

ABO and Rh Loci screening in *korku* population of Amravati district: Maharashtra

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Abstract

India lies at the tri-junction of three continent and human genetic diversity ranks second after Africa. Indian population is chiefly divided into tribal and non-tribal population. In the present study screening of 744 unrelated Korku individual for the distribution of ABO and Rh loci was carried out. The study shows that blood group A predominates in distribution with the highest phenotypic frequency (66.86%). In future application of DNA based markers would provide more insight into this tribe.

Keywords: ABO, Korku, Rh, Austroasiatic, Tribe

1. Introduction

Korku is a scheduled tribe (ST) community mostly found in the Khandwa, Burhanpur, Betul and Chhindwara districts of Madhya Pradesh and adjoining areas in the Melghat region of Maharashtra in India. They speak Korku dialect which is a member of the Austroasiatic linguistic group.

Korkus have derived their name from the combination of two words 'koru' and 'ku' which means tribal men (Russell and Hiralal, 1916). The Korku population is a branch of the great Munda tribes and are placed here in the vicinity of the great tribe the Gonds (Deogaonkar *et al.*, 1990). Initially, korku tribe believed to be a hunting gathering community dwelling in the forests of Satpura ranges.

Predominantly, a rural-based community with 98.74 per cent is living in rural areas, Korkus are primarily cultivators. According to the 1981 census, 46.42 percent of them are workers. Of these, 48.38 percent are cultivators, 46.47 percent are agricultural labourers, 2.30 percent are engaged in rearing livestock, forestry, fishing, etc. The remaining 2.85 percent are engaged in various other occupations such as mining and quarrying, household industries, construction, trade and commerce, etc. They have achieved a literacy rate of only 6.54 percent as recorded by the 1981 census. While 11.68 percent of their males are literate, among females the literacy rate is 1.24 percent.

The current study is based on the ABO and Rh blood group distribution among the Korku population basically inhabited in the Melghat region of Amravati district, Maharashtra. Korku population as it is an isolated group among other caste and tribes, thus this study will help to cast light on understanding population genetics structure under laying Indian population.

2. Materials and Methods

Total 744 blood samples were typed from different villages of Melghat areas of Amravati district after obtaining appropriate informed consent. All samples were tested for the ABO and Rh blood groups using anti - A, anti -B and anti - D sera. Gene frequencies were calculated by Hardy-Weinberg

principle using the WinBug program (Spiegelhalter, *et al.*, 2003) [3].

3. Result and Discussion

ABO and Rh blood groups distribution among the endemic Korku population of Melghat region of Amravati district is shown in the table 1. Blood group A predominates in distribution with the highest phenotypic frequency (66.86%) followed by blood group B (17.87%). Blood group O and AB contain (11.82%) and (04.43%) respectively. The frequency of allele A was found to be quite high (0.4732) as compared to B (0.1234) and O (0.4033). The frequency of Rh positive (D = 0.9771) and negative was (d = 0.0228). Roychoudhury (1977a) used smaller number of genetic loci and observed the genetic relationship of Kunbi (Maratha) and Gujratis which is closer to each other than to the Hindus of Madhya Pradesh.

Table 1: ABO and Rh blood groups distribution among the endemic Korku population

Blood group	No	Phenotypic frequency in %	Allelic frequency
A	490	65.86	A= 0.4732
B	133	17.87	B= 0.1234
AB	33	04.43	O= 0.4033
O	88	11.82	
Rh Blood group			
Rh+ve	727	97.71	D = 0.9771
Rh-ve	17	02.28	d = 0.0228

4. Reference

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