

ORIGINAL ARTICLE

Association of ABO Rh blood group with dengue fever and dengue hemorrhagic fever: A case-control study

Vitthal Khode, Goutam Kabbin¹, Komal Ruikar

Departments of Physiology, and ¹Paediatrics, Shri Dharmasthala Manjunatheshwara College of Medical Sciences, Sattur, Dharwad, Karnataka, India

Address for correspondence: Dr. Vitthal Khode, Department of Physiology, Shri Dharmasthala Manjunatheshwara College of Medical Sciences, Sattur, Dharwad - 574 240, Karnataka, India. E-mail: drkhoday@yahoo.co.in

ABSTRACT

Background: Data on frequency distribution of ABO Rh blood group in pediatric dengue patients are not available. Dengue disease an emerging arthropod borne infection of public health concern belongs to Flaviviridae. The studies defining the relationship between blood groups and dengue disease and its severity are limited. Blood group antigens are generally known to act as receptors for various etiological agents. Hence, we hypothesized there will be an association between blood group and dengue disease and its severity and conducted this case-control study.

Study Design: Hospital-based case-control study.

Materials and Methods: Study was conducted in department of pediatrics, 244 pediatric subjects (age group 1 - 13 years) were enrolled divided into cases who were admitted cases of dengue (119, 65 males, 64 females) and controls who were attending outpatient department for various other ailments. (125, 67 males, 58 females) and demographic data (age, gender, blood group, and dengue infection status) were collected from them. The risk of acquiring dengue disease and severity and its association with factors such as blood group, gender were analyzed statistically.

Results: The data of this study showed a possible association between blood groups of the study population with dengue infection. We observed that dengue infections were higher in individuals with O positive blood group 42.8% when compared with controls 32%. ($P = 0.043$) But blood groups were not associated with severity of infection. These data present further evidence for the association of the blood groups, gender to susceptibility to dengue infection. Further studies are needed to confirm these findings.

Conclusion: Dengue disease is more common with blood group O. But severity of the disease is not associated with any blood groups.

Key words: ABO blood groups, dengue fever, dengue hemorrhagic fever

Access this article online	
Quick Response Code:	Website: www.jahjournal.org
	DOI: 10.4103/1658-5127.127899