

Distribution of the ABO and Rh (D) Blood Groups Among the Sikh Harijans of Punjab

S. Sidhu

Department of Human Genetics, Guru Nanak Dev University, Amritsar 143 005, Punjab, India

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ABSTRACT The distribution of the ABO and Rh (D) blood groups has been investigated among the Sikh Harijans - one of the most dominant groups of the scheduled caste population of Punjab. The frequency of the O, A, B, and AB groups was recorded 33.33, 20.67, 35.33 and 10.67%, respectively. Rh negative was found to be 2.67%. The results were compared with some other scheduled caste populations of Punjab.

INTRODUCTION

The scheduled castes of Punjab cover a wide range of groups of populations like Harijans who are either Sikhs or Hindus. In the present study, only Sikh Harijans commonly known as "Majhabis" were considered. Majhabis follow the Sikh Gurus and thus have the appearance like Sikhs. They reside in separate colonies which are usually located on the outskirts of the cities or the villages. Sikh Harijans work as agricultural and industrial workers, but their socio-economic status is much lower than other populations of Punjab. Their marriage patterns are endogamous at the caste level and exogamous at the gotra level. Marriage by exchange and child marriages are a common affair of this community. The aim of the present study is to study the distribution of the ABO and Rh (D) blood groups among the Sikh Harijans of the Punjab.

MATERIAL AND METHODS

The blood samples from a total of 300 unrelated Sikh Harijan subjects were collected at random from the two settlements situated near Moga which is a tehsil headquarter

of district Faridkot in the Punjab state. These were typed for the ABO and Rh (D) blood groups using standard antisera with proper controls. The gene frequencies were calculated after Mourant et al. (1976).

RESULTS AND DISCUSSION

ABO System

The distribution of the ABO blood groups and frequencies is presented in table 1. In Sikh Harijans, most frequently occurring blood group was B (35.33%) followed by O (33.33%), A (20.67%) and AB (10.67%). The incidence of the A, B and O alleles was found to be 0.170, 0.263 and 0.566, respectively. A similar frequency distribution of the ABO alleles has been reported in several other scheduled caste populations of Punjab such as Hindu Harijans (Sehgal, 1979), Sansis (Sidhu and Sidhu, 1980), Bazigars (Sidhu and Sidhu, 1988) and Charnars (Sidhu, 1994).

Table 1 : Phenotype and allele frequencies of the ABO and Rh (D) blood groups among the Sikh Harijans of Punjab

System/ phenotype	Number observed	Per cent	Allele frequencies
<i>ABO System</i>			
O	100	33.33	A = 0.170
A	62	20.67	B = 0.263
B	106	35.33	O = 0.566
AB	32	10.67	
Total	300	100.00	0.999
<i>Rh (D) System</i>			
Positive	292	97.33	D = 0.837
Negative	8	2.67	d = 0.163
Total	300	100.00	1.000

Rh (D) Factor

Of the 300 individuals tested, 8 were found to be Rh negative, giving a frequency of 2.67% for this phenotype (Table 1). The chi-square test showed a non-significant difference between Sikh Harijans of the present sample and Bazigars (Sidhu and Sidhu, 1988) and Chammars (Sidhu, 1994) of Punjab in their Rh blood group distribution.

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