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Biography

Arup Ratan Bandyopadhyay is Professor and former Head of the Department of Anthropology, University of Calcutta. He did MPhil and PhD from University of Calcutta, India. He is the recipient of UGC Research Fellowship (for pursuing PhD, qualifying National Eligibility Test), merit award and Young Scientist award. He was President of Anthropological and Behavioral Sciences section of the Indian Science Congress in its centenary year. He received seven national extra-mural research grants as Principal Investigator, including a grant from the British Council for collaboration with the Roslin Institute, University of Edinburgh, UK. He published more than 100 anthropological research articles in national and international journals on evolutionary biology, forensic anthropology, dental anthropology, public health in relation to medical genetics, cytogenetic and anthropometry of non-communicable disease, dermatoglyphic in medical and psychiatric disorders, and population genetics and human rights issues. He has delivered many invited lectures and recently in International Conference in Gynecology, Obstetrics and Reproductive Medicine (GORM2018).

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Note:

HAPTOGLOBIN AND HEMOLYTIC DISEASE OF THE NEWBORN: A STUDY ON BANGALEE HINDU CASTE POPULATION, WEST BENGAL, INDIA

Hemolytic disease of the newborn (HDN) used to be a major cause of fetal loss and death among newborn babies. It has been recognized that maternal-fetal ABO incompatibility is the most frequent cause of HDN. The present study attempts to find the role of haptoglobin in the hemolytic disease of the newborn (HDN), to ascertain the selective advantage of HP*1 alleles over HP*2 alleles, and to find the association of haptoglobin with ABO blood group system. To achieve the purpose a total of 572 children with HDN were studied along with their parents. On the other hand, 1000 newborns without HDN as controls were taken as controls. ABO blood group was done by antigen-antiserum agglutination test and haptoglobin (HP) types were ascertained by Polyacrylamide Gel Electrophoresis (PAGE) following standard techniques. Allele frequencies of these polymorphic markers calculated were computed by maximum likelihood estimation. Distribution of haptoglobin groups according to ABO blood group mother-child combinations were studied. Mothers of HDN patients revealed an excess frequency of 'O' alleles and children with HDN demonstrated a significant excess of 'A' alleles compared to those of control 1000 newborns. The allele frequency of HP*1, was found to be higher among HDN children with ABO incompatible mother-child combinations, than those among the HDN patients with ABO compatible mother-child combinations. Further follow up of the HDN samples without detectable haptoglobin types required exchange transfusion, but those with detectable haptoglobin types did not require exchange transfusion irrespective of mother-child combination. Trend towards protective effects of HP in mean hemoglobin level and other parameters of HDN patients was evident.