

HEMORRHAGIC DISEASE OF THE NEWBORN

- DEFINITION

It is a disorder in newborn infants characterized by a transient deficiency in vitamin K dependent clotting factor.

FREQUENCY

- 4.2 - 7.2 / 100,000 births to 1.4-6.4/100,000 births in Asia.

ETIOLOGY

FETAL

- Reduced stores of Vitamin K at births.
- Functional immaturity of the liver
- Sterility of the gut

MATERNAL

- Drug ingestion during pregnancy(
anticonvulsants- E.g.... Phenobarbital, Phenytoin
anticoagulants E.g. Aspirin)
- Lack of free vitamin K in the maternal serum
- Poor placental transfer of vitamin K
- Low level of Vitamin K in breast milk

INFANT

- Breast feeding
- Diarrhea
- Hepatitis
- Cystic fibrosis
- Celiac disease
- Alpha-1-antitrypsin deficiency
- Absence of vitamin k prophylaxis.

TYPES HDN

EARLY HDN

Bleeding occurs during the first 24 hours of life.

CLASSIC HDN

Bleeding occurs during the first week of life in breastfed infants.

LATE HDN

Bleeding occurs 3-8 weeks after birth

CLINICAL FEATURES

- Spontaneous bleeding occur from the nose
- Petechia
- Conjunctival hemorrhage
- Retinal hemorrhage
- Oozing blood from umbilicus or circumcision
- Hematuria
- Tar-colored stool
- Hematemesis

DIAGNOSTIC EVALUATION

- Prothrombin time-Prolonged
- Partial thromboplastin time-Prolonged
- Factor II, VII, IX and X
- Complete blood count and bleeding time-
Normal
- CT Scan-shows intracranial hemorrhage

MEDICAL MANAGEMENT

- Prophylaxis-0.5 mg/ml in small premature neonates less than 1000g. 1mg SC/IM in neonates more than 1000g.
- Treatment- 1mg SC or 1-10mg IV

PREVENTION

- HDN can be prevented by the intramuscular administration of 1mg of vitamin K to all newborns immediately after birth.

PROGNOSIS

- In the absence of ICH, the prognosis for vitamin k deficiency bleeding in an otherwise healthy infant is excellent.

COMPLICATIONS

- ICH
- Complications of treatment include anaphylactic reactions to IV Vitamin k, hyperbilirubinemia, or hemolytic anemia after high dose vitamin k and hematomas at the site of injection if administered IM.

NURSING DIAGNOSIS

- Decreased cardiac output related to hemorrhage from nose, skin, conjunctiva and umbilicus
- Fluid volume deficit related to hemorrhage
- Risk for infection related to immature immune system, immature skin structure and venipuncture.
- Risk for impaired skin integrity related to immature skin structure and invasive therapy.
- Immature thermoregulation related to immature temperature control and decreased subcutaneous fat

- Altered growth and development related to failure to achieve developmental task.
- Anticipatory grieving related to perceived potential loss of baby.
- Altered family process related to situational crisis
- Knowledge deficit regarding disease condition, etiology, clinical features and diagnostic evaluation related to lack of awareness.

THANK U