HUTT maternity
Hutt Valley Maternity Care

HUTT VALLEY DHB

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Non Immune Fetal Hydrops (NIFH) Guidelines

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your Lead Maternity Carer.

Purpose

To provide guidance for diagnosis of NIFH

Scope

For obstetric and midwifery staff

Definitions

SDP: Single deepest pool
SVT: Supraventricular tachycardia
SLE: Systemic Lupus erythematosus
TTTS: Twin to twin transfusion syndrome
CCAM: congenital cystic adenomatoid malformation
G6PD: Glucose -6-phosphate dehydrogenase
MCA: Middle cerebral artery
PSV: Peak systolic velocity
PTL: Preterm labour
TOP: Termination of pregnancy

Diagnosis

Presence of any TWO USS findings given below:

a) Ascites
b) Pleural effusion(any fluid significant)
c) Pericardial effusion (> 2mm significant)
d) Skin edema >5mm
e) Polyhydrammos: SDP >8 cm and/or AFI> 24 cm
f) Placentomegaly>4mm thickness

Causes

Aneuploidy (T21/Turner's)
Cardiovascular causes
Structural: TOF/Transposition of great vessels/Ebstein's anomaly/Truncus arteriosus
Dysrhythmias: Tachyrhythmia: SVT
Brady: complete heart block (SLE)
Arteriovenous shunts:
Fetal: sacrococcygeal teratoma/Vein of Galen aneurysm

Placental: TTTS/ Chorioangioma
Abnormalities in thorax
CCAM
Bronchopulmonary sequestration
Congenital diaphragmatic hernia
Chylothorax/Hydrothorax
Fetal anemia: Parvovirus B19
G6PD deficiency
Thalassemia
Fetomaternal Haemorrhage
Fetal infection:
TORCH/Parvovirus/Syphilis
Genetic syndromes: Noonan's/ Cornelia De Lange
Metabolic: mucopolysaccharoidoses

Diagnostic workup:

Maternal investigations:

- Full blood count
- Blood group and Rhesus and Red cell Antibody screen
- Hb electrophoresis (Thalassemia)
- Kleihauer Betke count (fetomaternal Hge)
- Serology: TORCH/Syphilis/Parvovirus
- Autoantibodies :anti RO/anti La (SLE)

Fetal

- Detailed scan at tertiary centre
  A) Anatomy
  B) Fetal ECHO
  c) Rhythm on M mode (rule out brady/tachyarrhythmias)
  D) Placenta and liquor
  E) MCA PSV (>1.5 MoM is suggestive of moderate/severe fetal anemia)
- <20/40 and MCA PSV normal: Amniocentesis for karyotype/PCR for TORCH and Parvovirus/Metabolic diseases
- >20/40 and MCA PSV elevated: Cordocentesis for Fetal Blood sampling: Full blood count; Blood Group and direct Coomb's test/Thalassemia screen/Karyotype

ANTENATAL MANAGEMENT:

- Early diagnosis :> 50% association with chromosomal problems, hence poor prognosis→ offer TOP
- Selective Therapeutic intervention:
  - a)SVT: Maternal/fetal administration of digoxin+/- antiarrhythmic agents
  - b)Complete heart block: maternal administration of steroids
  - c)fetal anemia: intrauterine transfusion
  - d)pleural effusion alone: Pleuroamniotic shunting

- Ongoing pregnancy with hydrops:
- 10% develop PET (mirror/Ballantyne syndrome)
- Polyhydramnios / PTL / abruption – amnioreduction maybe required.
- Mode of delivery uncertain
- Neonatal palliation
- Overall perinatal mortality 50-98%

Reference

Hyett J .Fetal Hydrops.In: Fetal Medicine:Basic Science and clinical practice. Rodeck CH, Whittle MJ, editors. London: Churchill Livingstone, 2008.

NZMFM network

Informed Consent

The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012).