Unit Three: Clinical Methods In Reproductive Health

**OBSTETRICS HISTORY TAKING**

**CONFIDENTIALITY:**

During history taking, the medical student should at all times show the patient the respect that is due to her;  while  full  confidentiality  must  be  maintained  at  all  times  bearing  in  mind  that  the  relationship between the professional and his client is based on mutual trust and respect.

**Classical Hippocratic Oath state**: “All that may come to my knowledge in the exercise of my profession or in daily commerce with men, which ought not to  be  spread  abroad,  I  will  keep  secret  and  will  never  reveal.”

Criminal Code of Malta [Ch.9:257]. The law reads as follows: “If any physician, surgeon, obstetrician or apothecary or, in general, any other person who, by reason of his calling or profession, becomes the

depository of any secret confided to him, shall, except when compelled by law to give information to the public authority, disclose such secret, he shall, on conviction be liable to a fine.”

**Summary of code of ethics**

• Informed consent; rapport

• Confidentiality; Privacy; Dignity: chaperon

• Woman’s views

• Informed consent for clinical evaluation and management

• Professional etiquette

• Ultimate primacy of the patient in making treatment decisions

**HISTORY TAKING IN OBSTETRICS**

**1.       Introduce yourself and obtain consent to take history:**

Ø  **“**Hello. I am Mr/Ms \*\*\*\*, a medical student. Do you mind if I ask you some questions about your medical condition?”

**2.       PARTICULARS:**

Ø  Name, age, address, marital status, occupation, religion, sex.

Ø  LMP, parity, gravity, EDD - Naegele’s rule

o   Gravidity is no. of pregnancies including current pregnancy (regardless of the outcome Normal or abortion)

o   Parity is no. of births beyond 24 wk gestation

**3.** **PRESENTING COMPLAINT:**

Ø  “What is the problem that brought you to the hospital/clinic?”

Ø  ƒ Best to record this in the patient’s own words.

Ø  ƒ  “Were  you  referred  by  your  doctor  or  did  you  self‐refer  yourself  to  the hospital/clinic?”

Ø  Duration of the presenting complain.

**4.       HISTORY OF PRESENT ILLNESS (HPI)**

Ø  In the obstetric patient, its may be best to consider the “presenting complaint” in two

parts:

a.       The history of present illness or complaint; and

b.       The history of the current pregnancy.

Patient may not furnish sufficient details, in which case it will be necessary to amplify with specific

Directed questions. E.g**. SOCRATES** relating to pain: ‐

         i.            **Site**: where, local/diffuse

       ii.            **Onset**: rapid/gradual, pattern, worse/better since onset

     iii.            **Character:** sharp/dull/stabbing, burning/cramp/crushing

     iv.            **Radiation**: “Does the pain affect you anywhere else?” [to thigh/loin/elsewhere]

       v.            **Alleviating factors**: “What do you do to make yourself comfortable?”  “Is the pain better after menstruation?”

     vi.           **Time course**: “When did the pain start?”; if pain is chronic “What made you seek attention now” “Is the pain worse at any particular time of the cycle?”

    vii.            **Exacerbating factors:** “Is there anything that brings on the pain or makes it worse?”

  viii. **Severity & Impact on life**: “On a scale of 1 to 10, at what level would you classify the pain?”

"Does it interrupt your life?"

**5.        SYSTEMIC ENQUIRY OF ASSOCIATED SYMPTOMS**

v  GIT system:

v  Respiratory system

v  Cardiovascular system

v   Cardiovascular system

v  Urinary system

v  CNS

v  Musculoskeletal system

**6.       OBSTETRIC HISTORY**

**A.      HISTORY OF PRESENT PREGNANCY**

**a.       Menstrual history**

ü  The date of the first day of the last menstrual period (or LMP).

ü The length of the menstrual cycle refers to the time interval between the first day of the period and the first day of the subsequent period. This may vary from 21 to 35 days in normal women, but menstruation usually occurs every 28 days

**b.      The estimated date of delivery (EDD)**

ü  Can be calculated from the first day of the last menstrual period (LMP) by  adding  9months  and  7days  to this date.

ü  However, to apply **this Naegele's rule**, LMP should be  accurate and  the woman should have had  regular 28­day menstrual cycles.

ü  The average duration of human gestation is 269 days from the date of conception

ü  Therefore, in a woman with a 28­day cycle, this is 283 days from the first day of the last menstrual  period (14 days are added for the period between menstruation and conception)

ü   In a 28 day cycle, the estimated date of delivery can be calculated by subtracting 3 months from the first day of the LMP and adding on 7 days (or alternatively, adding 9 months and 7 days).

ü  It is important to appreciate that only 40% of women will deliver within 5days of the EDD and about two­thirds of women deliver within 10 days of EDD.

ü  The calculation of EDD based on a woman's LMP is therefore, at best, a guide to a woman as to the date around which her delivery is likely to occur.

ü  If a woman's normal menstrual cycle is less than 28 days or is greater than 28 days, then an appropriate number of days should be subtracted from or added to the estimated date of delivery.

ü For example, if the normal cycle is 35 days, 7 days should be added to the estimated date of delivery

a.       GRAVITY

üThe term**‘gravidity’** refers to the number of times a woman has been pregnant, irrespective of the outcome of the pregnancy, i.e. termination, miscarriage or ectopic pregnancy.

ü   A primigravida is a woman who is pregnant for the first time and a multigravida is a woman  who  has been pregnant on two or more occasions.

ü This term ‘gravidity’ must be distinguished from the term ‘parity’, which describes the number  of live­born  children and stillbirths a woman has delivered after 24 weeks  or with a birth weight  of  500g.

ü  Thus, a primipara is a woman who has given birth to one infant after 24 weeks.

ü A multiparous woman is one who has given birth to two or more infants, whereas, a nulliparous woman has not given birth after 24 weeks.

ü  The term ‘grand multipara’ has been used to describe a woman who has given birth to five or more  infants

ü A parturient is a woman in labour and a puerpera is a woman who has given birth to a child during the preceding 42 days.

b.       Gestation by dates

c.       **FOCUSED ANTENATAL CLINIC**

üWhen started, number of visits so far

üantenatal profile

o   haemoglobin

o   blood groups & rhesus factor

o   syphilis test – VDRL / RPR

o   HIV test

o   Urinalysis

o   Optional : blood slide for MPS, Stool for ova & cyst

üMedication presently and previously

üRadiological examinations during pregnancy

d.       Assess about Symptoms of pregnancy and their severity

ü  Nausea and vomiting

o   commonly occur within 2 weeks of missing the first period and it is  believed to be secondary to human chorionic gonadotrophin (hCG.

o    it is described as morning sickness, vomiting may occur at any  time of the day and is  often precipitated by the smell or sight of food.

o    Morning sickness commonly occurs in the first 3 months but, in some women, it may  persist throughout pregnancy

o    Severe and persistent vomiting leading to maternal dehydration, ketonuria and  electrolyte  imbalance is termed hyperemesis gravidarum

ü  Increased frequency of micturition

o   due to the pressure on the bladder exerted by the gravid uterus.

o   It tends to diminish after the first 12 weeks of pregnancy as the uterus rises above  the symphysis pubis,  i.e. into the larger abdominal cavity.

ü  Excessive lassitude or lethargy

o   is a common symptom of early pregnancy and may become apparent even before the first period is missed.

o   Often, it disappears after 12 weeks of gestation.

ü  Breast tenderness and heaviness,

o   which are really an extension of those experienced by many women in the premenstrual  phase of the cycle, are common during early pregnancy.

o   It is due to the effect of increasing serum progesterone as well as an increased retention of water.

ü  First maternal perception of fetal movements , also called ‘quickening’

o   is not usually noticed until 20 weeks gestation during first pregnancy  and 18 weeks  in the second or subsequent  pregnancies.

o   However, many women may experience fetal movements earlier than 18 weeks and others may progress beyond 20 weeks of gestation without being aware of fetal  movements at all.

ü  Some women may experience an abnormal desire for a particular food and this is termed pica

ü  Pseudocyesis

o   Development of symptoms and many of the signs of pregnancy in a woman who is not pregnant.

o   This is often due to an intense desire for or fears of pregnancy that may result in hypothalamic  amenorrhoea

ü  Leg cramps

ü  Limb swelling

e.       Enquire about symptoms which could indicate complications of pregnancy

üPer vaginal discharge, bleeding

üLAPs

üHeadache

üVisual disturbance

üPain on micturation

**f.        PREVIOUS OBSTETRIC HISTORY(Previous deliveries/miscarriages)**

üDetail each previous pregnancy - dates of deliveries, where birth took place, delivered at what gestation, how long did labour take, mode of delivery, condition of baby at birth,  sex, birth weight, other complications at delivery and postpartum, any blood transufusion,  did she breast fed if not why,  Length of labour & complications,  outcome, Previous miscarriages

**I.              GYNAECOLOGY  HISTORY**

üUse of family planning

past medical surgical history

personal  social , economic history

family history

summary of the history

Gynaecological History Taking

1.       Personal identification

2.       Chief complain

3.       History of presenting illness

4.       Review of systems

5.       Gynaecology history

ü  LMP, parity, last date of delivery

ü  Menstrual history

                                                               i.      Age of menarche (10-16yrs)

                                                             ii.      Duration of flow

                                                           iii.      Regularity  and duration of cycle

                                                           iv.      Amount of bleeding (number of pads used)

                                                             v.      History of dysmenorrheal

ü  Irregular bleeding – intermenestrual, post coital – so amount, timing, colour, pain associated

ü  Per vaginal discharge=colour, timing, amount, smell

ü  Per vaginal bleeding – colour. Amount, Smell, presence of clots

ü  Fertility / infertility

                                                               i.      Use of family planning methods-duration & type

                                                             ii.      Any problems on fertility

                                                           iii.      Previous pregnancies & last date of delivery if applicable.

ü  Sexual history

                                                               i.      Sexual partners and for how long

                                                             ii.      Any problems – dyspareunia, electile dysfunction

                                                           iii.      Frequency & timing of coitus (when applicable)

ü  History of STIs

                                                               i.      Any previous STIs

                                                             ii.      Treatment for STIs

                                                           iii.      Use of protective measures

ü  Past gynaecological problems and operations

6.       Past medical surgical history

7.       Personal social economic history

8.       Family history

9.       Summary of the history

10.   Examination.

General Examination Techniques

**Prerequisites when examining a patient**

·         Use your senses well – listen, look, touch, smell, when examining

·         Knowledge of anatomical land marks

·         Ensure adequate lighting in the room & Secondary tangential lighting from a lamp

·         Ensure the place is quiet to allow proper percussion and auscultation

·         Ensure presence of necessary instruments

·         Ensure privacy.

·         Explain the procedure to the patient and ask permission to examine

·         Be thorough without wasting time, systemic without being rigid, gentle yet not afraid to cause discomfort

·         Try to look calm, organized and competent even if you do not exactly feel that way

·         Avoid expressions of disgust, alarm, distaste, or other negative reaction

·         Sequence the comprehensive examination in a manner designed to minimize the patient’s need to change positions and maximize your efficiency. Variations are possible and you may wish to develop a method of your own. In general it is helpful to move from head to toe.

·         Examine patient from the right side. Working from one side helps you master skills more quickly and promotes efficiency. Left-handed students find it awkward but are encouraged to practice it for convenience of themselves and others

**GENERAL TECHNIQUES USED IN PHYSICAL EXAMINATION**

**1.       Inspection:**

·         Definition: it’s the process of observing signs indicative of a healthy or a pathological state of a certain body part or system within a patient

·         Inspection should start as the patient enter consultation room (posture, gait, appropriate clothing, colour and moisture of skin, unusual odours), during history taking and during physical examination where you expose the areas of inspection as you validate the inspection findings with your patient (“I see a black spot here, have you noted it?)

**2.       Palpation**

·         Definition: it involves the use of your hands and fingers to gather information through sense of touch.

·         Certain parts of the hands are better than others for specific types of palpation eg:

o   Palmar surface & finger pads are most suitable to assess position, texture, size, form, consistency and presence of fluid or crepitus of a mass or structure

o   Ulnar surface of hands is suitable to assess vibration

o   Dorsal surface of hands is suitable to assess temperature.

·         Palpation may be light or deep controlled by amount of pressure applied. Light palpation always precedes deep palpation.

·         On the abdomen: always begin the palpation process with light systemic palpation of four quadrants initially avoiding areas of tenderness or problem spot

·         Light palpation is important in eliciting areas of muscle resistance and tenderness.

·         Deep palpation is normally only done in the abdomen

·         Palpation can be made with one hand or by two hands on top of each other with the upper one exerting the pressure (reinforced palpation)

·         Bimanual palpation is a technique whereby an organ is palpated using both hands.

·         Preparation:

o   Short nails

o   Patient to lie supine to relax abdominal muscles

o   Warm your hands to avoid producing muscle contractions

o   Stand on right of the patient (if the patient is in a low bed – sit on or kneel besides the patient’s right)

o   Ensure patient is comfortable

o   Ask patient to show areas of pain before you start palpation.

**3.       Percussion**

·         Definition: it involves striking one object against another, thus providing vibration and subsequent sound waves.

·         Your middle finger functions as the hammer and the vibration is produced by the impact of the finger against the underlying tissue.

·         Sound waves are heard as percussion tones (notes) that arise from vibrations in the body tissue

·         The degree of percussion tone is determined by the intensity of medium through which the sound waves travel eg air, fluid or solid:

·         Example

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Tone | Intensity | Pitch | Duration | Quality | Example |
| Tympanic | Loud | High | Moderate | Drum like | Gastric bubble |
| Hyper-resonant | Very loud | Low | Long | Boom like | Emphysematous lung |
| Resonant | Loud | Low | Long | Hollow | Health lung |
| Dull | Soft to moderate | Moderate to high | Moderate | Thud like | Over liver |
| Flat | Soft | High | Short | Very dull | Over muscle |

Percusion Technique

I.            Your (dormant) middle finger acts as a hammer (plexor) and fingers on the other hand (non-dorminant) acts as the striking surface (pleximeter) spread over surface of the body.  The middle finger should be slightly flexed, relaxed and posed to strike. Plexor should be at right angles with pleximeter. Snap the wrist of the tapping hand downwards, and with the tip of the plexor sharply tap the inter-phalangeal joint or second phalanx of pleximeter

**NB. The downward snap of the striking finger originates from the wrist and not from movement in the forearm or shoulder. It should be quick, sharp but relaxed wrist motion**

 Once your finger has struck, snap the wrist back quickly lifting the finger to prevent dampening the sound.

Use the tip and not the pad of the flexor finger

You can percuss one location several times for ease interpretation of the tone

II.            Alternative technique:

ü  Strike your finger or hand directly against the body eg clavicle and skull

(hydrocephalus)

**4.       AUSCULTATION**

·         Definition: means listening for sounds produced by the body.

·         It should be carried out last after the other techniques have provided information that will assist in interpreting what you hear

·         NB. Only abdomen you auscultate before palpation and percussion as the latter two techniques sometimes influence the bowel sounds.

·         Technique:

o   Ensure a quiet environment

o   Place bell or diaphragm of the stethoscope on naked skin as clothing obscures sound

o   Stabilize the stethoscope by holding the chest piece between the second and third finger.

o   When using the diaphragm press it firmly against the skin.

o   Avoid touching the tubing with your hands or allowing it rub against any surface as it creates extraneous noise.

o   Listen to sound not only for its presence or absence but also for its characteristics – intensity, pitch, duration and quality

o   Closing your eyes may help you focus on the sound

o   Target and isolate each sound, concentrating on one sound at a time.

General Examination and Vital Signs

**General examination**

·         Observe the patients general state of health, height, built and sexual development

·         Note posture, motor activity, gait, dresss, grooming and personal hygiene – any odours of the body and breath

·         Watch patient’s facial expressions and notes manner and affect and reactions to things in the environment

·         Listen to manner of speaking and note state of awareness

**CLINICAL PARAMETERS**

**1.       PALLOR:**

ü  Sites in the body to examine pallor

v  Conjunctiva

v  Tongue

v  Palms

v  Nail bed: capillary refill

v  Sole of foot

v  Anus/ perineum

**Conjunctiva**: ask patient to be seated or lie supine, facing you. Place both thumbs on the margins of the lower eyelids and gently pull the skin downwards to evert lower lids (palpebral conjunctiva) and examine colour.

**Tongue /lips**: ask patient to open mouth and protrude the tongue. Observe colour of the tongue. Pull and evert the upper and lower lips gently to observe colour of inner parts.

**Palms**: ask the patient to supinate the two palms. Observe colour while you compare with your own palms

**Capillary refill test**: blanch the nail bed with the thumb and sustain the pressure for several seconds on fingernail or toenail. Release the pressure, observe the time elapsed before the nail regains its full colour. Normally this should occur almost instantly – in less than 2seconds.

**Soles**: with the patient lying supine or seated: look at the soles and observe colour

**Anus / perineum**: patient in lithotomy position (supine, hips and knees flexed) or lying on side, assess the perineum / anus for colour if applicable. Use gloves

2.       **JAUNDICE:**

Ø  Means having a yellowish discoloration.

Ø  Can be observed at: **sclera, mucous membranes and skin**

Ø  With patient seated or supine, gently elevate upper eyelids using both thumbs with patient facing a light source, ask him/her to look downwards to expose sclera and assess colour.

Ø  Ask patient to open mouth assess colour of mucous membrane

Ø  Examine skin and assess colour – light skinned people and infants.

Ø  Look at palms and soles for yellowish discoloration

**3.       HYPOXAEMIA : CYANOSIS**

·         A bluish discolouration these sites

·         TYPES:

o   Central cyanosis – lips & frenulum and

o   peripheral cyanosis – extremities at hands and feets

·         examine palms, sole, lips and frenulum for colour

**4.       HYPOXAEMIA: FINGER CLUBBING**

**I.**look at the shape of nails as compare with yours

**a.**Nail base angle should measure about 160 degrees.

**b.**Observe this by placing a ruler or a sheet paper across the nail and dorsal surface of the finger and examine the angle formed by the proximal nail fold and nail plate.

**II.**In clubbing the angle increases and approaches or exceeds 180 degrees

**a.**Ask the patient to place together the nail (dorsal) surfaces of the fingertips from the right and left hands

**b.**When nails are clubbed, the diamond – shaped window at the base of the nails disappears and the angle between the distal tips increases (shamroth technique)

**III.**Gently squeeze nail between your thumb and the pad of your finger to test for adherence of the nail to the nail bed.

**a.**The nail bed should feel firm

**b.**A boggy nail base accompanies clubbing.

**5.       DEHYDRATION**

·         Sites: **fontanels, eyes, mucous membranes, skin (abdomen or chest)**

·         **Fontanels –** below 18months – sunken in dehydration

·         **Eyes –** sunken in dehydration. Absent tears in dehydration

·         **Mucous membranes –** dry in dehydration

·         **Skin turgor –** pinch skin over chest or abdomen using thumb and index finger. Observe duration skin takes to go back.

**6.       OEDEMA**

·         **Sites:**face, sacrum, abdomen. Extremities.

·         **Face:** observe peri-orbital oedema

·         **Sacrum:** press sacral area with thumb for 30seconds

·         **Lower limbs:** use both thumbs to apply pressure on the lower limbs 1cm above medial malleolus for 30seconds as you look patient face.assess for pitting by running you finger over the site

·         **Report oedema as –** bi- or unilateral, tender or non-tender, pitting or non-pitting.

**7.       LYMPH NODES.**

ü  **S**mall, mobile and painless lymph nodes are often palpable in healthy individuals

ü  A painful lymph node is suggestive for inflammatory process

ü  A firm or fixed non-motile LN is very suggestive for a malignant process

Technique:

Inspect area of LN for apparent LN, oedema, erythema, red streaks and skin lesions

Using pads of 2rd 3rd & 4th fingers gently palpatefor superficial nodes

Note location, consistency, mobility, tenderness, size, shape, discreteness & warmth. Move skin over area.

Head & neck LN: Palpate the anterior LN from behind the patient and vice varsa. Sternocleidomastoid muscle divide into anterior & posterior

Axillary LN:

Other LN.

**8.       ORAL THRUSH**

**VITAL SIGNS**

**The word vital signs means essential to life.**

**T**hey include:

·         Pulse rate

·         Respiratory rate

·         Blood pressure

·         Temperature

**1.       PULSE RATE**

Radial pulse is mostly used to assess:

·         Heart rate

·         Cardiac cycles per minute

·         Collapsing pulse

·         Arrhythmias

·         Condition of the blood vessels

·         Assessing the blood pressure

Sites for taking pulse rate:

·         Radial: on the thumb side of the wrist

·         Temporal: lateral to eye brow on the temporal bone

·         Brachial: medial aspect of cubital fossa

·         Femoral: upper inner aspect of thigh

·         Popliteal: behind the knee

·         Dorsalis pedis: upper surface of the foot

·         Carotid pulse: side of the neck

**Characteristics of pulse**

ü  Rhythm:

o   Regular

o   Irregular

§  Regular irregular

§  Irregular irregular

ü  Character:

o   Feeble (small volume – eg dehydration)

o   Pounding eg anxiety

o   Collapsing

ü  Pulse volume.

**2.       BLOOD PRESSURE**

Requirements:

·         Mercury sphygmomanometer

·         Aneroid sphygmomanometer

·         Electronic sphygmomanometer

·         Stethoscope

False reading may occur in:

·         Bp machine defect

·         Dehydration

·         Anxiety

·         Exercise

·         Individuals with small and large biceps

·         Differences between supine and erect Bp especially in elderly.

**Classification of hypertension**

**Pre-hypertension**: Systolic BP 120-140 or diastolic BP 80-90.

**Stage I hypertension**: Systolic BP > 140-160 or diastolic BP >90-100.

**Stage II:** Systolic BP > 160 or diastolic BP > 100.

**3.       TEMPERATURE**

Sites:

·         Armpit (most used)

·         Oral – adults & children who can follow instructions

·         Groin – in children

·         Rectal – for children and unconscious. Most accurate but uncomfortable.

Requirements:

·         Thermometer:

o   Mercury

o   Electronic

o   Inflated auxiliary thermometers

o   Low reading thermometer

·         A container containing cotton soaked in disinfectant. Change disinfectant every 24hours

·         A quick assessment of temperature can be done by use of back of the hand.

**4.       RESPIRATORY RATE**

Note character and rhythm.

**1.     OBSTETRIC ABDOMINAL EXAMINATION**

Regular abdominal examination is an important component of both antenatal care and monitoring labour

By abdominal examination you can ascertain:

·         The size of the uterus and note whether it corresponds to the period of amenorrhea

·         The size of the foetus

·         The lie presentation and attitude of the foetus

·         The relative sizes of the brim of the pelvis and the presenting part

·         Whether the foetus is alive

·         The presence of the abnormal condition eg excess liquor amnii, twin pregnancy, abdominal tumours

**Requirements**

·         Foetoscope

·         Watch with second hand

·         A bowl with dry gauze and cotton swabs

·         Tape measure

·         Receiver for the dirty swabs

·         Couch

·         Bed sheet

**Examination**

Explain the procedure to the patient

Ensure privacy

Wash and dry your hands to ensure they are warm

Expose the abdomen

**Inspection**

Inspect for shape, size, skin, linear nigra, striae gravidarum, scars, foetal movements, umbilicus

**Palpation**

**LEOPOLD’S MANEUVER**

* First maneuver: Fundal Grip
* Second maneuver: Umbilical Grip
* Third maneuver: (1st pelvic grip) = The Pawlick's Grip,
* Fourth maneuver: (2nd Pelvic Grip) = pelvic grip

**First Leopold’s maneuver: Fundal Grip**

Facing the mother, palpate the fundus with both hands

–      Assess for shape, size, consistency and mobility

Fetal head: firm, hard, and round

–      Moves independently of the rest

–      Detectable by ballottement

Breech/buttocks: softer and has bony prominences

–      Moves with the rest of the form

**Fundal height**

·         Using your left hand, place either the ulnar/radial border of the index finger on the abdomen from xiphisternum

·         Apply pressure as you move downwards in steps to locate the underlying mass

·         Once the mass is encountered maintain the hand or finger at that level

·         Using the right hand, determine the number of fingerbreaths from the superior border of the umbilicus up to the level of fundus

·         Each finger breath multiplied by 2. Fundal height at umbilicus is 22/40, at sympysis pubis is 12/40

·         Alternatively you can use tape measure to check fundal height from symphysis pubis through umbilicus to xiphoid sternum. Note the fundal height

**Second Leopold’s maneuver - Determine position of the back (lie)**

·         Lie is the relation of the baby’s long axis to the mother’s uterus long axis

·         Still facing the mother, place both palms on the abdomen

·         Hold right hand still and with deep but gentle pressure, use left hand to feel for the firm, smooth back. Repeat using opposite hands

·         Feel for:

·         The foetal poles

·         Regularity or irregularity and convexity

·         Absence of foetal poles in the flanks = **longitudinal lie**

·         Presence of foetal poles on the flanks = **transverse lie**(long axis of the fetus is perpendicular to that of the mother’s)

·         **Oblique lie =**long axis of the fetus is 0-90 degrees (or 90-180 degrees) to that of the mother’s

·         Uniform, firm convexity of contour = side of the foetal back

·         Determine whether convex contour is nearer the front or far out in the flank – gives idea about **position**

**Third Leopold’s Maneuver - presentation**

·         Determine what part is lying above the inlet.

·         Using the right hand apply the pawlik’s grip (single handed palpation) to fell the part of foetus overlying the pelvic inlet

·         If transverse, any mass felt is most likely the shoulder = **shoulder presentation**

·         If longitudinal lie differentiate between **cephalic and breech presentation.** A hard rounded mass indicates cephalic presentation

·         Pawlick’s grip gives precise findings when head is not engaged

**Fourth leopold’s maneuver - engagement**

·         **Engagement i**s checked while facing the mothers lower limbs and with both hands placed on the lower abdomen

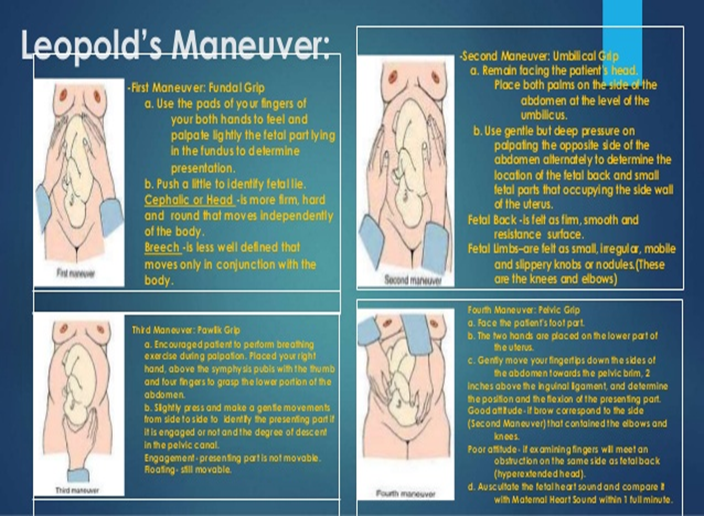
·         If the fingers seem to meet below the presenting part then engagement has not occurred. When engagement occurs, the head will be fixed on the pelvis

·         Before deep engagement, as the fingers are passed down the presenting part, the area that is most prominent on the head is noted.

·         If the cephalic prominence is on the side of the small parts (limbs), it implies the head is well flexed hence **Vertex presentation**

·         If prominence is felt equally on both sides – deflexed hence **brow presentation**

·         **If**prominence is on the side opposite that with the small parts and indistinct back curvature, the findings suggest **face presentation.**



**OBSTETRIC ABDOMINAL EXAMINATION 2**

**Attitude**

·         Refers to the position of the foetal head to its trunk.

·         The normal position is **complete flexion giving vertex presentation**

·         When deflexion = **brow presentation**

·         When extension = **face presentation**

**DENOMINATOR**

·         Denominator is the arbitrary point on the presenting part used as a point of reference in denoting the position of the presenting part in relation to the pelvis.

o   Vertex presentation - the denominator is **OCCIPUT**

o   Brow presentation – the denominator is **sinciput**

o   Face presentation – the denominator is **mentum or chin**

o   Breech presentation – the denominator is **sacrum**

**Position**

·         Relation of denominator (occiput/ sacrum) of presenting part to the quadrants of pelvis.

·         Eight positions are described

o   When the denominator is directed towards symphysis pubis it gives a **direct anterior position** and when directed towards sacrum it gives **direct posterior position**

o   When denominator is directed towards the ileopectineal eminences, the position is **left or** **right anterior position**

o   If the denominator is directed towards  the mid points of the ileopectineal line, it gives **left or right anterior position**

o   If the denominator is directed towards the left or light sacro-iliac joint then it is left or right posterior position

·         Normal presentation is anterior position with commonest being left occipital anterior.

·         Left Occipito Posterior (LOP) – 3%

·         Left occipito lateral (LOL) – 40%

·         Left occipito anterior (LOA) – 15%

·         Right occipito anterior (ROA) – 10 %

·         Right occipito lateral (ROL) – 24%

·         Right occipito posterior (ROP) –

**DESCENT AND ENGAGEMENT**

·         Refers to entry of the presenting part into the pelvis

·         Head is the presenting part in 99% of all labours

·         Descend is recorded in terms of the span of the foetal head still palpable in the abdomen above the level of symphysis pubis

·         The whole span of the head is subdivided into 5 fifths and each finger breaths spans 1 fith (1/5)

·         When is completely free, the descend is 5/5 then to 4/5, 3/5, 2/5, 1/5, 0/5.

·         Once the widest diameter of foetal head has entered, **only 2/5 is palpable** and strictly speaking, this is **when engagement has occurred**

·          If a portion has sunk in the pelvis, pawlik’s grip may not determine the identity of the presenting part.

**AUSCULTATION**

v  Place the foetoscope on the back of the foetus, apply sufficient pressure to exclude external sounds

v  Take note of foetal heart rate count and regularity.

**OBSTETRIC VAGINAL EXAMINATION**

**Indications:**

ü  To confirm labour

ü  Pelvic assessment

ü  Assess progress of labour

ü  Assessment of cervical ripening before induction of labour

ü  Diagnose or rule out complications of labour

**Contraindications**

ü  Suspected PROM

ü  Suspected placenta praevia.

**Procedure**

ü  Explain the procedure to the patient

ü  Let patient empty bladder

ü  Provide privacy

ü  Ensure adequate working space

ü  Aseptic technique

**Inspection of the external genitalia**

ü  Inspect for: scars, warts, scratch marks, varicose veins, hair distribution,

ü  Any discharge – colour, consistency, smell, quantity,

ü  State of urethral meatus

**VULVA TOILET**

ü  Aseptic technique – sterile gloving

ü  Roll the sterile cotton wool swabs into five small balls and Soak them in a galipot containing antiseptic solution

ü  Take them on the right hand, then drop one the left hand – swab with left hand the furthest labia majora from the top to the perineum. Similarly, swab the other side of labia majora.

ü  Similarly, swab labia minora on both sides with the next two swabs using left hand.

ü  Separate labia minora using your left hand then swab vestibule with the swab in the right hand from clitoris to fourchette using the right hand.

ü  Drape the mother by placing the sterile towel under her buttocks and another one on the abdomen up to the hairline of the pubic area.

**SPECULUM EXAMINATION IN OBSTETRIC**

 Read section on speculum examination below

**DIGITAL VAGINAL EXAMINATION**

ü  Lubricate index and middle fingers of the right hand

ü  Separate the labia with two fingers of the left hand

ü  Insert index and middle finger of the right hand into the vaginal canal

o   The terminal phalange of the middle finger is inserted first and pressed against the perineal body in order to relax introitus

o   The index finger is then slipped in and the two fingers are directed toward the cervix

ü  Assess features at the cervis:

o   Dilatation of the cervix

o   Degree of thinning and softness (effacement)

o   Presence or absence of membranes

o   Confirm presenting part and its state eg moulding, caput

o     Direction of sutures and position of fontanels

o   Level of presenting part compared to the ischial spines

ü  **pelvic assessment**

o   Feel for sacral promontory

o   Assess curvatures of the sacrum by sweeping your fingers downwards towards the outlet

o   Assess prominences of the ischial spines and tip of coccyx by sliding the examining fingers along the iscial spines and coccyx

o   Measure the sub-pubic angle by fitting the two examining fingers in the sub-pubic angle

o   Measure the inter-tuberous diameter by fitting the four knuckles of the examining hand between the ischial tuberosity.

**GYNAECOLOGICAL PELVIC EXAMINATION**

**Indication**

v  Suspicion of pathology of female genital system

v  Exclusion of pathology

**Contraindication**

v  Intact hymen

**Requirements**

v  Couch with stirrups

v  Sterile speculum: cusco’s, sims’, ferguson’s

o   **Assignment: types of speculums and different sizes. How to examine patient using univalve speculums.**

v  Sterile gloves

v  Non-sterile gloves

v  Receiver with decontamination solution.

v  chaperone, consent, good lighting

**Procedure**

Preparation

v  Prepare environment for pelvic examination – privacy, equipment & supplies

v  Explain the procedure to the patient

v  Patient empty bladder, remove underclothing, position in lithotomy

v  Cover her to avoid unnecessary exposure

**Method: speculum examination**

1.       Maintain infection prevention throughout the examination – wash hands, put on sterile gloves, use high-level disinfected / sterile instruments

2.       Inspect external genitalia to screen for STI / FGM

v  Warts, abnormal discharge, ulcers, bleeding from vagina, sores, swelling, presence and distribution of hair, obvious anatomical anomalies, female genital mutilation, cosmetics (eg rings)

3.       Reassure the patient throughout the procedure

4.       Choose speculum size for the patient

5.       Warm blades under a stream of tepid  water

6.       Hold speculum in the right hand while the index finger of the left hand presses downwards on the fourchette to expose the introitus

7.       Slide the closed blades obliquely (away from the urethral area and clitoris) over the fingers into the introitus , introduce the instrument into the vagina

8.       While inserting the instrument rotate it to a clockwise direction until the anterior and posterior blades run along the anterior and posterior vaginal walls with the handles pointing towards the anus.

9.       Open the blades to expose the cervix

10.   Inspect cervix- erosion, colour, growths, friability, discharge,

11.   Take lab specimens if necessary for investigation for PAP smear for cytology, vaginal secretions for microscopy.

12.   Rotate the speculum and inspect vaginal wall for: warts, abnormal discharge, sores, bleeding

13.   Remove the speculum gently in horizontal position and place it in decontamination solution.

**DIGITAL VAGINAL EXAMINATION IN GYNAECOLOGY**

v  Put on sterile gloves

v  Clean the vulva

v  Insert the index and middle fingers of right hand gently into the vaginal canal while you avoid touching clitoris with your thumb

v  Examine the cervix:

ü  Ostium- open or closed

ü  Irregularity

ü  Growth

ü  Consistency

ü  Mobility

ü  Tenderness

v  Examination of uterus – bimanual examination

ü  Place your left hand on the abdomen, just above sympysis pubis

ü  Locate uterus by feeling it between your left hand over abdomen and the finger tips of your right index and middle fingers placed on the cervix

ü  Palpate for:

o   size, shape and consistency, mobility,

o   position : anteverted or retroverted

v  Examination of the adnexia

ü  locate the left fornix and place the finger tips in this fornix

ü  together with left hand placed over the left side of lower abdomen, try to palpate for any mass or tenderness

ü  repeat same on the right  side

v  Excitation of the cervix for endometritis

ü  use your right index and middle fingers to gently move the cervix from left to right and check for any pain

v  palpate the anterior, left and lateral walls of the vagina walls for: ruggae, growth, tenderness

v  check vaginal muscle tone by asking the client to tighten vaginal muscle

v  check for cystocele and rectocele

ü  press the left index and middle finger downwards and ask patient to cough = rectocele

ü  press the left index and middle finger upwards and ask patient to cough = cystocele

v  palpate bartholins glands on both sides of the labia majora

v  press on the trigone muscle to exclude cystitis

v  Milk the skenes glands with left hand.

v  Palpate the inguinal LN.

**EXAMINATION OF THE MALE GENITALIA**

**Requirements:**

ü  Gloves

ü  Penlight

Inspection:

ü  The pubic hair characteristics and distribution

ü  The glans penis (retract the foreskin if patient uncircumcised):

o   Colour

o   Smegma

o   External meatus of urethra

o   Urethra discharge

Palpation:

ü  The penis:

o   Tenderness

o   Induction

ü  Strip the urethra for any discharge (you can ask the patient to perform this part of procedure for you:

o   Firmly compress the base of the penis with your thumb and forefinger and move them towards the glans

o   Press the glans penis between the thumb and forefinger

o   Collect discharge

Scrotum and ventral surface of the penis:

Inspection:

ü  Colour

ü  Texture

ü  Asymmetry

ü  Unusual thickening

ü  Presence of hernia

ü  Trans – illuminate any masses in the scrotum

o   When any mass is felt other than the testicle or spermatic cord determines whether it is filled with gas, fluid or solid material using penlight

**Palpation:**

a.       Inguinal canal for direct and indirect hernia

ü  With patient standing, ask him to bear down as if having bowel movement

ü  While he is straining inspect the areas of inguinal canal and the region of fossa ovalis

ü  Ask patient to relax, insert the pulp of your examining finger into the lower part of the scrotum and carry it upward along vas deferens into the inguinal canal. (the finger depends on the size of the external ring which is normally palpable)

ü  With your finger placed at the external ring ask the patient to cough and feel for a viscous mass against your finger (present if a hernia is present)

b.       The testis, epididymitis, vasa deferentia

ü  Use the thumb and first two fingers to assess:

                                                   i.      Consistency

                                                 ii.      Size

                                               iii.      Tenderness

                                               iv.      Fluid

                                                 v.      Lumps or nodules

c.       The inguinal lymph nodes

d.       Cremasteric reflex

ü  Elicit the cremasteric reflex bilaterally

ü  Stroke the inner thigh with a blunt instrument such as the handle of the reflex hammer or with your finger

ü  Normally the testicle and scrotum rise on the stroked side

**EXAMINATION OF THE FEMALE BREAST AND AXILLA**

Breast is an appendix of the skin in the milk-lines from axilla to groin.

The development has different stages – tanner’s classification

**Preparation**

Undress patient as far as waist, sits upright

It is necessary after examining the patient sitting upright to ask the patient to lie flat and reexamine the breasts

Both breasts must be exposed completely

**Method**

**Inspection**

Ø  While patient in the following positions:

o   Arms hanging loosely at the sides (arms aside)

o   Arms held over head

o   Arms held at hips

o   Leading (bending) forward

Ø  Inspect each breast and compare them for:

o   Size

o   Symmetry

o   Contour

o   Skin colour

o   Venous pattern

o   Lesions

Ø  Inspect nipple for:

o   Size (compare both breast)

o   Retraction

o   Discharge

o   Ulceration

Ø  Inspect the areola for pigmentation

Palpation

Ø  Systematically palpate the breast, axilla and supra-clavicular regions

Ø  Ask the patient to find first herself the lump and to point the lesion she has detected, before you attempt to do so and before you start palpation

Ø  Start with the normal breast to have her impression of the normal breast

Ø  Palpate the areola and nipple and finish with axilla

**Techniques**

Ø  Two techniques:

o   Palpation “with the flat of the hand”

o   Palpation “between the pulps of the fingers and the thumb”

Ø  **Flat-hand- technique:**

o   Exert a slight pressure on skin with the pulps of the middle and end phalanges of the fingers 2-5 and perform a small circular movement

o   Normal breast gives a firm lobulated impression with fine nodularity a feature particularly before the periods. In fat and after menopause expect to feel both lobulation and nodularity less easily

o   With flat-hand-technique accepted techiniques include:

§  Vertical zigzag palpation

§  Concentric circular palpation

§  Quadrant palpation

o   Most used technique is quadrant for clinician and self breast examination.

Ø  Perform palpation calmly, with patience, without skipping any part including axilla.

Ø  Palpation of areola:

o   Gently squeeze the areola skin between thumb and index together with a rolling movement (small retention cysts and glands of Montgomery can be noted as well as small centrally located tumours)

o   Indirectly by pressing with the top of index on different places of the areola, elicit nipple secretion, if present.

Ø  Palpation of nipple

o   Inform patient the procedure may hurt

o   Perform a short but firm squeeze of nipple between thumb and index finger

o   Notice secretion

Ø  Palpation of the tail of Spence and axillae

o   Palpate the tail as it enters axillae by gently compressing the tissue between the thumb and fingers

Ø  Palpation of the LN

o   With patient seated with arms flexed at elbow

o   Support the patient’s **right lower arm** with **your right hand** to examine the **right axilla & vice varsa**

o   Examine-apex, medial, lateral, anterior & posterior.

NB: Make always a well documented record of your examination

v  Localization : name the quadrant or describe the location using “hours”

v  Size: in mm or cm

v  Shape: round –discoid – regular – irregular

v  Consistency: very soft, soft, firm, hard, stony or bony hard

v  Contour: in relation to surrounding tissue

v  Tenderness: yes or no, spontaneous

v  Mobility: in relation to the skin, breast tissue, fascia, thorax wall.

**Summary**

History Taking

General Examination

Specific examinations

* obstetric abdominal examination
* Pelvic examination - speculum examination and digital vaginal examination
* Male genital examination
* breast examination

**COMMON INVESTIGATIONS IN REPRODUCTIVE HEALTH PRACTICE**

* ***Learning objectives***
* •       *At the end of the lecture, the student is expected to be able to:-*

–   *Know the scope of the common investigations in RHC*

–   *Acquire insight into the rational & objective request for relevant investigations*

–   *Apply the same or similar investigations in different clinical situations*

–   *Interpret results of investigations for the benefit of patients*

***Introduction: Investigations***

•        *Important aspect of patient management*

•        *Should always be rational/objective*

•        *Normal parameters should be known*

•        *Can be expensive*

•        *May be invasive*

•        *Supplement but not replace clinical acumen*

***“Good, comprehensive medical history & physical examination remain key to paient management”***

***PURPOSE FOR INVESTIGATIONS***

•       *Confirmation of diagnosis*

•       *Making diagnosis*

•       *Estimate of disease severity*

•       *Monitoring effect of treatment*

•       *Monitoring recurrence*

•       *Screening for disease*

Common investigations in obstetrics

***Antenatal care (ANC)***

•        *[Hb] & HCT*

–    *To screen or confirm anemia*

–    *Forms a basis for supplementation*

•        *VDRL*

–    *Screening for syphylis – affects fetal outcome*

–    *Specific treponemal tests before treatment (e.g. TPHA)*

•        *Blood group*

–    *Establishes risk of feto-maternal incompartibility & hemolytic disease*

–    *Prepares for transfusion needs*

•       *Urinalysis - Screening for protein, glycosuria, UTI, etc*

•       *HIV - PMTCT; Entry into prevention of transmission; Enables provision of support - psycho-social & medical*

•       *Obstetric ultrasound - Appraisal of fetal growth; Fetal abnormality screening; Fetal well-being assessment: BPPS; Doppler studies; PET prediction*

***Full blood count (FBC)***

*Has multiplicity of value*

*Examples of significance:*

•         *[Hb] & HCT*

–    *Presence/absence of anemia; Etiology not implied*

•         *Cell indices - MCV, NCH, MCHC – may allot anemia to broad categories:*

–    *Microcytic*

–    *Hypochromic*

–    *Megaloblastic*

–    *Mixed*

•       *WBC count*

–   *Total count*

•     *Marked elevation - acute infections (bacterial/viral)*

•     *Moderate elevation – chronic infections*

–   *Differential count*

•     *Neutrophilia – acute bacterial infections*

•     *Lymphocytosis –viral or chronic bacterial infections*

•       *Peripheral blood film (PBF)*

–   *RBC’s*

•     *Normocytic normochromic; hypochromic microcytic*

•     *Polychromasia; reticulocytosis;megaloblasts*

•     *Anisocytosis; poikilocytosis;tear drop cells*

•     *Spherocytes; sickle forms*

–   *WBC,s*

•     *Polymorphs – nuclear segmentation*

•     *Toxic granulation*

•     *Malaria parasites (MP,s)*

•       *Erythrocyte sedimentation rate*

–   *None specific*

–   *May indicate infection*

•       *Platelet count*

–   *Absolute count/concentration*

***Infections in pregnant state***

1. ***Urinary tract infections (UTI)***

–            *Urinalysis:- appearanc; pH; blood; sugar; proteins; nitrites; urobilinogen; leukocytes; bilirubin; specific gravity; ketones*

–            *Microscopy:- pus cells; epithelial cells;casts; crystals; RBC,s; bacteria; yeast cells; trichomona vaginalis*

–            *Culture*

–            *sensitivity*

**2.       *Respiratory tract infections***

–   *FBC; chest X-ray; sputum – AAFB,s*

**3.      *Chorioamnionitis***

–   *FBC +ESR; vaginal swab – M/C/S*

**4.       *Malaria***

–   *MP’s*

5.        ***Blood coagulation disorders –thrombo-embolic disease & DIC***

•       *Coagulation screen*

–   *Bleeding time; clotting time; APTT/KCCT; PTI/INR; platelet count*

•       *Thrombus localization*

–   *Doppler studies*

–   *Venography; radioisotope studies; thermography*

6.        ***Hypertensive disease in pregnancy***

•       *Renal function tests (RFT,s)*

–   *Urinalysis – protein, blood*

–   *U/E; uric acid; creatinine; creatinine clearance*

–   *Renal ultrasound*

•       *Liver function tests (LFT,s)*

–   *Bilirubin, liver enzymes*

•       *Coagulation screen; platelet count*

•       *Obstetric utrasound –FWB; doppler studies*

***7.     Value of ultrasound in obstetrics***

•        *Diagnosis of pregnancy*

–    *Intaruterine; extra-uterine*

•        *Fetal growth monitoring*

–    *Appropriateness of growth (AGA;SGA; LGA)*

–    *IUGR (asymmetrical; symmetrical)*

–    *Fetal weight, sex, viability*

•        *Fetal well-being*

–    *BPPS (fetal tone; fetal movements; respiratory movements; AF volume; placental echogenicity)*

•       *Pelvimetry*

•       *Gestation estimation-timing of specific epiphyseal plates’ closure*

•       *Diagnosis of twins*

•       *Diagnosis of extra-uterine pregnancy*

8.          ***Diabetes mellitus***

•       *Urinalysis*

–   *Glycosuria; ketonuria; proteinuria*

•       *Blood sugar*

–   *RBS; FBS; OGTT; PPBS; Serial BS*

•       *Glycolysated Hb (Hb1c) - [N<6%]*

•       *Obstetric ultrasound – IUGR; Macrosomia; BPPS; Polyhydramnios; etc*

9.        ***Rhesus isoimmunization***

•       *Indirect Coombs test (ICT)*

•       *AF spectrophotometry –absobance deviation at 450nm*

•       *Cord blood at birth*

–   *[Hb] + hct*

–   *Direct Coombs test*

–   *Bilirubin*

*10.*       ***Anemia & Antepartum hemorrhage***

•        *Anemia*

•     *FBC+PBF*

•     *Stool o/c*

•     *MPs*

•       *Antepartum hemorrhage (APH)*

•     *Placental localization*

•     *Ultrasound; EUA*

•     *Coagulation screen*

•     *[Hb] = hct*

11.   ***Antepartum hemorrhage (APH); Establishment of fetal maturity***

*Septicemia & endotoxic shock*

•     *RFTs including urine output*

•     *Blood cultures*

•     *Coagulation screen, especially platelet count*

•     *Critical care investigations (spo2, spco2, etc)*

*Establishment of fetal maturity*

•     *Amniocentesis*

–   *Surfactant or ‘shake’ test*

–   *Lecithin:sphingomyelin (L/S) ratio (N > 1:2)*

Common investigations in Gynaecology

•       ***FULL BLOOD COUNT***

“***Important in differentiating  infective from none-infective  conditions”***

•       ***Value of ultrasound scan in gynecology***

•        *Diagnosis of pelvic masses*

–    *Solid – fibroids; ovarian; other*

–    *Cystic – ovarian; TOM; PCOD*

–    *Fluid in the pelvis – PID; pelvic abscess; ectopic pregnancy*

•        *Management of infertility*

–    *Follicular growth monitoring; TVS for ovum retrieval*

•        *Intrauterine diagnosis*

–    *Endometrial hyperplasia; ‘lost’ IUCD; hematometra*

•       ***Radiology in gynecology***

•       *Hysterosalpingogram*

–   *Scope – uterine cavity; endoslpinx; spill*

–   *Pathology:*

•     *Submucous/intramural fibroids*

•     *Tubal block (cornual, mid-section,terminal)*

•     *Tubal loculations/peri-tubal adhesions*

•     *Fimbrial adhesions*

•     *hydrosalpinges*

•       *X-ray sella turcica – hyperprolactinaemic galactorrhoea syndrome*

•     *Erosion of clinoid processes & pituitary fossa*

•       *Embryonal tumours – cystic teratomas*

•       *‘Lost’ IUCD – tracer IUCD inserted*

•       *Extra-uterine pregnancy*

•       ***Infertility –MALE***

•         *Semen analysis*

•      *Appearance*

•      *Volume*

•      *pH*

•      *Liquefaction*

•      *count*

•      *Motility*

–    *Progressive*

–    *Sluggish*

–    *non-progressive*

–    *non-motile*

•      *Vitality*

•      *Morphology*

•      *Agglutination*

•      *Pus cells*

•       *Post-coital test*

•     *Motility; agglutination*

•       *Sperm-mucous interaction tests*

•     *Direct (spouses) or crossed*

•       *Hormonal profile*

•       *Testicular biopsy*

•       ***Infertility – FEMALE***

•       *Radiological – HSG; X-ray sella turcica*

•       *Pelvic ultrasound scan*

–   *Uterine pathology (fibroids; adenomyosis)*

–   *ovarian pathology (PCOS)*

•       *Hormonal profile*

–   *FSH; LH; PRL; testosterone; progesterone; estradiol*

•       *PCT*

•       *Sperm-mucus interaction tests*

•       *Visual fields*

•       *CT-scan/MRI*

•       *Karyotype*

•       ***Diagnostic endoscopy in gynecology***

•        *Laparoscopy*

•     *Chronic pelvic pain*

•     *Endometriosis*

•     *Infertility*

•     *Ectopic pregnancy*

•     *Pelvic inflammatory disease*

•        *hysteroscopy*

•     *Endometrial pathology*

–    *Submucous myomas; Uterine synachie; Endometrial polyps; abnormal uterine bleeding*

•        *Culdoscopy*

•       ***Carcinoma of the cervix***

•                 *Papanicolou (pap) smear*

•                 *Colposcopy*

•                 *Cone biopsy*

•                 *Loop electro-excision procedure (LEEP)*

•                 *EUA, bopsy and staging*

•       ***Abnormal uterine bleeding***

–   *D&C*

–   *Fractional curettage*

–   *Hysteroscopy*

–   *Hormonal profile*

•       ***Gestational trophoblastic disease***

•       *Hydatidiform mole*

–   *PDT/B-hCG*

–   *US scan – ‘snow storm appearance’*

•       *Choriocarcinoma*

–   *B-hCG*

–   *Metastatic disease*

•     *CXR (cannon balls):CT-scan/MRI (liver.renal,brain)*

•     *Lumbar puncture; LFTs; RFTs*

•       ***Ectopic pregnancy***

•       *PDT/b-hCG*

•       *Pelvic U/S scan*

•       *Laparoscopy*

•       *Paracentesis*

•       *Culdocentesis*

•       ***Sexually transmitted infections (STIs)***

•       *Vaginal swab – M/C/S*

–   *HVS*

–   *Cervical swab*

•       *VDRL*

•       *HIV ELISA*