Case Of NAIT Causing Severe Thrombocytopenia due to Anti-HLA Class I

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Abstract

Neonatal alloimmune thrombocytopenia (NAIT) is the leading cause of thrombocytopenia in otherwise healthy new-born. (1,2) Maternal antibodies raised against paternally inherited alloantigen carried on fetal platelet causing NAIT. Maternal IgG antibodies passed through to the fetal via the placenta, attack and cause the destruction of the fetal platelet. (3) We present a case of NAIT without any complications in a premature baby (35 weeks) with VACREL association, G6PD deficiency, left calcified cephalohaematoma, cardiomegaly and hypospadias with severe thrombocytopenia (platelet counts is 23 109/L) at day two of life and received twice platelet transfusion. Platelet count initially 123 109/L at birth but significantly drop and persistently less than 50 109/L until day 10 of life before it normalized. Maternal serum antibody screening was negative, but platelet immunology test detected maternal platelet-reactive antibody Anti-HLA Class I and correlates with incompatible parental crossmatch indicating that parent had "platelet-antigen incompatibility". The goal of obstetric management is to identify pregnancies at risk and prevent intracranial haemorrhage. (4) There is no evidence to support routine screening for pregnancies as per current practice. (2, 5) The latest treatments include maternal administration of intravenous immunoglobulin to suppress maternal antibody production and or to reduce placental transfer of antibodies; with or without steroids during antepartum period besides planning of mode, timing and method of delivery. (2, 5, 6, 7) This is a rare and unique case of NAIT secondary to Anti-HLA Class I antibody and hence clinician should be au fait with the diagnosis and management as it is infrequent among Malaysian.

Keywords: Neonatal Alloimmune Thrombocytopenia (NAIT), Anti-HLA Class I, Platelet Antibody

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