Medical history of:
- Previous neonate with thrombocytopenia of unknown etiology
- Previous neonate with platelet count below 50,000/mm³, regardless of the presumed etiology
- Previous fetus or neonate with intracranial hemorrhage of uncertain etiology

Reference platelet laboratory: Maternal platelet antigen typing Paternal platelet antigen typing Maternal platelet HPA antibody testing using sensitive assays*

Results:
- Incompatibility at HPA loci (1, 2, 3, 4, 5, 6, 9, or 15)
- Specific maternal anti-HPA antibody to one of the above present

Diagnosis of fetal or neonatal alloimmune thrombocytopenia (see Figure 2)

Results:
- No incompatibility at HPA loci
- Nonspecific or no antiplatelet antibody present

No further evaluation necessary

Test for maternal antibodies at 30 weeks of gestation against father's platelets, if possible

Results:
- If test is negative
- If test is positive

Repeat maternal HPA antibody testing and cross-match with paternal platelets at 12, 24, and 32 weeks of gestation

Results:
- If test is negative
- If test is positive

Detection of positive anti-HPA antibodies that react to paternal platelets

Evaluation for maternal antiplatelet auto antibodies OR history of immune thrombocytopenia

Yes

Evaluate for maternal antiplatelet auto antibodies OR history of immune thrombocytopenia

No

No further evaluation necessary

* Examples of sensitive assays include MACE (modified antigen capture enzyme-linked immunosorbent assay [ELISA]) and MAIPA (monoclonal antibody immobilization of platelet antigens). HPA, human platelet antigen.

This flow chart was developed as a flexible educational tool to promote consistency in the general care of patients. It is not intended to substitute for or be used as professional medical advice for any individual and is not intended to set out a standard of care for any specific disease or condition. The treatment of patients requires the exercise of professional medical judgment in order to meet individual requirements. If you have questions regarding your or anyone else's health, medical care, or the diagnosis or treatment of a specific disease or condition, please consult with your personal healthcare provider.

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Paternal zygosity for the potentially involved HPA antigen

PCR testing via amniocentesis (CZVS contraindicated) for fetal platelet genotype

Antigen-negative fetus

No further testing necessary

Antigen-positive fetus

Father heterozygous

Father homozygous

Previous infant with thrombocytopenia but no intracranial hemorrhage

EGA 20 weeks:
Intravenous immunoglobulin (1g/kg/week) and prednisone (0.5 mg/kg/day)
OR
Intravenous immunoglobulin (2g/kg/week)

EGA 32 weeks:
Give intravenous immunoglobulin (2g/kg/week) and prednisone (0.5 mg/kg/day)

Deliver by cesarean at 37–38 weeks EGA after lung maturity documented; vaginal delivery only recommended if percutaneous umbilical blood sampling at or after 32 weeks of gestation shows more than 100,000/mm³ platelets

Previous fetus or neonate with intracranial hemorrhage diagnosed at 28 or more weeks of gestation

EGA 12 weeks:
Intravenous immunoglobulin (1g/kg/week)

EGA 20 weeks:
Increase intravenous immunoglobulin to 2g/kg week
OR
add prednisone (0.5 mg/kg/day)

EGA 28 weeks:
Give intravenous immunoglobulin (2g/kg/week) and prednisone (0.5 mg/kg/day)

EGA 20 weeks:
Add prednisone (1mg/kg/day)

EGA 32 weeks:
Give intravenous immunoglobulin (2g/kg/week) and prednisone (0.5 mg/kg/day)

Deliver by cesarean at 35–36 weeks EGA after lung maturity documented; vaginal delivery only recommended if percutaneous umbilical blood sampling at or after 32 weeks of gestation shows more than 100,000/mm³ platelets

Previous fetus with intracranial hemorrhage diagnosed at less than 28 weeks of gestation

EGA 12 weeks:
Intravenous immunoglobulin (2g/kg/week)

EGA 20 weeks:
Add prednisone (1mg/kg/day)

EGA 28 weeks:
Give intravenous immunoglobulin (2g/kg/week)

Deliver by cesarean at 35–36 weeks EGA after lung maturity documented; vaginal delivery only recommended if percutaneous umbilical blood sampling at or after 32 weeks of gestation shows more than 100,000/mm³ platelets

Intravenous immune globulin
• Give 2 g/kg/week dose as a split dose of 1 g/kg/day on each of two days
• Gammmagard brand preferred
• Consider 100mg IV hydrocortisone with each dose to decrease headaches
• Consider Rx for Imitrex (25 mg tabs; 50 mg initial dose; can repeat 25 mg 2 hours later; not to exceed 100 mg in 24 hours)
• Check hematocrit Q 2 weeks if blood type A, B, or AB to rule out anemia due to alloimmune antibodies in IVIG

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