



## A STUDY OF DISTRIBUTION OF BLOOD GROUP AMONG FEMALE MEDICOS IN MEDICAL COLLEGE JABALPUR

### Physiology

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### ABSTRACT

**Objective:** The present study is aimed to determine the distribution pattern of the ABO and Rh blood groups among first MBBS female students in medical college Jabalpur.

**Materials and Methods:** We have selected 57 first MBBS female medical students of known blood group and compared it with previous studies.

**Observations & Results:** O+ve 18, B+ve 19, B-ve 04, A+ve 10, A-ve 02, AB+ve 04

**Conclusion:** Present study shows that the most common blood group among first MBBS female medical students at NSCB medical college Jabalpur is 'B' blood group followed by 'O' blood group and least common blood group is 'AB' blood group.

### KEYWORDS

Blood group, ABO and Rhesus, Female medicos.

### INTRODUCTION

At first Landsteiner discovered the first human ABO blood group system in 1901 and Wiener described the Rh blood group in 1941. These systems are the basis of blood transfusions. On the basis of surface antigens ABO blood group system is classified in to four blood group types. Blood group 'A', 'B', 'AB', and 'O'. Also they may be Rh positive or Rh negative on the basis of Rh antigen in blood. Blood group system of the human population has the ABO blood grouping. The blood group type varies according to region, races, ethnicity, gender and specific population. The importance of knowledge of ABO and Rh blood group distribution is helpful in blood transfusion practices, resolving medicolegal issues and geographical variations. Recently blood groups study also carried out for genetics and research purposes. Present study is carried out to know the distribution of blood group among female medicos in medical college Jabalpur, Madhyapradesh.

### MATERIALS AND METHODS

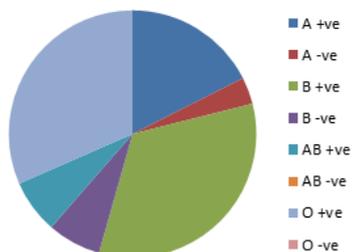
The present study was carried out at department of Physiology, NSCB Medical College Jabalpur. We have selected all first MBBS female medical students of 2018-19 sessions and performed blood grouping by conventional slide agglutination method, observations were collected and studied.

### OBSERVATIONS AND RESULTS

We did ABO blood grouping by slide agglutination method also did Rh testing. And observations were noted. Our observations are as follows –

**Table 1. Distribution of ABO and Rh Blood Group Systems in first MBBS female medical student in Medical College Jabalpur**

S. No.	Blood Group	Number	Percentage
1.	A +ve	10	17.5
2.	A -ve	02	3.5
3.	B +ve	19	33.33
4.	B -ve	04	7.01
5.	AB +ve	04	7.01
6.	AB -ve	0	0
7.	O +ve	18	31.57
8.	O -ve	0	0



**Fig 1, Blood group percentage**

The study showed that the 'B' blood group formed the most common with 40.35% followed by 'O' blood group with 31.57%. 'A' blood group was 21.05% and 'AB' blood group was the least common with 7.01%. This was in contrast to studies done in South Karnataka, which showed 'O' blood group as most common followed by 'B' blood group. In the Rh blood group Rh positive were 89.47% and Rh negative were 10.52% [Table 1, Fig 1].

### DISCUSSION

Present study is conducted on first MBBS female medical students and distribution of ABO and Rh group is compared with the similar studies. The frequency and distribution of ABO blood group and Rh typing should be in accordance by the formula  $B > O > A > AB$ . our study also fulfils the above criteria. In contrast to above results Kour et al study shows the formula  $O > B > A > AB$  for ABO grouping and Rhesus typing. Most common blood group was 'B' and least common was 'AB'. However the distribution of 'A' and 'O' blood group of our study varied from other studies.

There is some variation in frequency of blood group in different places of India. 'O' blood group were most common group in places like Bangalore, Devanagere and Shimoga-Malnad. We can say as per different studies 'O' blood group is most common in Eastern and Southern India while 'B' blood group is most common blood group in northern and western India. The frequency did not vary in females in our study.

In other parts of world outside India, in countries like USA, Britain, Australia and Nigeria 'O' blood group is most common. Some countries showed similar frequency as India for example Pakistan. In Nepal blood group 'A' is most common, which is in contrast to the present study.

Present study shows Rh negativity of 10.52%, which is slightly higher than other studies done in India. That shows females have slightly higher frequency of Rh negativity in this region. In western countries Rh negativity was reported about 15-17%. These blood group studies and Rh typing may be useful in research purposes, genetic counselling, prevention of certain diseases and medicolegal problems.

### CONCLUSION & SUGGESTIONS

To conclude present study shows that the most common blood group among first MBBS female medical students at NSCB medical college Jabalpur is 'B' blood group followed by 'O' blood group and least common blood group is 'AB' blood group. These findings correlate with other studies done in different regions of India. Further similar studies should be done in different regions for better understanding.

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