Intra-uterine fetal death

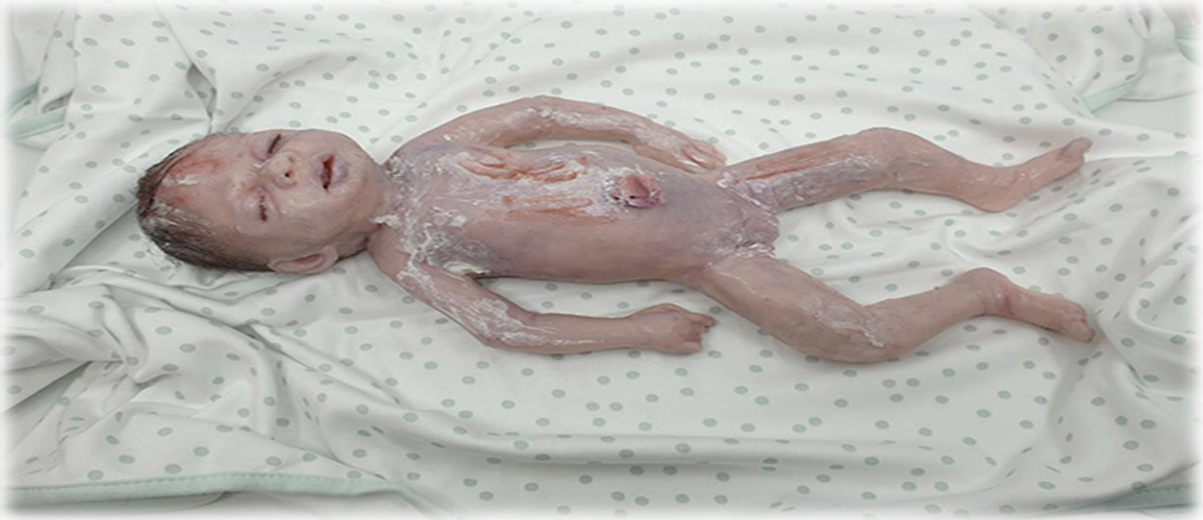
La Medica Academy
Study Smarter Not Harder

Introduction, Etiology, and Risk factors

Diagnosis and Investigations

Management, Complications, and Considerations

Stillbirth

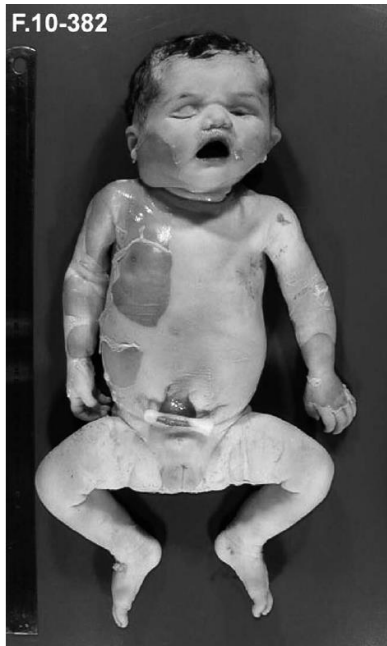


INTRODUCTION:

- **stillbirth refers to fetal death in utero or delivery of a fetus with no signs of life** as indicated by absence of breathing, heartbeat, pulsation of umbilical cord, or definite movements of voluntary muscles
- suggested criteria for definition of stillbirth is ≥ 20 weeks gestation or weight ≥ 350 g if gestational age is unknown[1]

World Health Organization definitions :

- WHO recommends defining stillbirth as a baby both with no signs of life at or after 28 weeks of gestation.
- **Fetal death is define as** : the intrauterine death of a fetus **at any time** during pregnancy.
- **Antepartum fetal death** : is a death that occurs **before** the onset of labor .
- **Intrapartum fetal death**: is a death that occurs **during** labor and thus may not show signs of maceration(Maceration :**skin discoloration or darkening, redness, peeling, and breakdown(enzymatic autolysis)**



United States National Center for Health Statistics definition :

- A **fetal death or loss that occurs after 20 weeks of pregnancy and/or ≥350 grams birth weight, and before or during delivery, with further division in to :**
- **An early stillbirth is a fetal death occurring between 20 and 27 completed weeks of pregnancy.**
- **A late stillbirth occurs between 28 and 36 completed pregnancy weeks.**
- **A term stillbirth occurs between 37 or more completed pregnancy weeks..**

INCIDENCE :

- - Worldwide, the stillbirth rate has been falling from approximately 21.4 deaths per 1000 births in 2000 to approximately 13.9 deaths per 1000 births in 2019 .

- - The reduction has been associated with improved access to antenatal care and skilled birth attendants and increased attention to known maternal risks for stillbirth.

- - Rates of stillbirth in low-income countries have been higher than in high-income countries,with most stillbirths (77 percent) occurring in subSaharan Africa and South Asia

ETIOLOGIES :

- - Stillbirth is the end result of a variety of maternal, fetal, and placental disorders, which can interact to contribute to fetal demise .
- **-The various causes of stillbirth appear to differ between low- and high-income countries ,and between early and late gestation .**

In low-income countries:

the obstructed/prolonged labor, preeclampsia, and infection.

In high-income countries :

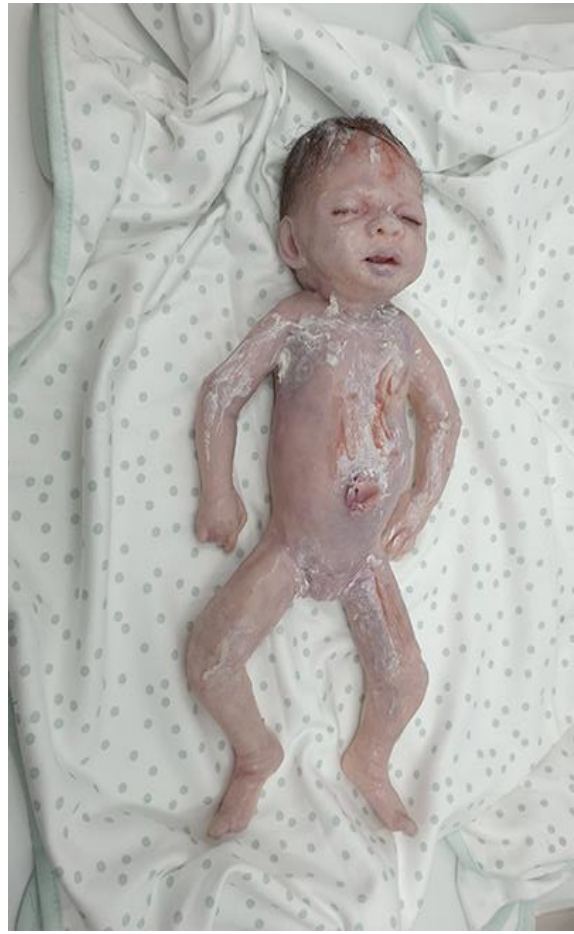
-the congenital or karyotype anomalies
-placental problems associated IUGR
maternal medical diseases

- **-Early gestational fetal mortality appears to be related to congenital anomalies, infections, intrauterine growth restriction, and underlying maternal medical conditions .**

- **-Late gestational fetal mortality appears to be due to both maternal medical disorders and obstetric disorders that generally evolve around the time of delivery, such as placental abruption and previa, cord prolapse, marginal insertion of the umbilical cord into the placenta, other labor and delivery complications, or unexplained cause .**

ETIOLOGIES :

1- Congenital anomalies : 20-50 % of stillborns have a major malformation. This rate varies from country to country and is greatly influenced by the availability of prenatal diagnosis and pregnancy termination .



2- Fetal growth restriction :Death of a growth-restricted fetus is the second most common type of stillbirth .The stillbirth rate in such fetuses is estimated to be 10 to 47 per 1000 live births, and stillbirths increases with increasing severity of growth restriction.

3- Infection : Infection may lead to fetal demise as a result of severe systemic maternal illness (eg, pneumonia).. placental dysfunction due to placental infection (eg, malaria), or fetal systemic illness (eg, *Escherichia coli*, group B *Streptococcus* [GBS], cytomegalovirus [CMV], Zika virus).

Infection accounts for approximately 50 percent of stillbirths in low- and middle-income countries and 10 to 25 percent of stillbirths in high-income countries.

4- Genetic abnormalities : Most aneuploidies are lethal in utero. Some aneuploidies (such as trisomy 21, 18, and 13 and monosomy X) confer an increased risk of fetal demise but can also result in live birth. Although death of a karyotypically abnormal embryo or fetus is most common in the first trimester, it can occur at all stages of pregnancy.

5- Hydrops fetalis : Hydrops fetalis may be due to immune or nonimmune etiologies and is often fatal.

6-Fetal arrhythmia : An unrecognized arrhythmia, such as long QT syndrome, may be a cause of unexplained fetal demise.

7- Abruptio placentae : Abruptio placentae occurs in approximately 1 percent of pregnancies but accounts for between 10 and 20 percent of all stillbirths .

The risk of stillbirth is highest when more than 50 percent of the placental surface becomes separated or when the abruption involves the central aspect of the placenta.

8- Umbilical cord abnormalities : Umbilical cord complications , torsion, stricture, prolapse, single umbilical artery, histopathologic evidence of compromised fetal microcirculation) are often a cause of fetal death in the third trimester .

9- Placental abnormalities : Placental causes of stillbirth include abruptio placentae, ruptured vasa previa ,infection, neoplasm, structural or vascular malformations, vasculopathy, and infarction.

10- Fetomaternal hemorrhage : has been reported in up to 5 percent of stillborns .

RISK FACTORS :

- -They are divided in to maternal and fetal risk factors :
- **A- Maternal factors :**

1- Sociodemographic factors :

- **A- Black race .**
- **B- Younger and older age : The stillbirth rate is lowest for women ages 25 to 34 and higher for teenagers and women ≥35 years of age**
- **C- Parity : increased risk for stillbirth among nulliparous women and parity ≥3 .**
- **D- Adverse social and behavioral factors**

2- Previous stillbirth : Women who experienced a stillbirth in their first pregnancy are three times more likely to experience a stillbirth in their second pregnancy compared with women who had a live birth in their first pregnancy .

RISK FACTORS :

3- Previous adverse pregnancy outcome :Women with a previous preterm birth (PTB) or small for gestational age (SGA) infant are at increased risk of stillbirth in a subsequent pregnancy .

- **4-Comorbid chronic medical disorders :**
- **A- Diabetes :Women with diabetes are at increased risk of stillbirth, particularly at or near term.**
- **B- Hypertensive disorders :Hypertensive disorders are associated with a significant number of stillbirths in low-income countries .**
- **C-Substance use — studies found that any active maternal smoking was associated with increased risks of stillbirth.**

- **5-Acquired and inherited thrombophilias**

RISK FACTORS :

- **6-Obesity** : Risks for fetal death, stillbirth, birth asphyxia, perinatal death, neonatal death, and infant death are all increased in the setting of maternal obesity.

- **7-Intrahepatic cholestasis of pregnancy** : ICP has been associated with an increased risk of stillbirth.

- 8-**Uterine abnormalities** : Uterine rupture is a rare but devastating cause of stillbirth. Structural uterine abnormalities, such as a unicornuate uterus, can be associated with cervical insufficiency, which can lead to previable PTB.

RISK FACTORS :

9-Assisted reproductive technology : Stillbirth rates appear to be slightly increased in pregnancies conceived via assisted reproductive technology.

10 - Other — Other maternal medical disorders that are associated with an increased risk for stillbirth include:

Systemic lupus erythematosus

Chronic kidney disease.

Hypo- and hyperthyroidism.

Sleep-disordered breathing.

RISK FACTORS :

- **B- Fetal factors :**
- 1- **Multiple gestation** — **Fetal mortality increases with increasing number of fetuses: 2.5-fold higher for twins than singletons, 5fold higher for triplets or more . (The increased risk in multiples is due to complications related to monochorionic placentation , (eg, twin-twin transfusion syndrome, twin reverse arterial perfusion sequence)**

- **2- Male sex : Stillbirth is more common among male than female fetuses.**

- **3- Platelet alloimmunization : Severe fetal alloimmune thrombocytopenia can result in intracranial hemorrhage and death in utero.**
- **4-Postterm pregnancy :The perinatal mortality rate at ≥42 weeks of gestation is twice the rate at term, increasing fourfold at 43 weeks and five- to sevenfold at 44 weeks. The absolute rate is estimated to be 14 to 40 per 1000 live births and stillbirths.**

HISTORY AND EXAMINATION:

❖ STILL BIRTH

- **Stillbirth is condition which need full investigation to detect the cause of it in order to prevent any similar outcome in the future .**
- **The investigations starts from full detailed history (where we can detect any of the risk factors which has been mentioned before.**

❖ History:

1) **Maternal age** .(more with extreme ages).
2) **Occupation**. (chemicals exposure , or substance which increase the risk for congenital anomalies ex: lead , synthetic industries.
3) **Blood group**(its found that the rates of having stillbirth fetuses with normal karyotype in couples with blood incompatibility more , and might be more in AB blood group or even fetomaternal bleeding).
4) **Number of parity.** (stillbirth is more with nulliparous and parity >= 3)
5) **History of fetal movement** (any decrease or absence of fetal movement can increase the suspicion of fetal complication which may end up with IUFD which can be considered stillbirth after its delivery).

- **6)If there is regular antenatal care and visits.**
  (to see if there is any tests of findings during these visits which may helps us in detecting the cause or the risk for stillbirth).
- **7) History of current pregnancy.**
  (if there is any complications during this pregnancy noted in the antenatal visits which may include IUGR , any spotting or bleeding which may indicate abruption or fetomaternal crossing if incompatible blood.)

- **8)Maternal medical status**
  (DM can cause sudden fetal death the risk is increased by 5 times than normal females).

- 9) **Post date.** (the fetus continue to grow which can cause many complications ex: placental insufficiency and the risk of still birth increased 64% in babies born after 40-410weeks compared to fetuses born in 37 weeks).

- **10) Having history of COVID-19**. (COVID-19 documented during hospitalization delivery was associated with an increased risk of having a stillbirth)

- **11) History of vigorous physical activity.** (regular light physical activity is associated with lower risk of stillbirth while heavy activity which is indicated by shortness of breath and sweating is associated with higher stillbirth risk.)

- **12) Social history** (smoking , alcohol, low socio-economic status. BMI)

- **13) Any history which may indicated maternal infections.(**history of URTI like fever ,SOB , cough……or malaria symptoms like fever, headache, N/V , hepatospleenomegaly , spleen enlargement , chills and sweating) or signs and symptoms of any other infection.
- **14) Family history** (some new Norwegian studies showed that females with family history of stroke are associated with more risk of stillbirth than others or family Hx for inherited thrombophilia).
- **15) History of previous stillbirth** (is **increase 3times**) .
- **16) History of intrahepatic cholestasis of pregnancy** (in late 2nd and 3rd trimester , no rash and itching in palms and soles , high bile salts levels , may have abnormal LFT).
- **17) History of multiple pregnancies.(** increased placental size and pregnancy complications)

Table 1. Estimated Rate of Stillbirth With Maternal or Fetal Conditions

Condition	Estimated Rate of Stillbirth*
All pregnancies	6.4/1000
Diabetes	
Treated with diet (A1)	6–10/1000
Treated with insulin	6–35/1000
Hypertensive disorder	
Chronic hypertension	6–25/1000
Preeclampsia	
without severe features	9–51/1000
with severe features	12–29/1000
Growth restricted fetus	10–47/1000
Multiple gestation	
Twins	12/1000
Triplets	34/1000
Oligohydramnios	14/1000
Late term pregnancy (greater than 41 weeks)	14–40/1000†
Previous stillbirth	9–20/1000
Decreased fetal movement	13/1000
Systemic lupus erythematosus	40–150/1000
Renal disease	15–200/1000
Cholestasis of pregnancy	12–30/1000
Advanced maternal age	
35–39 years	11–14/1000
40 years or greater	11–21/1000
Black maternal race	12–14/1000
Maternal age less than 20 years	7–13/1000
Assisted reproductive technology	12/1000
Obesity (prepregnancy)	
BMI equal to or greater than 30 kg/m^2	13–18/1000
Smoking greater than 10 cigarettes per day	10–15/1000

*Rate per 1,000 live births and stillbirths

†Data from Rosenstein MG, Snowden JM, Cheng YW, Caughey AB. The mortality risk of expectant management compared with delivery stratified by gestational age and race and ethnicity. Am J Obstet Gynecol 2014;211:660.e1–8.

Adapted from Signore C, Freeman RK, Spong CY. Antenatal testing—a reevaluation: executive summary of a *Eunice Kennedy Shriver* National Institute of Child Health and Human Development workshop. Obstet Gynecol 2009;113:687–701 *and* Fretts RC. Etiology and prevention of stillbirth. Am J Obstet Gynecol 2005;193:1923–35.

❖ ***Notes:***

1) Its noted the causes of stillbirth differ between developing and developed countries.
   - Where in developing countries most of the stillbirth causes is related to preeclampsia and infections die to poor antenatal care and poor hygiene in general .
   - Where in developed countries most of stillbirth is caused by congenital anomalies and karyotype anomalies due to increased maternal age at time of marriage.

Examination and lab tests:

- **The lab tests which need to be ordered for mother with stillbirth is dependent mostly on her medical and obstetric history .**

- **So the approach is guided by the clinical data , timing of the death and whether the fetus was growth restricted or not by the ultrasound measurements.**

Table 15.8 Investigation into perinatal death

Investigations	Reason
Full blood count	Anaemia, leukocytosis
Clotting screen	Disseminated intravascular coagulation
Liver function tests and bile acids	Obstetric cholestasis
Kleihauer test	Fetomaternal transfusion
Virology, infection screen	Cytomegalovirus, parvovirus
Autoantibody screen (anticardiolipin and lupus anticoagulant)	Antiphospholipid syndrome, systemic lupus erythematosus
Placental swab for culture	Infections such as *Listeria monocytogenes*
Blood group antibodies	Haemolytic disease
Toxoplasma antibodies	Toxoplasmosis
HBA1c	Undiagnosed diabetes
Placental pathology	Evidence of infection or vasculopathy
Cytology of placenta	Fetal chromosomal abnormality
Skin biopsy/cardiac blood/placental biopsy	Fetal chromosome abnormalities
Full-body X-ray or MRI	To identify congenital defects

HBA1c, glycosated haemoglobin; MRI, magnetic resonance imaging.

Maternal examination:

1) Vitals (B.pr , temp,).
2) General look (pallor , jaundice , scratch marks)
3) Neck examination.
4) Chest examination (pulmonary edema with PET , pneumonia infection)
5) Abdominal examination. (soft / rigid/ fundal height).
6) Then ultrasound is used to confirm the absence of fetal cardiac activity.

Examination :

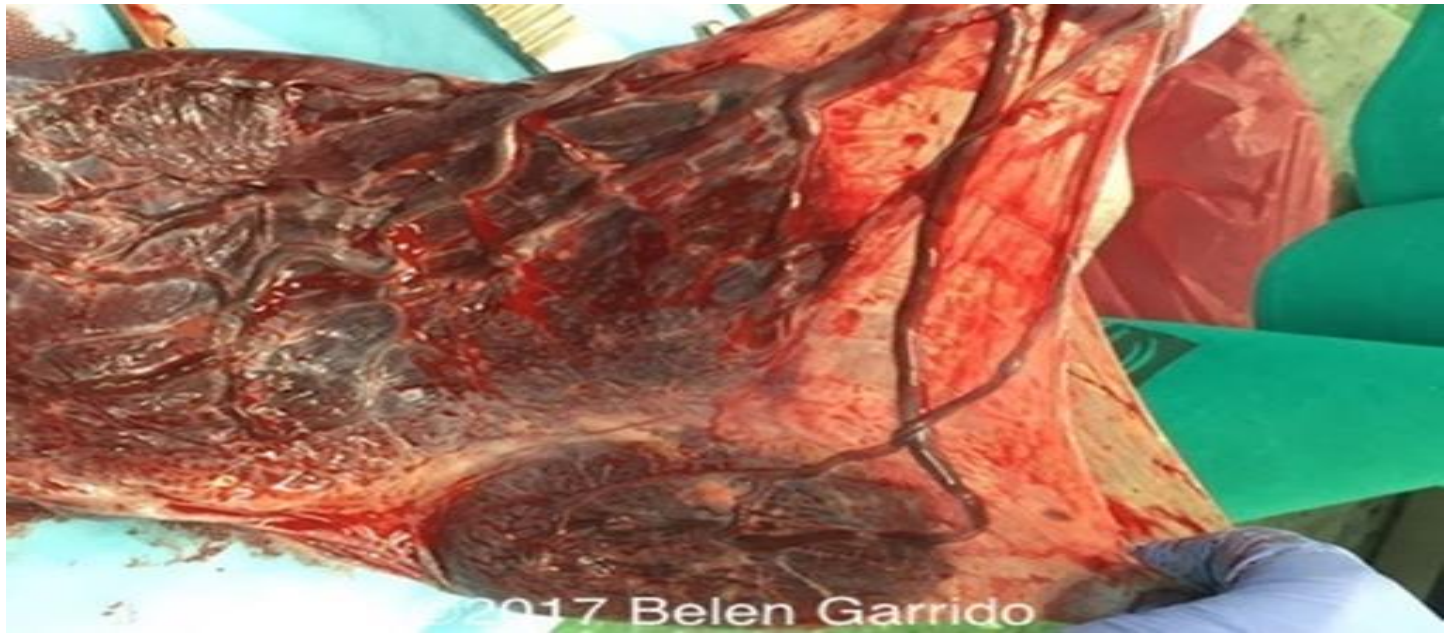
- we should do gross and microscopic examination of the fetus , placenta , umbilical cord and fetal membranes it's the most useful way for evaluation of stillbirth and the most important part of the evolution .

- ## Placental examination:
- **Grossly :**
  - Gross evaluation may reveal conditions such as abruption (hematoma) and vasa previa.

- **Placental size :**

(small size with IUGR , large with DM ,Multiple pregnancy).

- **Placental Weight .**
- **Microscopic detection** : for infection, neoplasm .
- **We can take a swab** from it for chromosomal studies.
- Abruptio-placenta has 8.9 risk for developing stillbirth.

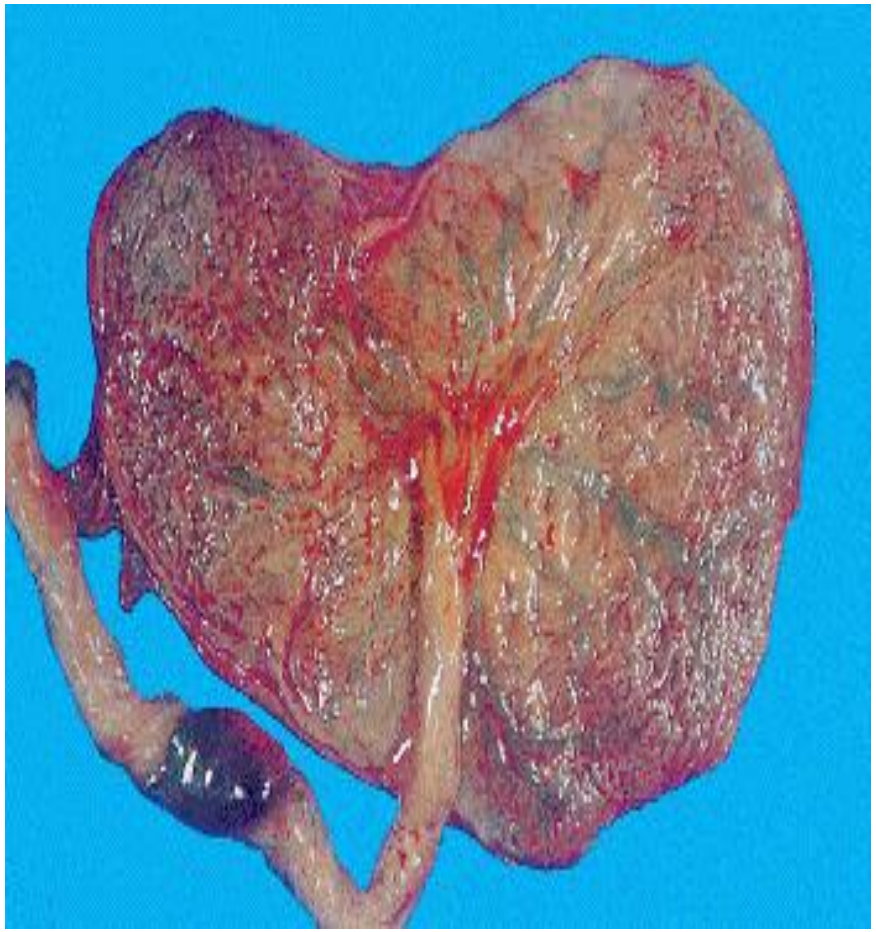


Vasa previa

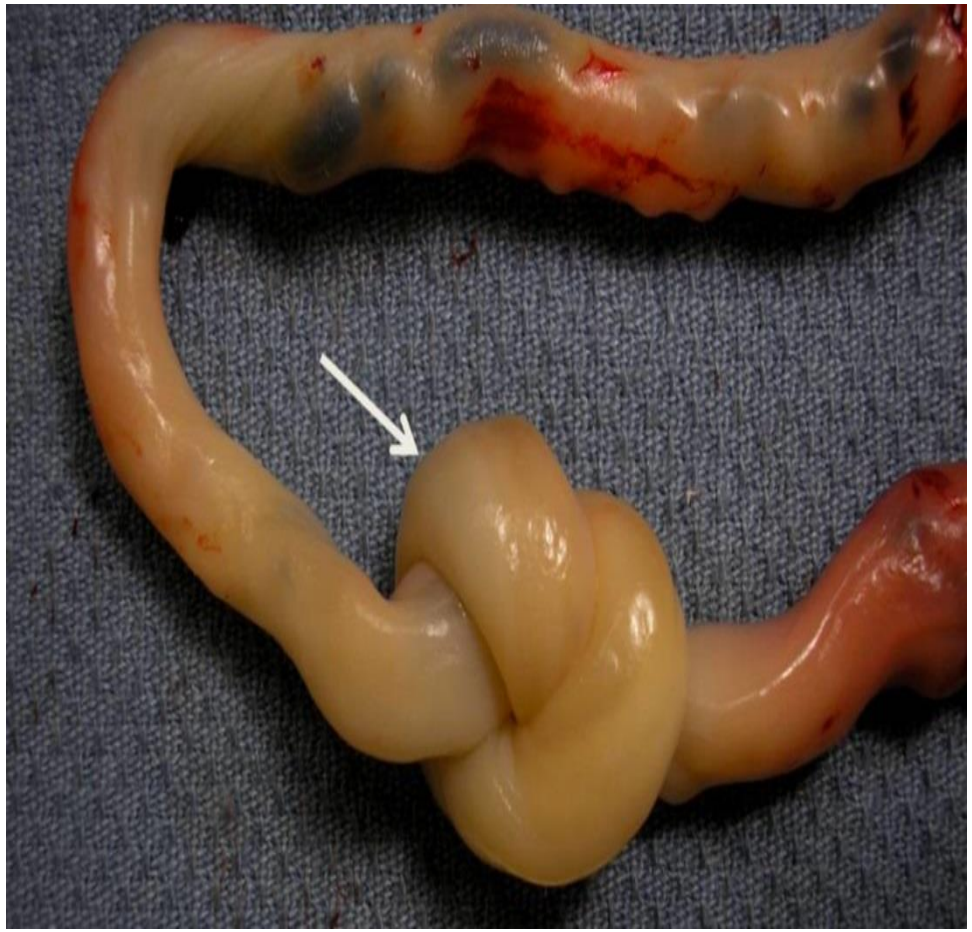
- ***Umbilical cord examination:***

- Detection of any acute umbilical cord accident like **prolapse or true knot**.
- Length of the cord (short or long).
- Number of vessels contained within the cord
- Site of cord insertion.(velamentous umbilical cord associated more with IUGR).
- umbilical cord abnormalities 25% can be associated with live births.

- Or for ant umbilical cord thrombosis.



Umbilical cord thtrombosis



True umbilical cord knot

Abnormal Cord Length

- ***Normal*** cord length is 50-60cm, averagely 55cm
- ***Short cord***: < 35cm is defined as short cord, may lead to fetal distress, placental abruptio, prolonged labour.
- ***Long cord***: > 80cm is defined as long cord, higher occurrence of cord around neck, cord around body, cord knot, cord prolapse and cord compression.

Examination of stillbirth fetus:

- The general examination of the stillborn fetus should be done promptly for noting :

1. **dysmorphic features.**
2. **obtaining measurements** of weight, length, and head circumference
3. **To decide if the fetus is a fresh still birth of a macerated fetus** (> 1-2 days IUFD).
4. **We also need to take a full view photographs** of the baby and a close photos of any abnormalities of unusual features , specially if the genetic studies are hard to be done.
5. **Fetal autopsy** also needed to be done as its considered as the most important method to determine the cause of death for the fetus.

- **It the family refuse doing full autopsy then we can offer other option such as partial autopsy or MRI which can also be very helpful.**
- **Genetic examination** should be done in all cases of stillbirth after taking the parents permission and explaining to them the cause.

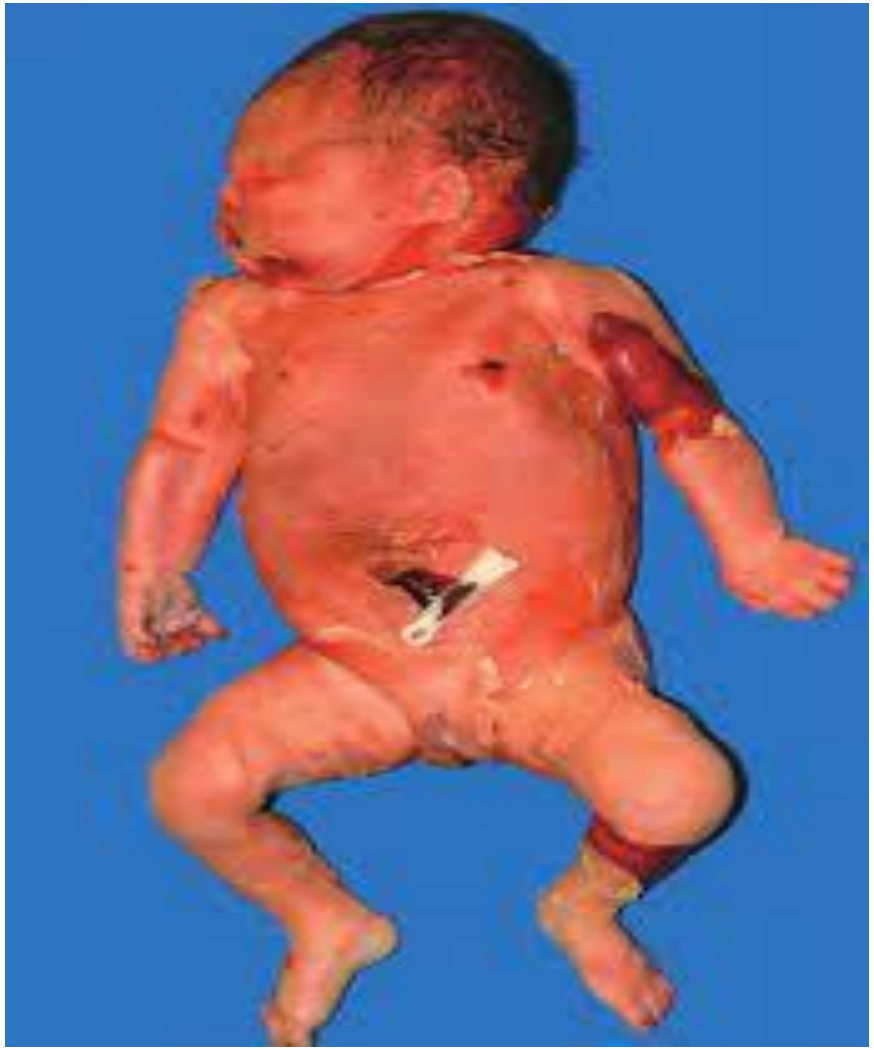
❖ ***Fresh stillbirth:***

✓ Its an intrapartum death so there are no changes on the fetal skin yet.

❖ ***Macerated stillbirth:***

✓ Characterizes by skin peeling which implies an intrauterine death of >24 h prior to the delivery.

Fresh stillbirth



Macerated stillbirth

❖ ***Findings***:

1) **Best determination of anatomic cause of death**.
2) **Congenital anomalies:** no or yes
3) **Dysmorphic features**: if present
4) **Other pertinent fetal findings**: Placenta
5) **full surgical pathology report**
6) **Microbiology results:**
7) **Radiographic findings**
8) **Pertinent negative findings.**

Evaluation of stillbirth baby

1) Photographs:
- ✓ Gross structural abnormality.

2) Radiology :
- ✓ Grossly malformed baby.

3) Karyotyping :
- ✓ Obvious fetal anomaly.
- ✓ IUGR.
- ✓ Family history of abnormal children .
- ✓ Recurrent pregnancy loss.
- ✓ Non immune hydrops fetalis.
- ✓ Potter syndrome.

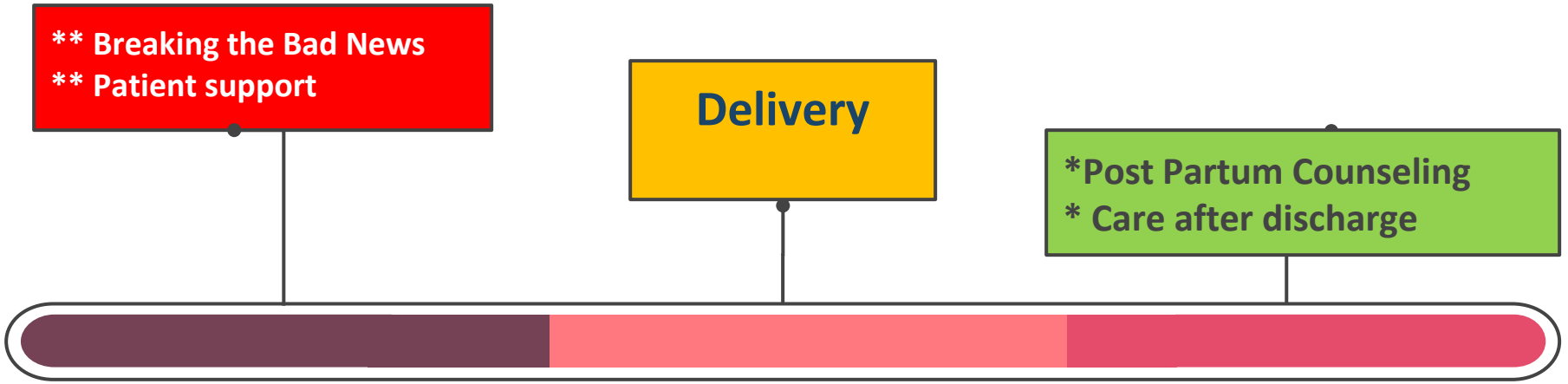
4) autopsy examination:
- ✓ Congenital malformation.
- ✓ Actual cause of death.

First: Break the bad news and support !

- Almost one-half of late fetal deaths occur in apparently uncomplicated pregnancies. Most occur before labor begins, but a minority occur intrapartum.
- Regardless of the timing, most parents are unprepared when told that the fetus has died..
- The family's anticipation of a joyous birth is supplanted by sadness, despair, confusion, and loss, including loss of a desired child, loss of self-esteem as a parent, and loss of confidence in the ability to produce a healthy child
- Psychological sequelae include : **depression, posttraumatic stress disorder, and anxiety, which may adversely affect their relationship and a subsequent pregnancy**.
- Once fetal death has been confirmed , the parent(s) should be informed in person, expeditiously, in an empathetic and straightforward manner, in surroundings where they can react privately. Staying with the patient after delivering the diagnosis, possibly holding their hand, and spending as much time with them as they need, is important

- Supporting parents and creating a trusting relationship can affect how they respond to bereavement

Management of Intrauterine fetal death !



- Communicate in a warm, sensitive, and genuine manner.
- Provide information in understandable lay language, which may need to be repeated.
- Minimize delays in delivering information.
- Be aware of and respect parents' individual and changing emotional needs.
- Discuss timing of induction.
- Discuss what parents can expect (environment for delivery and postpartum care, physical condition of the baby, disposition of the baby).
- Provide options for intrapartum and postpartum procedures and care.
- Treat baby with respect.
- Respect individual preferences about seeing and holding the baby. Seeing the stillborn is validation and evidence of the baby's birth, existence, and death. Not seeing the baby may cause regret for some parents but may be the right decision for others.
- Collect memorabilia for the parents (eg, photographs, hand and footprints, locks of hair, hospital wristbands).
- Provide information about referrals to psychologists, social workers, counselors, and support organizations that the parents can pursue if and when desired.
- Provide information about practical issues, such as lactation, registration of the death and funeral preparation, contraception, when to expect results of testing, and future pregnancies.
- Provide extra support during a subsequent pregnancy, particularly around the time of the previous loss.

Second : Birth (Timing and route)

A)Timing:

*The parent(s) do not have to be rushed into making any decisions about in the absence of maternal medical concerns (sepsis, preeclampsia, placental abruption or membrane rupture)

When the parent(s) have accepted the diagnosis and are ready, a discussion about the timing of, and procedure for, birth can ensue.

*The patient who is a candidate for a vaginal birth should be told that if they are not induced, spontaneous labor begins in the majority of cases within 3 weeks of fetal death.

*Waiting for spontaneous labor to begin is an option and may avoid issues associated with induction; however, waiting also increases the risk of developing coagulation abnormalities, particularly if the dead fetus is retained for several weeks

*10% chance of maternal DIC within 4 weeks from the date of fetal death and an increasing chance thereafter

B)Route: Vaginal delivery unless there are absolute contraindications

Expectant management

- the risk of expectant management for 48 hours is low.
- 10% chance of maternal DIC within 4 weeks from the date of fetal death and an increasing chance thereafter
- Women who delay labour for periods longer than 48 hours should be advised to have testing for DIC **(plt count and fibrinogen) twice weekly.**
- should be advised that the value of postmortem may be reduced and appearance of the baby may deteriorate.

Induction of birth (RCOG)

- ****Un-scared uterus :**
- A combination of mifepristone and a prostaglandin preparation should usually be recommended as the first-line intervention for induction of labour.
- vaginal misoprostol is as effective as oral therapy but associated with fewer adverse effects.
- dose should be adjusted according to gestational age (100 micrograms 6-hourly before 26+6 weeks, 25–50 micrograms 4-hourly at 27+0 weeks or more, up to 24 hours).

- ****woman with a history of lower segment CS:**
- Mifepristone can be used alone to increase the chance of labour significantly within 72 hours (avoiding the use of prostaglandin).
- If single lower segment scar should be advised that, in general, induction of labour with prostaglandin is safe but not without risk.
- If two previous LSCS should be advised that in general the absolute risk of induction of labour with prostaglandin is only a little higher than for women with a single previous LSCS.
- more than two LSCS deliveries or atypical scars should be advised that the safety of induction of labour is unknown.

ACOG and uptodate
Induction Vs Evacuation

- **1) Fetal death before 24 weeks** —
- dilation and evacuation (D&E) is the best option for management if a clinician with appropriate technical expertise is available (A fetal size less than 24 weeks is more important than the gestational age at the time of diagnosis)
- In a retrospective cohort study, D&E between 14 and 24 weeks of gestation was less morbid than induction of labor (lower risk for infection requiring intravenous antibiotic therapy)
- If technical expertise for D&E is not available, induction can be performed.

***Method of Induction before 24 week gestation stillbirth :

- misoprostol with mifepristone.

- The addition of mifepristone appeared to reduce the time interval by about 7 hours compared with published regimens not including mifepristone, but there was no other apparent benefit.
- Misoprostol (PGE1) used in preference to PGE2 because of its equivalent safety and efficacy and lower cost.

2) Fetal death after 24 weeks

- ●**Favorable cervix** : oxytocin.
- ●**Unfavorable cervix** :
- 1.initial dose of 50 mcg misoprostol vaginally

(**If resulted in **effective contractions with cervical changes**: Repeat same dose every 4 hours for a maximum of 6 doses).

(**If it **does not lead to effective contractions or cervical changes within 4 hours** : the second dose can be doubled (100 mcg) and then again to 200 mcg vaginally 4 hours after the 100 mcg dose).

2. Oxytocin can be initiated 4 hours after administration of the last misoprostol dose if needed for further augmentation of labor, especially once the cervix has dilated to 3 to 4 cm.

•The mean expulsion time is 10 to 11 hours, but if expulsion does not occur in the first 24 hours of induction, the misoprostol regimen can be repeated a second time.

- Note: Uterine contraction frequency can be monitored manually; electronic uterine monitoring not used routinely when inducing patients with a fetal demise.
- Adequate contraction : (≥2 contractions in 10 minutes)

- Success has been reported for a wide variety of misoprostol doses, routes of and frequencies of administration The optimum regimen has not been established

After the delivery

- Offer parents choices about viewing and holding their baby and **avoid biasing their choice or making presumptions that limit their choices**. We also offer placing a diaper on the baby and clothing the baby.
- **Discuss autopsy (** A "wrap-up" meeting is scheduled when all results of testing and the autopsy are available, which may take up to several months. However, parents should be informed as progress is made along the way**)**

- **Breast engorgement and physiologic milk secretion :**
- It is essential that the mother be informed about the likelihood of postpartum milk leakage and breast engorgement. Mothers who do not receive this information are more likely to develop anger and other signs of emotional distress. Management options include pharmacological and supportive methods and it depends on patient choice : **Applying ice packs covered in cloth peace, expressing small amount by hand to ease the pain, warm shower to allow breast to leak naturally, donating the milk.** Pharmacological methods: analgesia for pain relief (ibuprofen/paractemol..) or suppressing the milk production by Cabergolin (**Bromocriptine** is no longer recommended as a lactation suppressant in some countries due to several maternal deaths, seizures and strokes.).
- **contact patients regularly after birth and schedule an early first postpartum visit**. Talking regularly with patients during this time, and especially at the first postpartum visit, helps the provider discern their emotional status, whether signs of depression are present, and whether professional referral is indicated.
- Support groups may be helpful for some parents

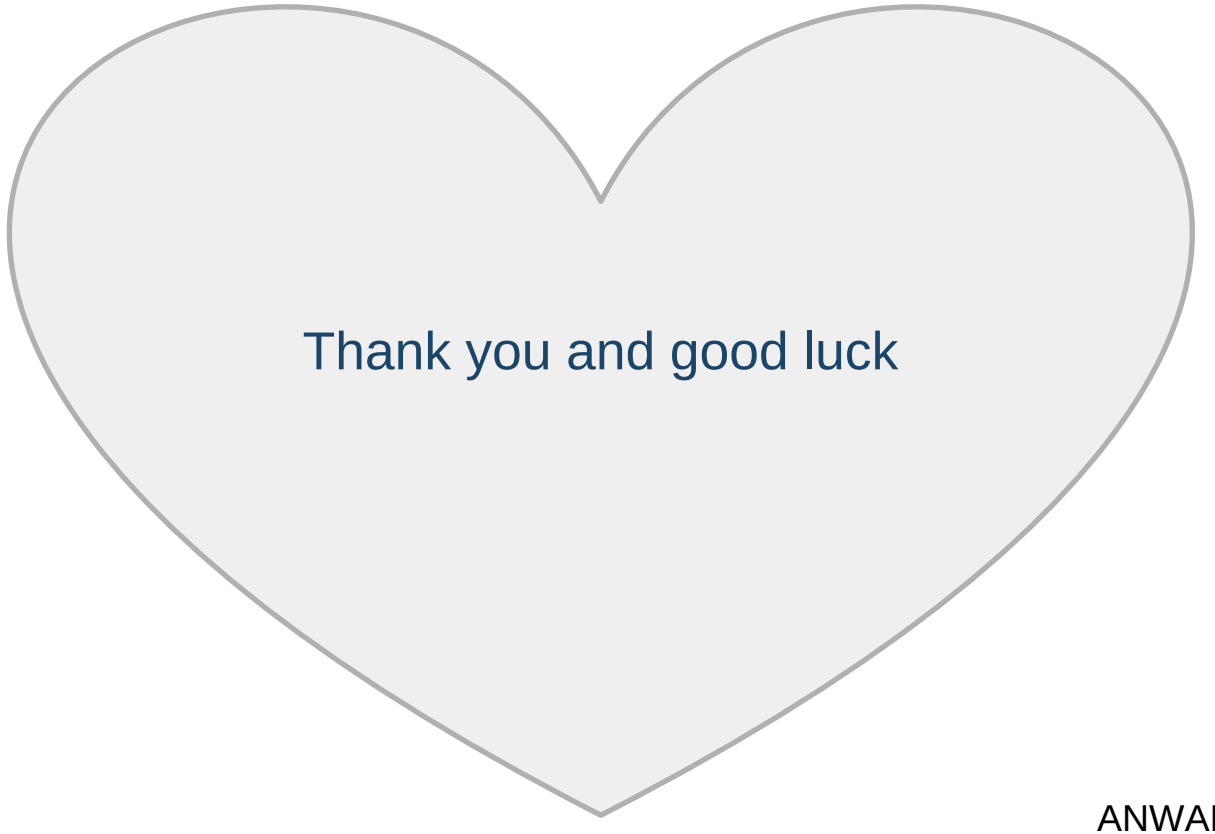
Risk of Stillbirth Recurrence Counseling and subsequent pregnancies

- Patients **who experience a stillbirth are almost 5 times more likely to experience a stillbirth in their next pregnancy** than those who had a live birth. However, an individual patient's recurrence risk of stillbirth is affected by multiple factors, including maternal risks, gestational age, and characteristics of the stillbirth.

- For stillbirths associated with specific conditions, such as hypertension or diabetes, the fetal surveillance should be part of the recommended management guidelines for such conditions.
- **For patients with a previous stillbirth at or after 32 weeks**, once or twice weekly antenatal surveillance is recommended at 32 weeks or starting at 1–2 weeks before the gestational age of the previous stillbirth.
- For prior stillbirth that **occurred before 32** weeks of gestation, individualized timing of antenatal surveillance may be considered.

- 1.Correct about perinatal mortality:
  A. It includes all infant death
  B. It includes all neonatal death
  C. It includes all stillbirths
  D. It includes deaths per 100 births
  E. It includes all 2nd trimester miscarriages

- Some identifiable causes of stillbirth include all of the following EXCEPT:
  a. Maternal hypertension
  b. Isoimmunization
  c .Previous cesarean section
  d. Cord accidents
  e. Chromosomal abnormalities



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