

Comment

Time for another round on screening?

Beate Horsberg Eriksen et al. describe two siblings with the diagnosis fetal/neonatal alloimmune thrombocytopenia (FNAIT). The disease is due to platelet incompatibility between mother and child, and is caused by antibody-mediated destruction of fetal platelets.

The first patient had extensive petechiae and severe thrombocytopenia at birth. An MRI examination revealed multiple intracranial haemorrhages that probably occurred at or near the time of birth. In the subsequent pregnancy, the risk of fetal/neonatal alloimmune thrombocytopenia was recognised, and medical steps were taken. This child also had severe thrombocytopenia at birth, but escaped complications.

The question raised is whether the medical handling of the two pregnancies explains the difference in clinical outcome. Could the cerebral haemorrhage of the first child have been avoided if the mother had been screened for fetal/neonatal alloimmune thrombocytopenia?

The debate on screening was initiated roughly five years ago, with the publication of the results of the large Norwegian prospective intervention study on FNAIT (1). The study included more than 100 000 pregnancies from Northern and Eastern Norway, and platelet typing and antibody studies were used to identify the 0.2% of all pregnancies where there was a risk of fetal/neonatal alloimmune thrombocytopenia. This sub-group of pregnant women was offered medical intervention in the form of elective caesarean section about 2–4 weeks before their due date. Compatible platelet concentrate was made available before the birth in case early transfusion of the newborn should be necessary. A 75% reduction in mortality or severe intracranial haemorrhaging was

reported among the infants compared with historical controls (1). The research team also published analyses that indicated that the intervention programme was cost-effective in terms of social costs if the expenses of taking care of children with serious cerebral injuries after a cerebral haemorrhage were taken into account (2).

Why, then, was there not immediate general support for screening for fetal/neonatal alloimmune thrombocytopenia? Despite the Norwegian research results, the controversial question remained the following: Screening could only be justified if the possibilities of medical intervention *substantially reduced the risk of haemorrhaging complications in the affected fetuses*. Reference was made to observational studies indicating that the majority of the intracranial haemorrhages in FNAIT occur before the 36th week of pregnancy, and hence cannot be prevented by early delivery (3). Documentation to the effect that caesarean section was a safer method of delivery than vaginal birth was also debated (4). In its report, the Norwegian Directorate of Health also stressed the emotional burden that would be placed on HPA-1a-negative pregnant women who were made aware of the risk of fetal/neonatal alloimmune thrombocytopenia without a definitive treatment available to guarantee a complication-free course (4).

In its report of 2008, the Directorate called for more research in this area. Perhaps it is already on its way? The Norwegian research group on fetal/neonatal alloimmune thrombocytopenia recently performed a study in which they succeeded in preventing HPA immunisation in an animal model (5), and other medical communities are working on similar preventive strategies. There are growing

expectations that an effective prophylactic strategy for fetal/neonatal alloimmune thrombocytopenia will be developed in the course of a few years. If this goal is achieved, surely all the remaining arguments against screening will become irrelevant?

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