

HIGH-DOSE INTRAVENOUS IMMUNOGLOBULIN (IVIg) IN RHESUS HAEMOLYTIC DISEASE (RHD)

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Background and aims: RHD is characterized by haemolysis and hyperbilirubinaemia due to Rh-incompatibility. Recently, AAP guidelines recommended high-dose IVIg as an alternative to exchange transfusion (EXT). The aim of this study was to compare clinical outcome of RHD patients before and after the introduction of IVIg.

Methods: A chart-review of 88 Coombs-positive RHD patients (1999-2009) was performed. Patients were divided into two groups, treated before (Group A[GA]-n°35) and after (Group B[GB]-n°53) the introduction of IVIg, respectively. Number of EXT and RBC transfusions, need and days of permanence of umbilical catheter (UC), duration of hospitalization and phototherapy; maximum bilirubinaemia, changes in bilirubinaemia over time, and morbidity were compared in the two groups.

Results: GB-patients had lower EXT need (13% vs 82% in GA, $p=0.000$), UC need (58% vs 97%, $p=0.001$) and UC days (mean 2.8/patient vs 4.6, $p=0.001$), higher need of RBC transfusions (mean 0.9/patient vs 0.2, $p=0.000$), longer hospitalization (mean 12.1 days/patient vs 6.9, $p=0.000$) and longer phototherapy (mean 7.6 days/patient vs 4.5, $p=0.000$). No significant difference in maximum bilirubinaemia was found; in GB-patients bilirubinaemia overcame neurological-risk value for shorter period (mean 55.4 hours/patients vs 74.6, $p=0.047$). 43.9% GA-patients had thrombocytopenia, 21.9% hypocalcaemia, 4.9% hypomagnesaemia, 19.5% UC-related complications, and 9.8% adverse reactions during EXT. Two infants in GB developed NEC.

Conclusions: High-dose IVIg in RHD patients reduced EXT need, UC need and permanence time, and risk of hyperbilirubinaemia-related neurological damage. However, IVIg-treated patients needed longer hospitalization, longer phototherapy, and had increased need of RBC transfusions.