

The ABO Blood Group in Two Sub-Castes of Kurmis of Chhattisgarh, Madhya Pradesh

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INTRODUCTION

The ABO blood group system is widely adopted for studying population variation. The Indian sub-continent as a whole is characterized by relatively high frequencies of B, usually somewhat exceeding those of A (Bhasin, et al., 1994).

The term Kurmi is considered to be derived from the Sanskrit, krishi meaning cultivation (Russell and Hira Lal, 1975). Kurmis comprise large number of subdivisions in central provinces (Madhya Pradesh) of which Manwa and Chandrakar are dominantly spread throughout Raipur and Durg districts of the Chhattisgarh region.

The aim of this paper is to investigate the distribution of the ABO blood groups among two sub-castes of the Kurmis and intergroup variation between them.

MATERIALS AND METHODS

Blood samples of unrelated Kurmi individuals of both the sexes of 74 Manwa sub-caste were collected in Jagdalpur (Bastar) during the year 2000 and those of 310 Chandrakar sub-caste from various villages of Durg district during 1982. The subjects were invariably randomly selected from urban and rural areas and were related with various occupational groups. Blood samples were tested for ABO blood groups following the standard serological techniques. The ABO gene frequencies were calculated after

Mourant et al. (1976).

RESULTS AND DISCUSSION

The distribution of the ABO blood groups among two sub-castes of Kurmis is presented in table 1. O was found to be the commonest blood group in both Kurmi samples, the incidence being rather higher in Chandrakar (46.16%) than in Manwa (36.49%). The incidence of A blood group was higher in Manwa Kurmis (29.73%) as compared to Chandrakar Kurmis (16.77%), which reverse was the trend for B blood group – Chandrakar Kurmis (40.32%) and Manwa Kurmis (27.03%).

As for the allele frequencies, the frequency of the A allele was noted higher in Manwa Kurmis (0.2037), whereas that of the B allele was higher in Chandrakar Kurmis (0.2134).

The χ^2 test for inter-group variation, when applied to the present ABO data revealed that genetically Manwa and Chandrakar are two significantly different Kurmi Sub-castes ($\chi^2 = 7.93358$, d.f. 3, $0.05 > p > 70.02$).

KEY WORDS Blood Group. Sub-caste. Kurmis. Madhya Pradesh.

ABSTRACT Kurmis are cultivators confined to Raipur, Bilaspur and Durg districts in Chhattisgarh, Madhya Pradesh. Data are presented on the ABO blood groups in two endogamous Sub-castes of Kurmis; viz; Manwa and Chandrakar. The incidence of B was recorded much higher in the former, that of A was comparatively much higher in the latter. The χ^2 test demonstrated significant differences between the two Kurmi samples.

Table 1: Distribution of the ABO blood groups among two sub-castes of Kurmis of Chhattisgarh

Sub-Castes	n	ABO Phenotypes				Allele frequencies		
		O	A	B	AB	A	B	O
Manwa Kurmis	74	(36.49)	(29.73)	(27.03)	(6.77)	0.2037	0.1868	0.6095
		27	22	20	05			
Chandrakar Kurmis	310	(46.16)	(16.77)	(40.32)	(4.19)	0.1112	0.2134	0.6754
		140	52	105	13			

Figures in parantheses are percentages

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