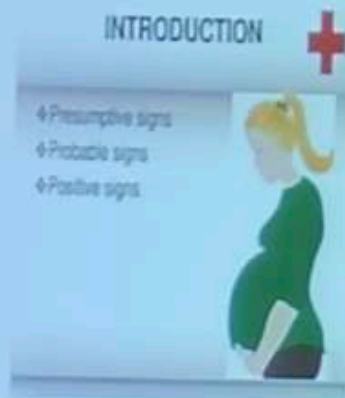


Introduction

Diagnosis of early preg is based primarily upon laboratory assessment of human chorionic gonadotrophin (hCG) in urine or blood

Ultrasound is also an accurate method of diagnosis



Dating a pregnancy

- Also known as **Gestational age**
- From the day of the last menstrual period (LMP)
- 9 months & 7 days
- 280 days
- 40 weeks

Expected date of delivery (EDD)

- Calculated by the date of LMP, counting forwards 9 months & adding 7 days in a 28 day cycle
- If the cycle is longer than 28 days, add the difference b/w the cycle length & 28 to compensate
- Gestational calendar wheels

Symptoms of pregnancy

Cessation of menstruation

Subjective symptoms

Morning sickness

Irritation of breasts


Nausea & vomiting

Fatigue

Increase in frequency of micturition

Signs of pregnancy

BREASTS: Fullness



Areola pigmentation

Montgomery's
tubercles,
hypertrophied
sebaceous glands

FACE: Brown
pigmentation, mask
usually patchy
(cholasma)

Diagnosis in the first trimester (first 12 weeks)

Symptoms:

- ❖ 1. Cessation of menstruation (missed period)
 - Due to increase in estrogen & progesterone production by corpus luteum
 - HARTMAN'S SIGN/ PLACENTAL SIGN
 - Slight bleeding at the expected time of menstruation, occurs rarely in first 3 mnths. Scanty
 - Shouldn't get confused → with threatened abortion

❖ 2. Morning sickness: 50% of cases

- Usually follow ~~seen~~ after the missed period
- Nausea/vomiting esp. in the morning on rising from bed
- Usually disappears after the 3rd month

❖ 3. Frequency of micturation:

- Due to congestion of the bladder mucosa, irritation of bladder by preg. Uterus
- Resting of the bulky uterus on the UB, anteverted position
- Change in maternal osmoregulation- increase in thirst & polyuria
- Usually disappears after the 3rd month

❖ **4. Breast symptoms:** Enlargement, heaviness, discomfort, pricking sensation--> 6th to 8th week

❖ **5. Appetite change:** craving for certain foods & refusal for some

❖ **6. Fatigue:** Sleepiness

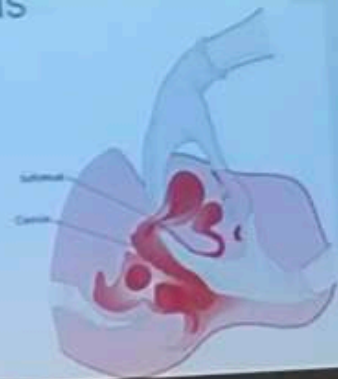
Objective signs

1. Breast signs: Evident in Primigravida - 6-8 weeks

- Increase in size & vascularity- dilated visible veins
- Increase pigmentation of nipple & areola, secondary areola
- Montgomery tubercles appear in areola- dilated sebaceous glands
- Expression of colostrum- (thick yellow secretion) as early as 12 weeks

2. Uterine sign: Felt by bimanual examination:

- Size: Enlarged
- Consistency: soft
- Shape: globular
- Uterus remains a pelvic organ upto 12 weeks, felt just per abdomen as a suprapubic bulge
- Hegar's sign of pregnancy:
 - Bimanual palpation of soft uterine isthmus b/w the cervix & the body
 - Cystic sensation of uterus by 8 weeks



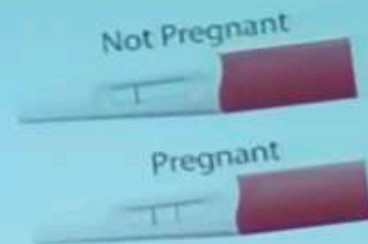
Pelvic changes

- **Jacquemier's sign:**
- Dark bluish discolouration of mucous membrane of vagina
- **Leukorrhoea:** Increase in vaginal discharge

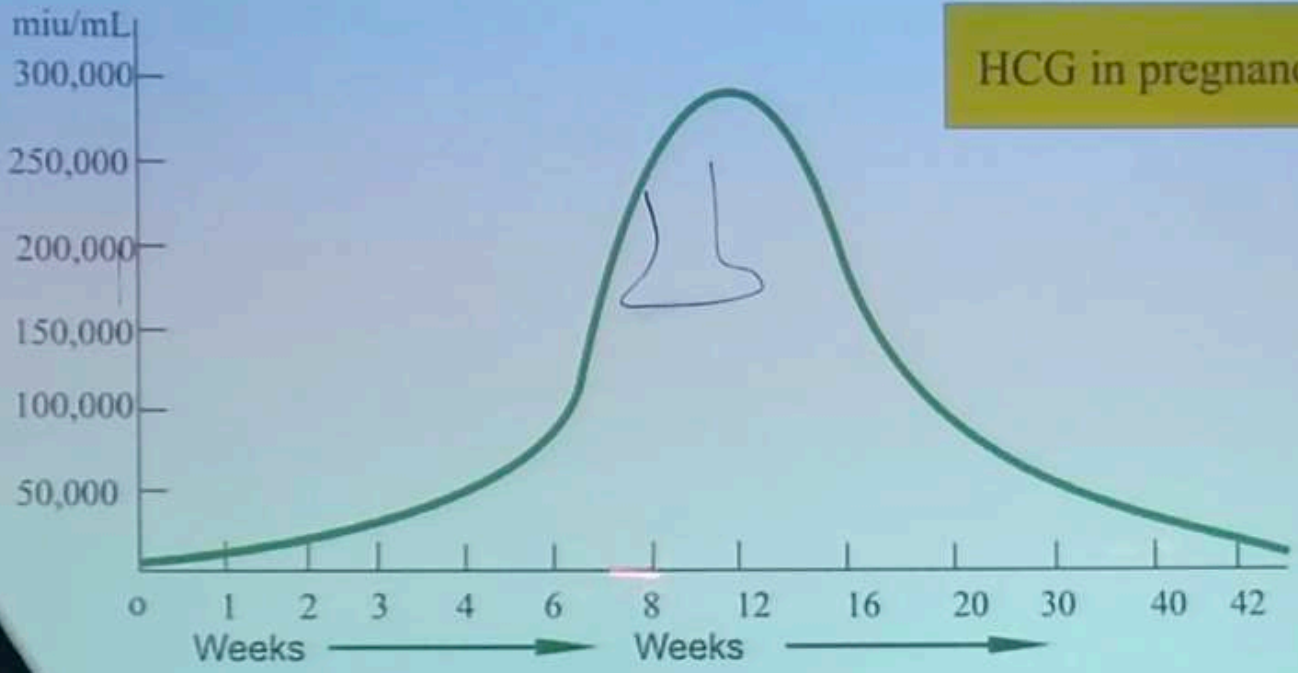
Immunologic al tests

1. HCG:

- This hormone is released by the trophoblastic tissue produced by the growing fetus & placenta
- Detection of HCG in the maternal serum or urine evident only 8-10 days after conception
- Detectable in the serum of approx. 5% of pts. 8 days after conception & more than 98% of pts. by day 11
- Levels peak at 10-12 weeks gestation & then plateau before falling



HCG in pregnancy



Ultrasound

2. ULTRASOUND:

- Intradecidual gestational sac is identified as early as 29-35 days of gestation
- Gestational sac & yolk sac – 5 menstrual weeks
- Fetal pole & cardiac activity – 6 weeks
- Embryonic movements – 7 weeks
- Number of fetuses
- To establish dates
- Doppler effect of USG can pick heart rate reliably by 10th week



**Diagnosis in
the second
trimester
(13-28
weeks)**

Symptoms:

- 1. Amenorrhea
- 2. Morning sickness & urinary symptoms gradually decrease
- 3. Quickening: perception of fetal movements by the preg. Woman
 - a. 18-20 weeks—In primigravida
 - b. 16-18 weeks -- In multipara
- 4. Abdominal enlargement

Inspection:

LINEA NIGRA:

- Extending from the pubic symphysis to ensiform cartilage
- 20 th week



STRIAE:

- (Both pink & white) visible in the lower abdomen more towards the flanks



Abdomen

ABDOMEN:

Linea nigra: brown or black pigmentation, stretching of collagen & elastin

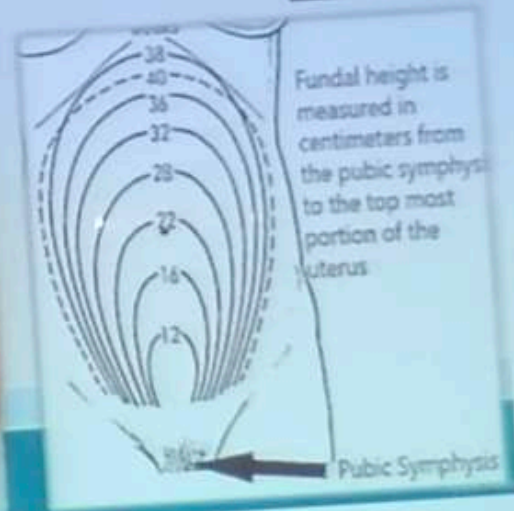
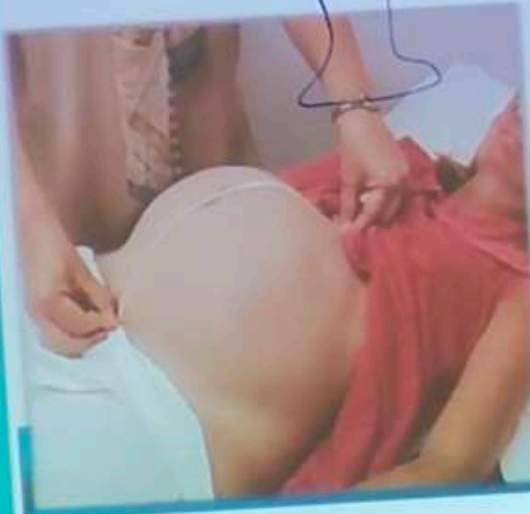
Striae gravidarum: stretch marks, red or purple during preg. Turns on to white after preg

Situated in the lower abdomen, breasts, thighs & buttocks

Palpation: uterus is palpable at 12 weeks of gestation

Palpation

- PALPATION:
 - Fundal height – increased with progressive enlargement of the uterus.



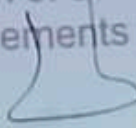
Palpation

- Uterus is abdominally felt (ovoid) feels soft & elastic
- **BRAXTON HICKS CONTRACTIONS:** Intermittent painless contractions detected by abdominal examination
- Active fetal movements can be felt at intervals by placing the hand on the uterus as early as 20 weeks



Abdominal exam.

- External ballotment: Elicited at 20th week by abdominal examination
- Palpation of the fetal parts & palpation of fetal movements by obstetrician by 20 weeks



Auscultation

- Auscultation of fetal heart sounds as early as 20-24 weeks by Pinnard stethoscope



torniquet to auscultate
heart sounds

Investigations

SONOGRAPHY: At 18-20 weeks permits a detailed survey of fetal anatomy, placental localisation & integrity of cervical canal

- **FETAL ORGAN ANATOMY:** to detect any malformation
- **FETAL VIABILITY:**

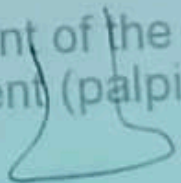
anomaly scan



Diagnosis in
the 3rd
trimester (29-
40 weeks)

Symptoms:

dyspnea as diaphragm
moved upwards

- Amenorrhea persists
- Enlargement of the abdomen- leading to discomfort to the patient (palpitation or dyspnea following exertion) 
- LIGHTENING: 38 weeks
- Sense of relief of pressure symptoms d/t engagement of the presenting part
- Frequency of micturation reappears *micturition as head decended in pelvis*
- Fetal movements are more pronounced

Signs

Signs:

- Cutaneous changes are more prominent with increase pigmentation & striae
- **UTERINE SHAPE:** from cylindrical to spherical beyond 36 weeks
- **FUNDAL HEIGHT:** at the level of ensiform cartilage at 36 weeks
- Comes to 32 week level at 40 th week because of engagement of the fetal part

Symphysio-fundal height

SFH: Upper border of the fundus located by the ulnar border of the left hand & point is marked

- Distance b/w the upper border of symphysis pubis upto the point marked is measured in cms.
- After 24 weeks the SFH in cm. corresponds to the number of weeks upto 36 weeks
- Braxton hicks contractions: more evident
- Fetal movements: easily felt

▪ Palpation of the fetal parts & their identification becomes much easier *as baby size is larger now*

▪ F.H.S-- heard distinctly

▪ **SONOGRAPHY:**

▪ Fetal growth assessment-- Can be made more accurate

▪ Amniotic fluid volume assessment—For oligohydramnios /polyhydramnios

abdominal circumference is measured for fetal weight assessment

oligohydramnios is dec amount of amniotic fluid and polyhydramnios is inc amniotic fluid esp in GDM

Differential diagnosis

- Uterine fibroid
- Cystic ovarian tumour – (Amenorrhea is absent, firm, hard positive sign absent, USG)
- Distended urinary bladder—catheterization solves the problem
- Haematometra
- Pseudocyesis

Important definitions

- Gravid
- Parous
- Primigravida
- Multigravida
- Grand multiparous

primigravida is first baby
nulliparous is no baby present

multigravida is numerous babies

more than 5 children is grand multiparous

TABLE 134-4**INFECTIOUS AGENTS ASSOCIATED WITH THE DEVELOPMENT OF LYMPHOID MALIGNANCIES**

Infectious Agent	Lymphoid Malignancy
Epstein-Barr virus	Burkitt's lymphoma Post-organ transplant lymphoma Primary CNS diffuse large B-cell lymphoma Hodgkin's lymphoma Extranodal NK/T-cell lymphoma, nasal type
HTLV-1	Adult T-cell leukemia/lymphoma
HIV	Diffuse large B-cell lymphoma Burkitt's lymphoma
Hepatitis C virus	Lymphoplasmacytic lymphoma
<i>Helicobacter pylori</i>	Gastric MALT lymphoma
Human herpesvirus 8	Primary effusion lymphoma Multicentric Castleman's disease

Abbreviations: CNS, central nervous system; HIV, human immunodeficiency virus; HTLV, human T-cell lymphotropic virus; MALT, mucosa-associated lymphoid tissue; NK, natural killer.