

Pregnancy & delivery and abortion

Medico legal aspects



The most common causes of death associated with pregnancy, in order of frequency are:

Hemorrhage.

Pregnancy induced hypertensive complications.

Infection.

Amniotic fluid embolism.

Abortion.

Deaths associated with surgical and anesthetic procedures.



Diagnosis of pregnancy

▣ Medico legal **reasons** for diagnosis of pregnancy:

1. **Divorce** :

For husband : **accuse** his wife by adultery as become pregnant and he is sterile.

For wife : **alleges** pregnancy after divorce to get alimony.

2- **inheritance**: when widow allege pregnancy .
Disposition of property is postponed.



Diagnosis of pregnancy

- ▣ 3- **allegation of rape**: pregnancy after rape increase compensation of victim.
- ▣ 4- **allegation of abortion** after a quarrel : pregnancy test is still +ve after abortion.
- ▣ 5- **infanticide**: proving that mother was recently pregnant.
- ▣ 6- **capital sentence** (female execution) : proved pregnancy postpone execution until end of lactation.



Diagnosis of pregnancy

a. Presumptive signs:

1. Suppression of menstruation.
2. Morning sickness.
3. Sympathetic disturbances.
4. Pigmentation of skin.
5. Urinary disturbances.



a. Probable signs of pregnancy:

-The breast: enlarged breasts, dark areola with appearance of secondary areola and Montgomery's follicles.

- Abdominal wall: enlarged abdomen with appearance of linea nigra in the middle line and Stria gravidarum on the sides due to distension and tearing of subcutaneous tissues.

- Vulva: dark pigmentation of vulval mucosa.

-Vagina: it becomes warm with pulsation and excess mucus secretion and transformation of its pink colour to dark violet.



The cervix:

Softening of the lower segment of cervix (cervical os).

Excessive secretions and presence of cervical mucus plug

Velvety sensation of mucosa.

The uterus:

Braxton Hick's sign: Braxton Hicks contractions are sporadic uterine contractions that start about 6 weeks

Uterine soufflé: refer to a sound heard on auscultation of the gravid female.

Enlarged uterus, which increases gradually in relation to period of pregnancy.



Diagnosis of pregnancy

Biochemical method

Gravindex test

Pregnancy kit test

Depend on presence of human chorionic gonadotropin(HCG) in urine

Become +ve after 2 weeks of missed period.

Clinical methods

+ve by end of 4th month (20 weeks)

Inspection: fetal movements.

Palpation : fetal parts

Auscultation : fetal heart sounds (120 beats/ min tic-tac rhythm

Ultrasonography: (best)+ve in first month and give data about presentation and age , number and any malformation of fetus.



Delivery

Definition

Labor is the process by which a viable fetus, placenta and membranes are expelled through the birth canal. Fetal viability varies between different countries and different centers, from 20-28 weeks gestation.

Medicolegal importance of diagnosis of delivery:

Inheritance: when a widow alleges delivery of an infant to inherit.

In charges of infanticide or concealment of birth: to show that the woman had recently been delivered.

Interchanging of infants: in maternity hospitals.



Diagnosis of delivery

1- general signs:	fatigue - rapid weak pulse- pallor
2- breast examination:	Swollen - firm. Darken areola and nipple. Containing colostrum.
3- abdominal examination:	Abdomen is lax. Show stria gravidarum.
4- external genitalia: Vulva and perineum.	<ul style="list-style-type: none">- Dilated and lax vulva.- Ruptured fourchette.- Perineal tear or episiotomy.
5- internal genitalia:	
A- vagina	Lochia: vaginal discharge which is bloody in first 5 days then yellow in next 5 days and disappear after 2 weeks.



B- cervix:
External os examination

1-Dilated : immediately: admit 2 fingers.
After 1 week : admit one finger
After 2 weeks: completely closed.
2-The cervix may show tears.

C- uterus:
Fundal level : felt as hard globe

Immediately: 2 fingers above umbilicus.
After one week : midway between umbilicus and symphysis pubis.
After two weeks: just above symphysis pubis.



Breast changes and stria gravidarum



Old delivery

-Breast changes subside, but the nipple darkening may persist.

-Abdominal changes, the striae become white scars (linea albicans).

-External genitalia: there may be vulval or perineal scars. The labia are swollen with rupture of the fourchette. The remnant of the hymen, its remnants either vanish or remain as small ones (carunculae mytriformes).

-The cervix:

In the parous woman, the cervix may show a scar of old tear, the external cervical os is transverse (slit-shaped), and the cervical mucosa is smooth having no arborvitae.

Nulliparous, the cervix of nullipara has no scar, the external cervical os is round, and the cervical mucosa is thrown into folds having an arborvitae appearance.



abortion

Definition of abortion: evacuation of gravid uterus contents and termination of pregnancy **before the time of viability of fetus.** (28 weeks of pregnancy).

Why abortion cases must be examined

- 1.Deaths following an abortion: all should be reported to the police.
- 2.A woman alleging an abortion after a blow in a quarrel.
- 3.A woman concealing abortion after being charged with it.
- 4.A woman alleging physicians, midwives, nurses, lay persons, or the woman herself with abortion.



Types of abortion

Spontaneous abortion	Induced abortion	
	Therapeutic abortion	Criminal abortion
<p>Pregnancy terminates spontaneously due to presence of a cause incompatible with pregnancy.</p>	<p>Induction of abortion by a doctor for saving life of mother.</p>	<p>Induction of abortion for any reason other than saving life of mother.</p> <p>This may be induced by a doctor, a nurse, lay abortionist, or woman herself.</p> <p>If done by doctor or nurse it's considered professional offense and ground for withdrawal of their license.</p>



Spontaneous abortion

Causes

1- maternal causes:

A- general causes: as hypertension and chronic nephritis.

B- local (uterine) causes : adhesion.

2- fetal causes : as vesicular mole or congenital anomalies.

Spontaneous abortion represent 10 % of all abortion .

Therapeutic abortion

Indications

Disease causing danger on mother life

1- disease aggravated by pregnancy: as heart failure or chronic renal failure.

2- disease of pregnancy: as eclampsia , hyperemesis gravidarum or sever antepartum hemorrhage

Methods

1- in first trimester: D and C operation.

2- in second trimester: abdominal hysterotomy.



Criminal abortion

- ▣ **Definition** : as before.
- ▣ **Methods** of induction of criminal abortion.
- ▣ **Dangers**(complications) of criminal abortion.
- ▣ **Diagnosis** of abortion.



Methods of induction of criminal abortion

General violence	Local violence	Abortifacient drugs
<p>Uncommon but may occur in mothers with irritable uterus by blow to abdomen in a quarrel or lifting a weight or cycling.</p>	<p>1- introduce foreign body to rupture membrane as kitting needle or cotton stick (may cause laceration of cx or uterus . 2- introduce irritant plug as arsenic or mercury to irritate uterus (may cause poisoning). 3- introduce douche (forcible flushing of uterus by irritant solution of iodine or Lysol) may cause vagal shock or embolism. 4- doctor use D and C operation. May cause vagal shock , hemorrhage or embolism.</p>	<p>Drugs used to induce abortion but it's successful in abortion only when used in large dose(cause poisoning). 1- ecbolic: cause direct stimulation of uterine contraction. As ergots , prostaglandins and oxytocin. 2- emmenagogues: drastic purgatives (causing diarrhea) causing indirect uterine contractions after affecting colon as castor oil, croton oil and colocynth. 3- local abortifacient : as k permanganate causing cx ulceration and vaginal bleeding.</p>



Dangers of criminal abortion

early				Late (infection)
shock	hemorrhage	embolism	poisoning	From using unsterile instruments
<p>1- neurogenic(vagal) from douching and dilatation.</p> <p>2- hypovolemic : from hemorrhage</p>	<p>May be</p> <p>1- primary : from perforation (intraperitoneal) or placental separation(intrauterine).</p> <p>2- secondary: Due to uterine sepsis causing dislodgement of formed clot.</p>	<p>1- air embolism</p> <p>2- amniotic embolism.</p> <p>from douching and curettage.</p>	<p>From abortifacient drugs and local irritant bogs of arsenic and mercury.</p>	

