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## A Study on the Role of Haptoglobin in Haemolytic Disease of the Newborn

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**KEY WORDS** Hemolytic disease of the newborn; haptoglobin; selective advantage.

**ABSTRACT** 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 over HP\*2 , due to greater binding capacity of hemoglobin of the former; and to find the association of Haptoglobin with ABO blood group system. 71 children (37 – male; 34 – female) with HDN were studied along with their parents. Distribution of Haptoglobin according to various mother-child combinations was studied. Mothers of HDN patients showed an excess frequency of ‘O’ alleles and children with HDN, showed a significant excess of A<sub>1</sub> and A<sub>2</sub> alleles compared to those of control newborns. Among the mothers of HDN children ‘d’ allele was frequent, but notably absent in father and children. It was seen that frequency of HP\*1 allele, was more among HDN children with double incompatible mother-child combinations, than those among the HDN patients with double compatible mother-child combinations. Further follow up of the HDN patients 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.

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