RAMA UNIVERSITY

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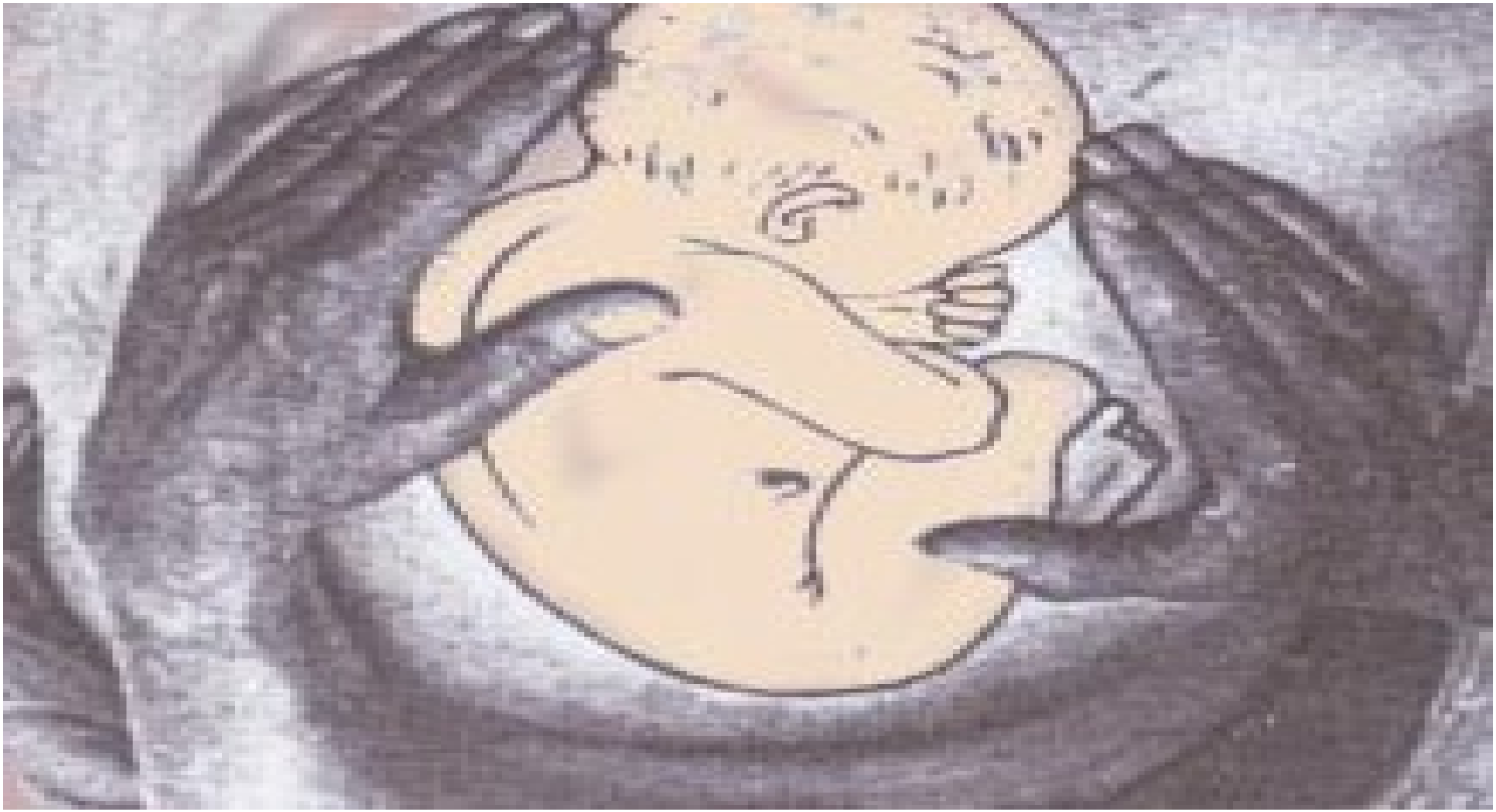
FACULTY OF NURSING

TOPIC

ANTENATAL ASSESSMENT



Antenatal assessment

- Antenatal care is defined as the systematic examination and advices given to the pregnant women at regular and periodic intervals based on the individual needs starting from the beginning of pregnancy till delivery. Antenatal examination is carried out whenever a woman visits the clinic for antenatal check up.

- Quality antenatal care and monitoring is very essential to diagnose and treat maternal disorders that preexist or develop during pregnancy.

- **Aims of Antenatal Care**

i) Ensure normal pregnancy with healthy baby and mother.

ii) Monitor the progress of pregnancy by conducting regular examination

iii) Prepare and encourage the pregnant woman and her family to have a healthy psychological adjustment to child bearing.

iv) Prevent and detect any complication at the earliest and provide care as required.

v) Provide need based health education an all aspects of antenatal care and importance of planned parenthood.

vi) Prepare the mother for confinement and postnatal care and child rearing.

Components of Antenantal Care

- Setting up antenatal clinic with all essential facilities.
- Registration
- History taking
- Investigations
- Antenatal examination
- Abdominal examination (obstetric examination)
- Vaginal examination
- Health education on various aspects of (family centred maternity care.

Articles Required for Antenatal Examination

- Examination Table-if in the clinic or on the bed at home
- Draping sheet
- Screen or curtain
- Urine testing articles and bottle for specimen
- Temperature tray
- Weighing scale
- BP apparatus
- Kidney tray
- Paper bag
- Torch
- Stethoscope
- Tape measure

The place where you would provide antenatal care should be clean, well ventilated and properly lighted.

- **History Taking**

Registration: The women should be registered after confirming that she is pregnant (possibly). Afterwards midwife will carryout the following:

- 1) Identification data — age, marital status, education, occupation, family composition, housing etc. The data includes complete soicio-cultural and economic background of the client and her family.

2) Reason(s) for visiting the clinic.

3) History taking:

a) Surgical history:

- history of any operation,
- injury or accidents,
- history of blood transfusion, etc.

b) Family history:

- both maternal and paternal history of breech delivery,
- twin delivery,
- hypertension,
- heart disease,
- diabetes, and
- congenital malformation

c) Personal history — health habits like smoking, drinking, drugs or any other past medical history

- History of heart disease any disease since childhood like rheumatic fever,
- pulmonary disease,
- convulsions,
- allergies,
- renal disease,
- diabetes, etc.

d) Menstrual history:

- age at first menstrual period,
- last menstrual period date,
- duration of each period,
- any complaints like dysmenorrhoea,
- amount of blood flow

e) Obstetrical history—

- gravid para

i) past obstetrical history nature of pregnancy (preterm full term)

- labour
- puerperium — (normal/afebrile)
- new born sex, healthy

ii) age at first pregnancy

- present pregnancy — any specific health problems

Investigations

— Urine — Albumin and sugar every visit (Refer Skill Bag Technique)

— Blood — Hb testing on every visit, once a month to exclude anaemia.

- Normal Hb 10-12 gm %

— Blood group

— VDRL for syphilis done on the first visit

— HIV test for high risk groups

— Ultrasound- To be done if indicated (If sending for an ultrasound make sure bladder is full)

- TORCH Test – To rule out the following infections (in selected cases)
- **T :** Toxoplasmosis
- **O :** Other Viral infections
- **R :** Rubella
- **C :** Cytomegalovirus
- **H :** Herpesvirus

Physical Examination

- This includes complete systematic examination of each system and assessing its function.
- Physical measurements include:
- Height Make the woman stand against the wall and measure the height.
- Average height of an Indian woman is 145-150 cms. Height
- indicates the pelvic size.
- Weight checking should be done at each visit. Obesity can lead to risk of gestational diabetes. Average weight of an Indian woman in the age group of 25-30 yrs is 60 kgs.

- During pregnancy the weight increase in the:
- First trimester — 1 kg.
- Second trimester and Third trimester — 5 kg. (2 kgs. a month)
- Total weight gain during pregnancy is approximately 11 kgs.
- The total weight gain during pregnancy indicates the birth weight of the child
- A higher than normal increase in weight indicates early manifestation of toxemia.
- Stationary weight for some period of pregnancy suggests intrauterine growth retardation or intrauterine death.

- Poor weight gain also indicates foetal abnormality.
- Blood pressure Blood pressure should be recorded during each visit. Any reading above 140/90 should be reported.
- Vital signs Temperature, pulse, respiration to be recorded in each visit

Head and Toe Examination

- Complete systematic examination from head to toe.

i) Hair and Scalp — healthy or infection

ii) Eyes

— Observe the color of the conjunctiva – yellow, pink or normal.

— Sclera – normal, yellow tinge suggest anaemia

— Infection, discharge

iii) Mouth

— Hygiene

— Gums and teeth — healthy, cavities, infection

iv) Ear, Nose and Throat -— Healthy, enlargement or infection.

v) Breast changes—Normal changes during pregnancy

3-4 wks — Pricking and tingling sensation

6 wks — Enlarged, tense, painful

8 wks — Bluish surface, veins visible

8-12 wks— Montgomery glands become prominent on the areola

16 wks — Colostrum can be expressed

vi) Abdomen — Palpate for liver or spleen enlargement or any other abnormality

vii) Skin — Observe for any scar or infection

viii)Extremities — Upper: Check hands, color of nails-pink or pale, shape of nails

Lower : Any pain, tenderness, varicose veins, presence of oedema

ix) Back and Spine:

— Observe the back and spine for any deformity

— Observe the symmetry of the rhomboids of Michaelis which is a diamond shaped area formed anteriorly by the fifth lumbar vertebra laterally by the dimples, of the superior iliac spine and posteriorly by the gluteal cleft.

PROCEDURE FOR EXAMINATION

- **Physical Examination**
- Collect all required articles
- Keep room ready — adequate light
- Privacy
- Warm or as per season
- Prepare the mother explain the procedure
- ensure that the bladder is empty
- give a comfortable and relaxed position
- Stand on the right side of the woman or the examination table
- Collect relevant history which includes identification data, socio-economic data, cultural, medical, surgical, family and personal history

- Collect information about previous pregnancies and the present one and record in the performa or the card
- Drape the mother and provide enough privacy by curtain or screen
- Do a thorough physical examination from head to toe and record the findings and also record on Bowel and bladder habits
- Any complaints related to pregnancy or minor ailments
- Explain and assist in routine investigation like urine, stool or blood.

Abdominal Examination

A thorough abdominal examination of pregnant woman helps to determine the lie, presentation, and position of the foetus.

- General Instructions to be kept in mind during abdominal examination:
- Make your hands warm before examining
- Explain the procedure
- Touch the abdomen lightly to reduce reflexive reaction
- Explain the woman to lie down in dorsal position with thighs slightly flexed with upper part of the body supported by a small pillow and expose the abdomen fully

- Do systematic examination-inspection followed by palpation and finally auscultation
- Keep the fingers together and use the palms surface of the fingers
- Use smoothly applied pressure to palpate the returns
- Palpation should be continuous i.e. do not lift your hand till the whole palpation is done.
- Follow the four sequential steps of palpation (Leopolds manouever). This will help you to gain and improve accuracy of your findings manouever.
- Do not press hard with the fingers as it is painful.

1) **Inspection**

- Which means observation of size, shape, contour, skin changes, foetal movements.
- The presence of scar, rashes, lesions, diluted veins, pulsations, presence of linea nigra can also be observed. Foetal movements can be observed as early as 18 to 20 wks.
- In primigravida and 16 wks in multigravida. Mother may be asked to report about foetal movements and report if excessive or lack of movement.

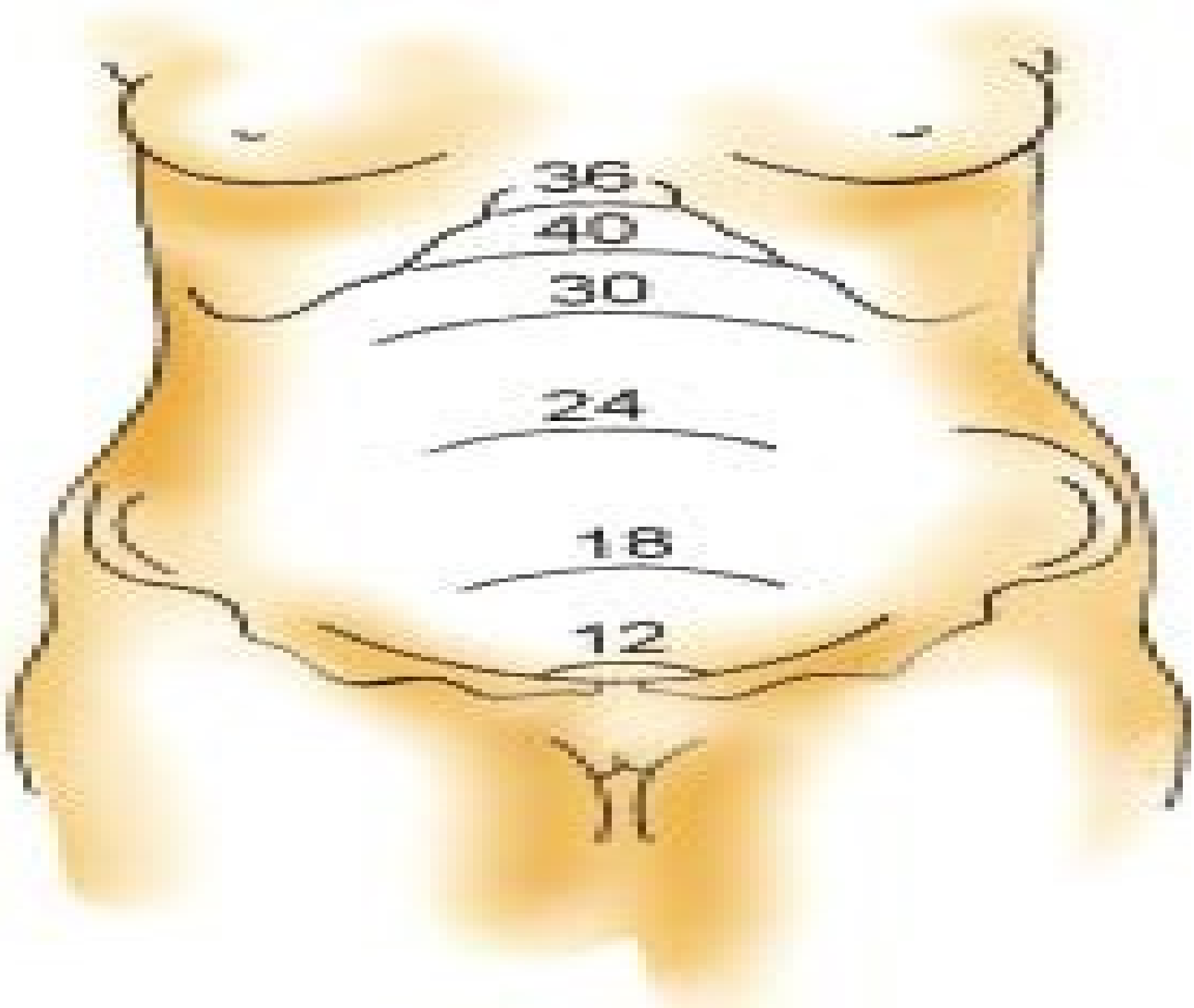
2) **Palpation**

- Abdominal palpation should be done between 16-20 wks of gestation onwards, when foetal parts are palpable.
- Period of gestation can be assessed by noting the actual growth of the foetus in weeks by assessing the height of the fundus in weeks and by measuring the abdominal girth. These findings can be compared with actual period of pregnancy or amenorrhoea to estimate if it is normal.

a) ***Fundal Height***: can be measured by measuring the distance between the symphysis pubis and the fundal curve using tape measure or fingerbreadth.

- This measurement provides information about the progressive growth of pregnancy.
- Umbilicus is usually taken as a landmark for measuring or assessing fundal height. You can place the uterus border of your left hand over the abdomen just below the xiphisternum.
- Pressing gently move the hand down the abdomen until the curved uppermost border part of the fundus is felt by the examining hand.

- McDonald's Measurement is done by using the tape measure. This measures the distance between the upper border of symphysis pubis to the uppermost curved level of the fundus in cms or in inches in the midline passing over the umbilicus.
- It is applicable beyond 24 wks of pregnancy. Measured fundal height divided by 3.5 gives the duration of pregnancy in lunar months.
- Using 3 finger breadth — which is approximately equivalent to 5 cms or 2 inches or 4 wks of lunar months. In this also 3 fingers from upper border of the symphysis pubis till the uppermost curve of the fundus.
- The growth chart of the foetus as per finger measurement is given below.


36
40
30
24
18
12

12 weeks — Uterus is just about the symphysis pubis

18 weeks — Uterus half way between the symphysis pubis and umbilicus

20 weeks — above the half way but 2.5 cms below the umbilicus

24 weeks — fundus will be present at the upper margin of the umbilicus about

20 cms from the symphysis pubis or 3 finger breadth above 20 weeks.

28 weeks — fundus is 1/3rd from the umbilicus to the xiphisternum or 30 cms from the symphysis pubis approximately.

32 weeks — 2/3rd distance from the umbilicus and xiphisternum, 6 finger above the umbilicus

36 weeks — 3/3rd distance, which means at the level of xiphisternum approximately 35 cms or 13-14 inches

40 weeks — mostly lightening takes place and uterus descends down to the level of 32 wks.

- Sometimes fundal height does not correspond with period of gestation and the reasons could be:

i) Multiple pregnancy

ii) Polyhydramnios

iii) Foetal macrosomias

iv) Big baby

v) Wrong dates

- If the fundal height is less than the period of gestation then it could be due to:

i) Abnormal foetal presentation

ii) Growth retarded foetus

iii) Congenital malformations

iv) Oligohydramnios

v) IUD (Intrauterine Death)

vi) Wrong dates

- b) ***Assess Abdominal Girth*:** Abdominal circumference is measured with help of tape measure. Normal increase of 1 inch or 2.5 cms. per week after 30 weeks.
- Measurement in inches is same as the wks of gestation after 32 wks in an average built woman. For example, the abdominal girth in a 32 weeks pregnant mother may be 32 or 31 inches.

c) ***Grips Used in Abdominal Palpation*:** Abdominal palpation is done using 5 types of grips which are:

1) Fundal Grip
2) Lateral Grip
3) Pelvic Grip — Deep Pelvic palpation
4) Pelvic Grip — Pawlick Manoeuver
5) Combined Grip

First Palpation Using Fundal Grip

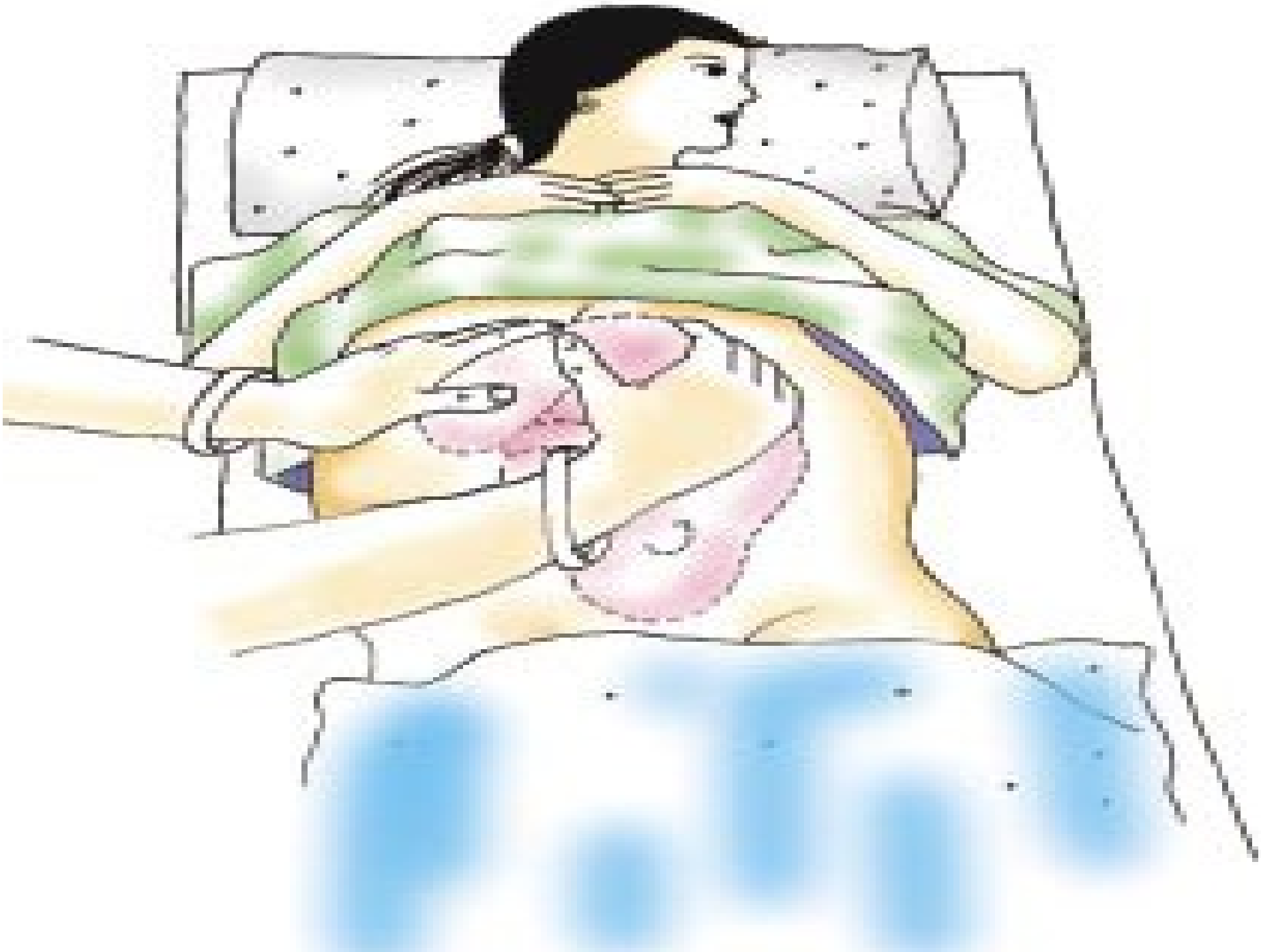
- You should stand facing patient's head, use the tips of the fingers of both hands to palpate the uterine fundus.

— When foetal head is in the fundus, it will be felt as a smooth hard, globular, mobile and ballotable mass.

— When breech will be in the fundus, it will be felt as soft irregular, round and less mobile mass.

- This manoeuver will enable to assess the lie of the foetus which is the relationship between the long axis of the foetus and the long axis of the uterus.

- The lie is mostly longitudinal or transverse but occasionally it may be oblique. This palpation or manoeuver also helps in identifying the part of the foetus which lies over the inlet of the pelvis. The commonest presentation are mostly vertex (head)



Second Manoeuver — Lateral Palpation

- For performing the lateral grip also you keep facing the patient's head and place your hands on either side of the abdomen. Steady the uterus with your hand on one side and palpate the opposite side to determine the location of the foetal back.

— The back area will feel firm

— Small baby parts like hands, arms and legs will be felt like irregular mass and may be actively or passively mobile.

- This grip helps to identify the relationship of the foetal body to the front or back and sides of the maternal pelvis. The possible positions are anterior, posterior, etc

- ***Third Manoeuver — Deep Pelvic Palpation***

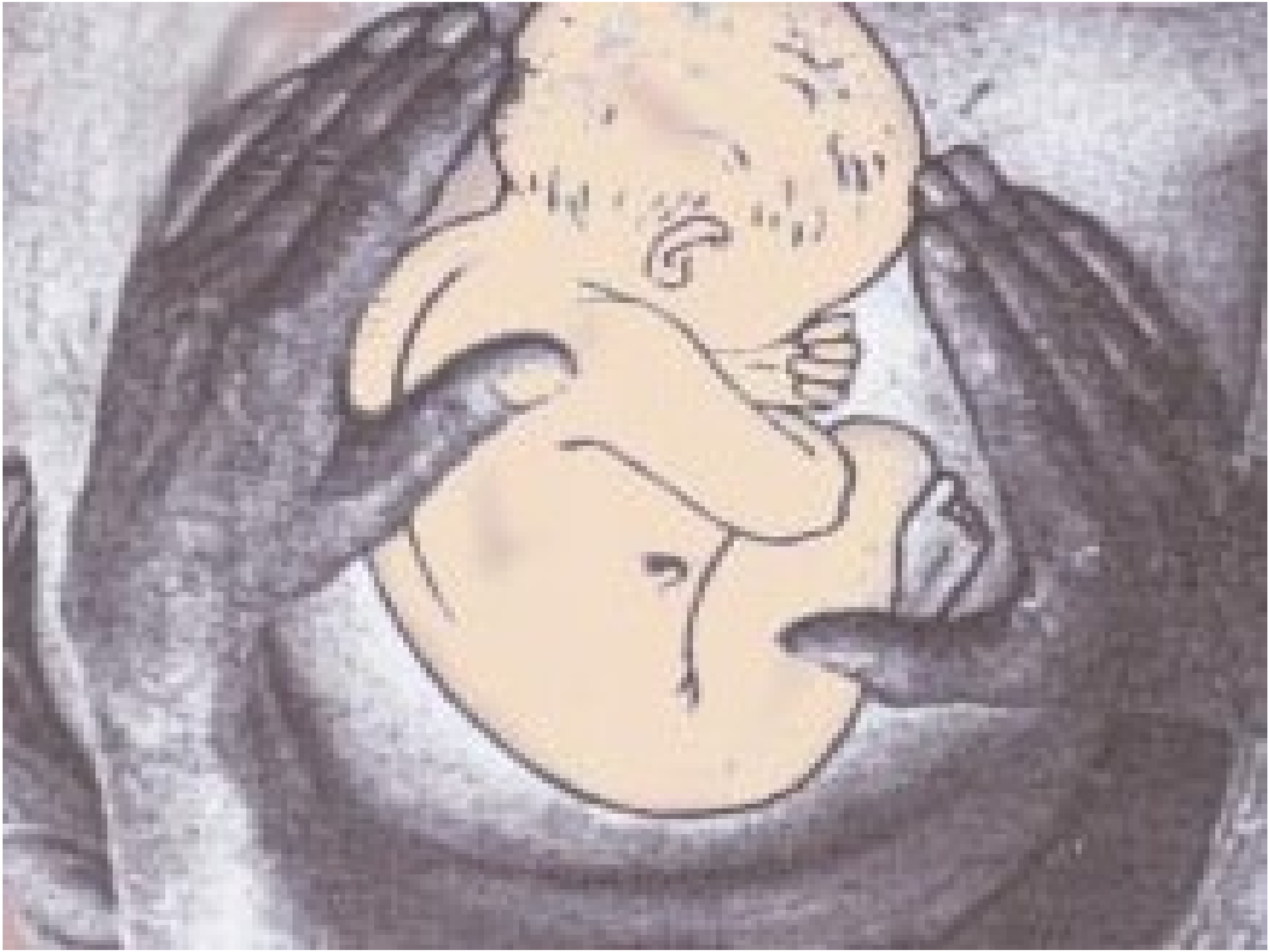
During this grip you will face the patient's feet. Gently move your fingers down the sides of the abdomen towards the pelvis until the fingers of one hand encounter the bony prominence.

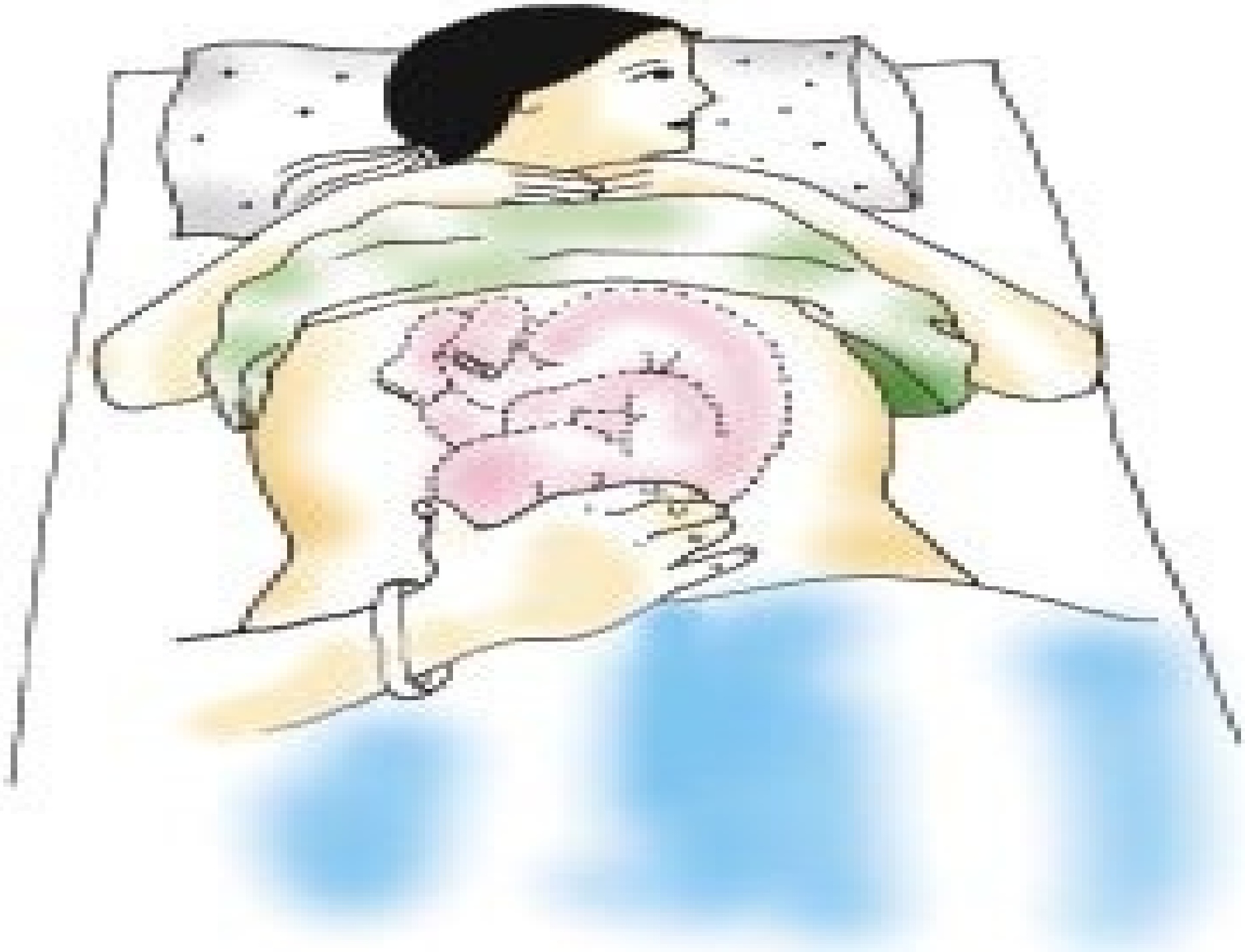
— If the prominence is on the opposite side of the back, it is the baby's brow and the head is flexed.

— If the head is extended then the cephalic prominence will be located on the same side as the back and will be the occiput.

— In this when there is cephalic prominence and the foetal head is felt over the brim of the pelvis it is Flexed Attitude.

— When the forehead forms the cephalic prominence and the head is extended it is called Extension Attitude.





Fourth Manoeuver — Pawlick Grip

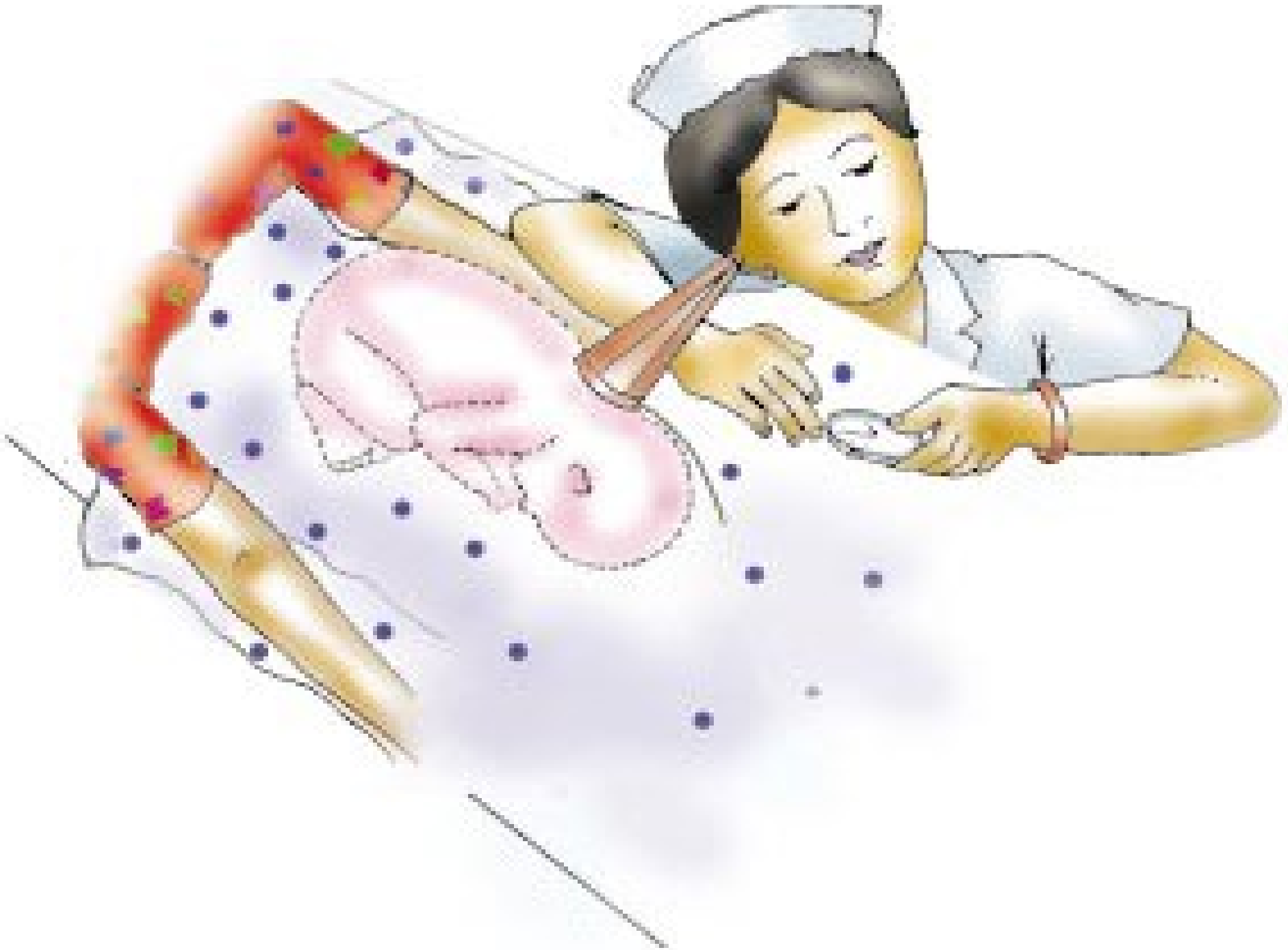
- Place the tips of the first three fingers of each hand on either side of the abdomen just above the symphysis pubis and ask the patient to take deep breath and exhale. As she exhales, sink your fingers down slowly and deeply around the presenting part. This grip will help you to identify the presenting part. This is the part that first contacts the finger in the vaginal examination most commonly it is the head or the breech.

Combined Grip

- In this grip the fundal grip alternate with the Pawlick grip. It is done in cases where onenis still doubtful about the above palpation. After abdominal examination vaginal examination may be done to assess the pelvis in later months.

3) **Auscultation**

- Auscultation is done to monitor the foetal heart sounds. The rate and rythm of the foetal heart beat gives an indication of its general length. This may be possible after 18 to 20 weeks. Normal foetal heart rate is 120-140 beats per minute. If a doppler ultrasound device is used, it can be detected as easy as 10 weeks of gestation. The point of clearest heart tones for various foetal positions is shown. Heart tones are best heard through the fetus's back. Loudness of the foetal heart tones depends on the closeness of the foetal back to mother's abdomen.



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