure 1. Rhesus blood group distribution pattern among the students

Discussion

Human blood can be studied on the basis of various blood grouping systems. In this study we used 2 blood grouping systems ABO and rhesus system. O blood group has highest prevalence as compared to other blood groups so it is easily available.[1-5] AB blood group is rare. Rhesus positive group has more frequency than rhesus negative group. Blood groups are determined by presence of specific antigen on RBCs. There are many antigens on red cells which form different blood groups but in health system we usually use these two systems.[6,7] Blood grouping is necessary when we need to donate blood to someone then blood grouping of donor and receiver is done and cross matching is also done. This study was conducted on students. Blood grouping was done in the university lab. Male and female both students were included with no age limitation. Consent was taken from all students and also from the ethical committee of the university. A performa was designed in which all relevant data was documented. P-value less than 0.05 was significant and above this non significant. Data was analyzed using Microsoft office version 2014. Statistical data was expressed in the form of tables and charts. Frequency and percentages were calculated.[8,10] O blood group has highest prevalence as compared to other blood groups so it is easily available. AB blood group is rare. Rhesus positive group has more frequency than rhesus negative group. Blood groups are determined by presence of specific antigen on RBCs. There are many antigens on red cells which form different blood groups but in health system we usually use these two systems.According to this study blood group O has the highest frequency among the students, followed by blood group A, B and AB respectively. This correlate with findings of previous studies that concluded similar distribution pattern of ABO blood group among both sexes.[8] However, some other studies reported blood group A to be the most frequent among males, while blood group B has the highest frequency among females.[14,15] Most of the male and female students were found to have rhesus positive blood group as also reported by previous studies.[6,8] This shows that inheritance of ABO and rhesus blood groups are not sex-linked.[2]

Conclusion

AB and rhesus blood grouping systems are usually applied in healthcare system of Pakistan. O blood group has highest prevalence as compared to other blood groups so it is easily available. AB blood group is rare. Rhesus positive group has more frequency than rhesus negative group. Blood grouping is necessary and life saving but if mismatched blood group is given to any recipient then it can be fetal.

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