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Prevalence of Bombay blood group in a tertiaryhealth care centre, Karnataka, India

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ABSTRACT

The prevalence of Bombay blood group in Employees State Insurance Medical College and Post Graduate Institute of Medical Science and Research centre(ESICMC-PGIMSR), a tertiary health provider in Karnataka, South India.

Introduction

The authors conducted investigation on the recipients and donor subjects over a period of 3 years numbering 37117,covering urban as well as rural population of Karnataka. The grouping and typing was done at ESICMC-PGIMSR blood bank to determine the prevalence of Bombay blood group. History of consanguinity in the parents of Bombay group positive subjects was recorded.

The ABO and Rh-D typing were carried out by standard cell and serum grouping by test tube method using commercially available antisera and known cells prepared in house, from pooled blood units. All blood samples showing "O" group were tested with commercial anti-H lectin of Ulex europaeus seed extract from J.Mitra and co.

Analyzing the results of 37117 study subjects showed that the most common was "O" group (40.5%); 6 oh phenotypes (0.016%) were detected of which 2 were males and 4 females, and all were Rh-D positive.

- The prevalence of Bombay blood group in our study, in a mixed population covering urban and rural areas of Bangalore district, was found to be higher (0.016%) compared to the studies done by Das et al(1) in Tamil Nadu and Periyavan .S. et al (2)in Karnataka(0.004% and 0.005% respectively).Consanguinity among parents was observed in 4 out of 6 cases. However study done by Anjuverma et al(3) in Andhra Pradesh has shown a slight increase in the prevalence of this phenotype (0.048%). This increase in their prevalence may be attributed to the screening of the family members of oh Phenotypes.

To conclude, population surveys are needed and also to improve necessary technology in blood banks to detect Bombay blood group, which is commonly mistaken as "O" group. It is necessary in all the blood banks to maintain a detailed registry of this rare blood group positives and can be used as donors in case of emergencies.Consanguinity appears to be an important, preventable risk factor.

Table-1: Total number of donor and recipient blood sample screened and the oh phenotypes in males and females.

Total number screened	Number of oh phenotype	males	Females
37117	6	2	4

References:

1. Das PK,Nair SC,Harris VK, Rose D, Mammen JJ,Bose YN, et al.Distribution of ABO and Rh-D blood groups among blood donors in a tertiary care centre in South India. Trop Doct 2001;31:47-8.

2. Periyavan S, Sangeetha SK, Marimuthu P, Manjunath BK, Seema DM. Distribution of ABO and Rh-D blood groups in and around Bangalore. Asian J Transfus Sci 2010:4(1);41.

3. Anju Verma, K Geetha Vani, Is Chaitanya Kumar, DS Jothi Bai. Prevalence of Bombay blood group in a tertiary care hospital.Asian J Transfus Sci 2011;5(1):57-58.

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