Definition: dead fetuses or newborns weighing > 500gm Or > 20 wks gestation

**Diagnosis**
Absence of uterine growth
decreased Serial β-hcg
Loss of fetal movement
Absence of fetal heart
Disappearance of the signs & symptoms of pregnancy
X-ray □ Spalding sign
□ Robert's sign
U/S □ 100% accurate Dx

**Causes of IUFD**

Fetal causes 25-40%
- Chromosomal anomalies
- Birth defects
- Non immune hydrops
- Infections

Placental 25-35%
- Abruption
- Cord accidents
- Placental insufficiency
- Intrapartum asphyxia
- Placenta Previa
- Twin to twin transfusions
- Chorioamnionitis

Unexplained 25-35%
Maternal 5-10%
- Antiphospholipid antibody
- DM
- HPT
- Trauma
- Abnormal labor
- Sepsis
- Acidosis/ Hypoxia
- Uterine rupture
- Post term pregnancy
- Drugs
- Thrombophilia
- Cyanotic heart disease
- Epilepsy
- Severe anemia
A systematic approach to fetal death is valuable in determining the etiology

A-Family history
- Recurrent abortions
- VTE/PE
- Congenital anomalies
- Abnormal karyotype
- Hereditary conditions
- Developmental delay

B-Maternal History
  I-Maternal medical conditions
  - VTE/PE
  - DM
  - HPT
  - Thrombophilia
  - SLE
  - Autoimmune disease
  - Severe Anemia
  - Epilepsy
  - Consanguinity
  - Heart disease
  II-Past OB Hx
  - Baby with congenital anomaly/hereditary condition
  - IUGR
  - Gestational HPT with adverse sequel
  - Placental abruption
  - IUFD
  - Recurrent abortions

Current Pregnancy Hx
- Maternal age
- Gestational age at fetal death
- HPT
- DM/Gestational D
- Smoking, alcohol, or drug abuse
- Abdominal trauma
- Cholestasis
- Placental abruption
- PROM or prelabour SROM
Specific fetal conditions

- Nonimmune hydrops
- IUGR
- Infections
- Congenital anomalies
- Chromosomal abnormalities
- Complications of multiple gestation

Placental or cord complications

- Large or small placenta
- Hematoma
- Edema
- Large infarcts
- Abnormalities in structure, length or insertion of the umbilical cord
- Cord prolapse
- Cord knots
- Placental tumors

2-Evaluation of still born infants

Infant description

- Malformation
- Skin staining
- Degree of maceration
- Color-pale, plethoric

Umbilical cord

- Prolapse
- Entanglement-neck, arms, legs
- Hematoma or stricture
- Number of vessels
- Length

Amniotic fluid

- Color-meconomium, blood
- Volume

Membranes

- Stained
- Thickening
Placenta
- Weight
- Staining
- Adherent clots
- Structural abnormality
- Velamentous insertion
- Edema/ hydropic changes

Investigations
Maternal investigations
- CBC
- BI Gp & antibody screen
- HB A1 C
- Kleihauer Batke test
- Serological screening for Rubella
- CMV, Toxo, Syphils, Herpes & Parovirus
- Karyotyping of both parents (Baby with malformation)
- Hb electrophoresis
- Antiplatelet antibodies
- Thrombophilia screening (antithrombin, Protein C & S, factor V leiden, lupus anticoagulant, anticardiolipin antibodies)

Fetal investigations
- Fetal autopsy
- Karyotype (specimen taken from cord blood, intracardiac blood, body fluid, skin, spleen, Placental wedge, or amniotic Fluid)
- Fetography
- Radiography

Placental investigations
- Chorionocity of placenta in twins
- Cord thrombosis or knots
- Infarcts, thrombosis, abruption,
- Vascular malformations
- Signs of infection
- Bacterial culture for Ecoli, Listeria, gp B strpt.
Management

- Expectant approach: 80% goes into spontaneous labour within 2-3 weeks
- Active approach: b/o emotional burden, risk of chorioamnionitis, and 10% risk of DIC (if >5wks).
- Induction of labour can be initiated at any time.

IUFD complications

- Hypofibrinogenemia ➞ 4-5 wks after IUFD
- Coagulation studies must be started 2 wks after IUFD
- Delivery by 4 wks or if fibrinogen □<200mg/ml

Psychological aspect & counseling

- A traumatic event
- Post-partum depression
- Anxiety
- Psychotherapy
- Recurrence 0-8% depending on the cause of IUFD

Thanks for listening!