

Study of ABO and Rh(D) Blood Groups in Kshatriya (Rajput) of Jaunpur District, Uttar Pradesh

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ABSTRACT The present communication reports the distribution of ABO and Rh(D) blood groups among 200 unrelated individuals from Kshatriya (Rajput) population of Jaunpur district. The overall ABO percentage is B (36%) > O (33.5%) > A (20.0%) > AB (10.5%). The frequencies of Rh positive and Rh-negative individuals are 96.5% and 3.5% respectively.

INTRODUCTION

Blood group systems have been successfully used to study the genetic variation within and between the populations and to evaluate the ethnic variation and affiliation between different populations. In the present study an attempt is made to study the distribution of ABO and Rh(D) blood group systems among the Kshatriya (Rajput) population of district Jaunpur, Uttar Pradesh.

MATERIALS AND METHODS

The blood samples were drawn from randomly selected 200 unrelated Kshatriya individuals of both sexes from Jaunpur district of Uttar Pradesh. The samples were analyzed for the ABO and Rh(D) blood groups using standard antisera

(Bhasin and Chahal 1996). Gene frequencies were calculated according to the method of Mourant et. al. (1976). The details of each subject such as name, age, sex etc. were collected using a brief questionnaire.

RESULTS AND DISCUSSION

Distribution of the ABO and Rh(D) blood groups among Kshatriya and their allele frequencies is presented in table 1 and 2 respectively. It is observed that in the present population B phenotype recorded highest frequency (36.0%) followed by O(33.5%), A(20.0%) and AB(10.5%). The order of ABO percentage frequencies are B>O>A>AB. The frequency of A, B and O alleles among the Kshatriya population is 0.165, 0.267, and 0.568, respectively.

Table 1: Distribution of the ABO blood group and their allele frequencies among the Kshatriya (Rajput).

Phenotype	Observed number	%	Expected number	Allele frequency
O	67	33.5	64.5	A=0.165
A	40	20.0	43.0	B=0.267
B	72	36.0	74.9	O=0.568
AB	21	10.5	17.6	
Total	200	100.0	200.0	1.000

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Table 2: Distribution of the Rh(D) blood group and their allele frequencies among the Kshatriya (Rajput).

Phenotype	Observed number	%	Allele frequency
Rh(D) Positive	193	96.5	D = 0.813
Rh(D) Negative	07	3.5	d = 0.187
Total	200	100.0	1.000

Out of the 200 subjects tested, 193 (96.5%) were found to be Rh positive and 7(3.5%) were Rh negative. The frequency of *D* and *d* alleles is 0.813 and 0.187 respectively (Table 2).

The distribution of allele frequencies of ABO and Rh(D) blood groups of Kshatriya population of Jaunpur district are found to be similar to that observed for Kshatriya population of Himanchal Pradesh (Mukhopadhyay and Kshatriya 2004).

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