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Editorial

Editorial Note on Neonatal Alloimmune Thrombocytopenia

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EDITORIAL NOTE

Neonatal alloimmune thrombocytopenia (NAITP, NAIT, NATP, or NAT) is a disorder that affects babies and causes a drop in platelet count when the mother's immune system attacks the platelets of her fetus or newborn. A low platelet count in the fetus or infant increases the risk of bleeding. There can be long-term consequences if the bleeding happens in the brain. Platelet antigens are passed on by both parents. NAIT is caused by antibodies to platelet antigens that are inherited from the father but not from the mother.

Fetomaternal transfusions cause the mother's immune system to recognize these antigens as non-self, resulting in the production of allo-reactive antibodies that cross the placenta. Proteins abound on the surface of platelets. Proteins are inherited from one's parents and are unique to each person. Different platelet proteins result in different platelet groups, just as different red blood cell proteins result in different blood groups. The platelets' function is unaffected by these variations. If, on the other hand, a baby inherits a protein that is present on the father's platelets but not on the mother's platelets, the mother may produce an antibody to combat the foreign protein. This antibody can transfer from the mother's blood to the baby's blood, where it attaches to the platelets. This antibody kills the baby's platelets and suppresses fetal platelet production; it's also thought to weaken blood vessel walls and interfere with the formation of new blood vessels. As a result, the baby is at an elevated risk of bleeding, which may result in death. Antibodies from the mother can stay in the baby's bloodstream for weeks, and bleeding can occur in the baby before, during, or after birth (fetal) (neonatal).

It is diagnosed by the blood tests from the infant's parents, as well as the baby, are used to validate the diagnosis. The phenotyping of maternal and paternal platelet antigens, as well as the screening of maternal serum for anti-platelet antibodies, can all be done.

Signs and symptoms

The platelet count loss is moderate, and the affected neonates are often asymptomatic. NAIT is the most common cause of a very low platelet count in the term neonate, as well as the most common cause of intracranial hemorrhage.

Transfusion reactions

Treatment: Invasive management

The first antenatal treatment for NAIT was umbilical cord blood screening and intrauterine platelet transfusion to avoid intracerebral hemorrhage. However, because of the significant risk of injury, this is no longer recommended routinely. Cordocentesis in the presence of a low platelet count can cause serious complications, such as fetal bradycardia (slowing of the baby's heart), cord tamponade, and bleeding complications in the baby, such as exsanguination. The baby is expected to die in 1.3 percent of fetal blood sampling procedures, but the rate varies greatly from center to center.

Non-invasive management

Intravenous immunoglobulin (IVIG) has been shown to help mitigate or relieve the symptoms of NAIT in children, as well as the severity of thrombocytopenia, when given during pregnancy and immediately after birth. In women who have had a previous affected child with an intracranial hemorrhage, the most common treatment is weekly IVIG i

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