Neonatal Alloimmune Thrombocytopenia (NAIT): Initial data from the Australian Registry

Prepared by Ri Scarborough, NAIT Registry Project Officer, December 2014

Neonatal alloimmune thrombocytopenia (NAIT) is a rare but a serious condition that can result in major bleeding in a newborn. NAIT often occurs in a mother's first pregnancy and is therefore frequently unexpected.

NAIT can occur when there is incompatibility in the platelet antigens between a mother and a father. If a foetus inherits an incompatible platelet antigen from the father and the mother makes antibodies to this antigen, the antibodies can cross the placenta, causing destruction of the foetal platelets and thrombocytopenia.

The Australian NAIT Registry is a secure register of pregnant women who develop or have a history of NAIT. The aims of the registry are to better define how many people in Australia are affected by NAIT, their clinical outcomes and the treatments they receive. The registry aims to better define optimal management and inspire research in this area.

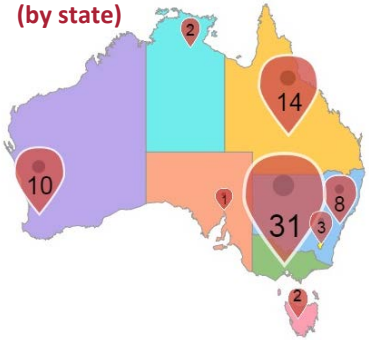
The registry commenced in March 2009, with just 8 hospitals involved. In 2014, 29 hospitals across Australia participated.

To date, we have 71 cases of suspected NAIT that have been reported to the registry. Case recruitment has improved markedly over the last two years, with the help of patient support groups, who have increased awareness of the registry via social media, as well as improved communication between registry staff, diagnostic laboratories, the Blood Service and hospitals.

Case recruitment (by year registered)

Case recruitment has been highest in Victoria, where the registry team is based, however recruitment in other states is improving.

Case recruitment (by state)

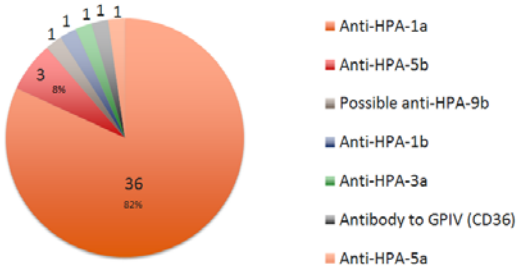


We presented the first 58 cases of the NAIT registry at the Annual Scientific Meeting of HAA (Haematology Society of Australia and New Zealand, the Australian & New Zealand Society of Blood Transfusion and the Australasian Society of Thrombosis and Haemostasis) held in Perth in October 2014.

The most common reason that NAIT was identified was because of a past history of an affected sibling, or skin manifestations of bleeding such as bleeding or bruising. Intracranial haemorrhage was seen in 10% of confirmed NAIT cases.

The most common antibody detected in the registry was anti-HPA-1a in 82% of cases. This is in keeping with international studies. Anti-HPA-5b was the next most commonly reported antibody.

Anti-HPA-1a most commonly detected



A number of NAIT cases were detected prior to delivery and 18 women received antenatal treatment with intravenous immunoglobulin (IVIg) and/or steroids.

We found that maternal IVIg may be associated with significant side effects which may limit treatment. Steroids were given when there was a history of a severely affected foetus or there was intolerance of IVIg.

NAIT is usually self-limiting and will typically resolve within 2 weeks, however if a baby has bleeding or a platelet count of $<30 \times 10^9$/L, he or she will need treatment. This will usually involve a platelet transfusion and intravenous immunoglobulin.

Approximately one-third of neonates reported to the registry received post-natal therapy with platelets and/or IVIG.

New cases and new hospitals are always very welcome. Enquiries (including mums who are not sure if they are already registered) can be directed to

med-NAIT@monash.edu

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