

A Note on ABO and Rh (D) Blood Groups and Red-Green Colour Blindness Among Padma Salis of Andhra Pradesh

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ABSTRACT The distribution of ABO and Rh (D) blood groups and red green colour blindness among the Padma Salis, a caste population of Visakhapatnam city of Andhra Pradesh has been reported. The frequencies of Rh (D) negative type and that of red green colour blindness observed are lower as compared to earlier reports on castes.

INTRODUCTION

The present paper reports the distribution of ABO and Rh (D) blood groups and red green colour blindness among the Padma Salis, an endogamous Telugu speaking caste population, of Visakhapatnam city scattered all over the city of Andhra Pradesh. They are traditionally weavers, presently engaged in a number of other pursuits like agriculture, trade and a variety of Government jobs, as their community is included under reserved categories (Backward class Group-B) for employment purposes by the State Government of Andhra Pradesh.

MATERIAL AND METHODS

Blood samples were collected from 155 randomly selected unrelated individuals belonging to Padma Sali caste residing in different localities of Visakhapatnam city. Blood typing was done using standard anti sera with suitable controls. The gene frequencies were calculated after Mourant et al. (1976).

155 individuals (Males 75 and females 80) were tested for red green colour blindness with

Ishihara (1972) charts numbered 1 to 38.

RESULTS AND DISCUSSION

Blood Groups

For the ABO blood groups, the Padma Salis record higher value of B than A (Table 1). This trend is in agreement with that generally observed among the earlier reports on caste populations of Andhra Pradesh (Naidu et al., 1990). Whereas, it is quite interesting to note that the frequency of Rh(D) negative type is lower as compared to the earlier reports on castes of Andhra Pradesh (Naidu et al., 1990) where as the mean Rh (D) negative frequency among castes of Andhra Pradesh was found to be 7.23% (Naidu et al., 1990).

Colour Blindness

The present report records a low frequency of the trait *i.e.*, 1.37% (Table 2) as compared to the mean value of 4.31% of colour blindness in male series of Andhra Caste populations reported earlier (Naidu et al., 1978).

Table 1: Phenotype and gene frequencies of ABO and Rh (D) Blood Groups among Padma Salls

Phenotype	N	Gene Frequency
ABO Blood Group		
A	29	$A=0.1439$
B	60	$B=0.2722$
O	53	$O=0.5839$
AB	13	
Total	155	
Rhesus Blood Group		
Rh (D) +	154	$D=0.9197$
Rh (D) -	1	$d=0.0803$
Total	155	

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Table 2: Incidence of red green colour blindness among Padma Salls

Sex	N	Normal		Colour-Blind		Deutan	
		n	%	n	%	n	%
Males	75	74	98.63	1	1.37	1	1.37
Females	80	80	100.00	—	—	—	—