

Blood Groups of Meghwal and Salvi—The Scheduled Castes of Rajasthan

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ABSTRACT The incidence of blood groups ABO, MN, Rhesus and ABH secretion has been reported among the two Scheduled Castes, namely Meghwals and Salvis of Girwa Tehsil of Udaipur District of Rajasthan. Both the groups show similarities with other groups of Rajasthan, Gujarat, Maharashtra and Madhya Pradesh with reference to the four genetic parameters studied for the present study.

In the present paper the distribution of four genetic parameters, namely— A_1A_2 , BO, MN, Rhesus blood group and ABH secretion has been studied among two Scheduled Castes—Meghwals and Salvis of Udaipur District of Rajasthan.

MATERIAL AND METHODS

The number of samples collected are 168 of Meghwals and 143 of Salvis of Girwa Tehsil of Udaipur District of Rajasthan. Both the population groups are Scheduled Castes. The total number of subjects tested of the two groups for the four genetic characters— A_1A_2 , BO, MN, Rhesus blood groups and ABH secretion is not same, due to certain limitations. The samples were analysed with standard anti-sera with adequate controls. The frequencies were calculated after Mourant et al. (1976).

RESULTS AND DISCUSSION

In both the Scheduled Caste groups—Meghwals and Salvis the frequency of gene B is quite high (0.289 and 0.277 respectively) than gene A (0.117 and 0.181 respectively) and similar frequencies distribution of genes B and A have been reported in the literature from Rajasthan, Gujarat, Maharashtra and Madhya Pradesh among the caste groups particularly in

Scheduled Castes. The gene A_2 is observed about 2 per cent in West India and in the present study also A_2 gene is present showing similar distribution.

The frequency of secretor gene is observed 0.482 and 0.518 among Meghwals and Salvis respectively. In West India, the average value of Se gene is found to be 0.45 (varies from 0.255 to 0.633) and in Central India the frequency of Se gene is 0.47 (ranges from 0.331 to 0.610). The present population groups also show similar pattern.

Among the Meghwals and Salvis, the gene M is present with frequencies of 0.566 and 0.625 respectively. The average frequency of gene M is 0.59 (varies from 0.250 to 0.753) in population groups of West India and in Central India it ranges in between 0.486 and 0.727 with an average frequency 0.62. Both the population groups fall nearer to population groups of West and Central India particularly with the Scheduled Caste groups.

The Rhesus blood group is tested with anti-D serum for both the groups whereas out of these only Meghwals were studied with five anti-sera. The Rh negative frequency is observed 0.204 and 0.188 among Meghwals and Salvis. Similar high frequency for Rh negative gene has been reported among the Caste and Scheduled Caste groups of Rajasthan, Gujarat, Maharashtra. Among Meghwals, who were studied with five

Table 1: The distribution of blood groups and gene/chromosome frequencies among Meghwal and Salvi of Udaipur District, Rajasthan

Blood Groups/ Phenotypes	No. Tested		Gene/ Chromosome	Frequency	
	Meghwal	Salvi		Meghwal	Salvi
ABO System					
O	59	41	A ₁	0.097	0.160
A ₁	22	30	A ₂	0.020	0.021
A ₂	4	4	B	0.289	0.277
B	72	55	O	0.594	0.542
A ₁ B	9	12			
A ₂ B	2	1			
Total	168	143		1.000	1.000
Secretors and Non-secretors					
Secretors	120	96	Se	0.482	0.427
Non-secretors	44	47	se	0.518	0.573
Total	164	143		1.000	1.000
MN System					
M	20	18	M	0.566	0.625
MN	29	24	N	0.434	0.375
N	12	6			
Total	61	48		1.000	1.000
Rhesus System					
(Tested with anti-D)					
D+	161	138	D	0.796	0.812
D-	7	5	d	0.204	0.188
Total	168	143		1.000	1.000
Tested with anti -C, -D, -E, -c and -e					
CCDEE	1		CDE		0.016
CCDEe	1		CDe		0.579
CCDee	18		cDE		0.165
CcDEe	12		cDe		0.070
CcDee	17		cde		0.170
ccDEE	2				
ccDEe	4				
ccDee	2				
ccdee	1				
Total	58				1.000

anti-sera the frequencies for CDe, cDE, cDe and cde are observed 0.579, 0.165, 0.070 and 0.170 and similar distribution has been reported among the Caste and Scheduled Caste groups of Gujarat, Maharashtra and Rajasthan.

From the above discussion, it may be evaluated that two Scheduled Caste groups of Rajasthan are showing similarities for the frequencies distribution of four genetic characters with the Caste groups of Rajasthan, Gujarat, Maharashtra and Madhya Pradesh.

REFERENCE

Mourant, A.E., Kopec, A.C. and Domaniewska-Sobczak, K.: *The Distribution of the Human Groups and Other Polymorphisms*. Oxford University Press, London (1976).