FETAL DEMISE

1. GENERAL

A. ***Definition:*** Fetal death after the 20th week of gestation (or fetal weight > 350 g) and prior to complete expulsion from mother.

B. ***Incidence:*** 7.5 per 1 000 births

C. ***Etiology***

1. Chronic asphyxia (60% - 70%)

2. Congenital or genetic abnormalities (20% - 25%)

3. Superimposed complication of pregnancy (5% - 1 0%)

4. Unknown (5% - 10%)

11. DIAGNOSIS

A. Absence of fetal heart rate when electronic fetal monitor is applied to presenting part.

B. Absence of cardiac activity confirmed with real-time ultrasound.

Ill. MANAGEMENT

A. *Initial* **considerations:**

1. Inform patient of diagnosis

2. 80% - 90% of cases will deliver within two weeks

3. The time from death to delivery is inversely proportional to gestational age.

4. Each case should be handled individually according to the patient's wishes.

5. If the patient choses to delay uterine evacuation, then weekly plasma fibrinogen levels should be adequate to detect any clinically significant coagulopathy.

   a. < 5% will develop coagulopathy after one week.

   b. 25% will develop coagulopathy after four weeks.

B. **Uterine Evacuation**

1. Dilatation and Evacuation

   a. Appropriate if uterus is < 16 weeks size and operator is experienced with procedure

   b. Laminaria insertion 6 - 8 hours prior to surgery will facilitate dilatation.

2. Dinoprostone (PGE2) Induction

   a. Appropriate if uterus is > 16 weeks but < 29 weeks

   b. Laminaria will facilitate dilatation

   C. Premedication with Tylenol, Phenergan, and Lomotil 30 minutes prior to induction will reduce maternal side effects.

   d. One 20-mg suppository is inserted into the post-vaginal fornix every 3 - 4 hours.

e. Once the fetus is delivered, oxytocin (30 u/L) can be infused at 1 50 cc/hour to facilitate delivery of placenta (simultaneous administration of oxytocin and PGE2 increases the risk of uterine rupture and therefore should be avoided).
f. If the placenta is undelivered after two hours or there is significant bleeding a D&C should be considered.

3. Hemabate (PGF2.) Induction
   a. Appropriate if uterus is > 16 weeks but < 25 weeks and there is adequate amniotic fluid.
   b. Laminaria will facilitate dilatation
   c. Under ultrasound guidance, 2.5 mg of hemabate is injected into the amniotic cavity (a test dose of 0.25 mg is initially injected).
   d. **Contraindicated** in patients with a history of asthma, glaucoma, or cardiovascular disease.
   e. Begin dinoprostone suppositories at 12 18 hours if unresponsive to hemabate.
4. Oxytocin Induction
   a. Appropriate if uterus is > 24 weeks.
   b. Foley balloon catheter, laminaria, and dinoprostone gel will facilitate cervical ripening.
   c. Oxytocin administration (see Oxytocin: Induction of Labor Guidelines).
   d. Prolonged high-dose oxytocin infusion can result in water intoxication, hyponatremia, and seizures.
5. Misoprostol (Cytotec) Approprriate from 12wk to Term
   a. 12-28 wks can use 100-200 mcg tablets in posterior fornix q 12 hours
   b. 28 wks + can use 100 mcg tablets in posterior forrnix q 12 hours

C. ***Postpartum***

1. Social service consultation should be offered to the patient.
2. The parents should be allowed to hold the baby for as long as they feel is necessary.
3. Make arrangements for disposition of the fetus.
4. Administer Rhogam as clinically indicated.

IV. SEEKING THE CAUSE

A. **Review Prenatal Care and Delivery**

1. Note any abnormalities (abnormal blood pressure, glucose intolerance, antibody screen, etc.).
2. Note and record appearance of fetus, umbilical cord and placenta.
3. Consideration should be given to the following tests:
   a. Random glucose
   b. CBC with platelets
   c. Antibody screen
   d. RPR
   e. Kleihauer-Betke Test
   f. Urine toxicology screen
   g. HIV
   h. Thyroid function
   i. CMV titer (IgM and [gG)
   j. ANA/lupus anticoagulant/anticardiolipin antibody

B. ***AutopsylPathology***

1. Most useful step in identifying cause of death.

2. Gross and microscopic examination of fetus and placenta.
3. Bacterial/viral cultures.
4. Radiographs/photographs.

C. ***Genetic Analysis***

1. Success of cytogenetic analysis decreases with duration of fetal death.

2. Appropriate specimens
   a. Fetal blood (green top tube with sodium heparin).
   b. Fetal skin, fascia, or placenta (in sterile container of saline or culture medium).
   c. Amniotic fluid.
3. Specimens should be kept refrigerated if immediate transport to genetic lab is impractical (i.e., nights and weekends).

V. SINGLE DEMISE IN TWIN GESTATION

A. Perform weekly serum fibrinogen.
B. Twice weekly NST or BPP beginning at 28 weeks.
C. Delivery at 34 weeks after documentation of fetal lung maturity or earlier as clinically indicated.