

## History taking

### I. Identity (nas mn roanda)

#### 1. Name

- \* record
- \* good relationship with doctor.

#### 2. Age

- \* jaundice in neonate.....physiological.
- \* In adult.....viral hepatitis.
- \* In elderly.....carcinoma of head of pancreas.

#### 3. Sex

- \* breast ca common in female.
- \* Follicular and papillary thyroid ca are common in female.

#### 4. Marital status

- \* Unmarried and nuliparity are risk factors for breast ca in female.
- \* Sexually transmitted diseases.

#### 5. Next of kin (name, phone number, address) .

- \* Some decisions cannot taken by the patient (consent in unconscious, < 18 years)
- \* For financial support.

#### 6. Religion

- \* incidence of penile ca less in Muslims and Jews due to circumcision.
- \* Jehovah's don not accept transfusion of blood even in life threatened conditions.

#### 7. Nationality

bilharzias common among Egyptians and people of south of Iraq (Nassyria) .

#### 8. Occupation

occupational diseases e.g. pneumoconiosis, asbestosis, tar worker, aflatoxin cause hepatic cancers among farmers.

#### 9. Address

- \* goiter in north of Iraq.
- \* esophageal cancers in cancer belt of north Asia .

#### 10. Phone number.

#### 11. Place of birth birth in Nassyria .....keep in mind a bilharzias is a cause of his hematuria.

#### 12. Date of admission should be given in hours if the case is an emergency one.

#### 13. Ward.

#### 14. Bed number.

**II. Chief complaint.** The symptom that make the patient search for medical help or come to hospital.

- \* Prefer to include one symptom.
- \* In patient language(avoid medical terms e.g. haematemesis for vomiting of blood).
- \* Short duration.
- \* Day of surgery consider as a day zero. Next day is a first postoperative day.

**III. History of present illness. (five guidelines).**

1. Analysis of chief complaint begin by onset(always).
2. Full related system review.
3. The patient reaction.
4. Hospital admission.
5. Patient status now and he is waiting for :-
  - \* Discharge.
  - \* Investigations.
  - \* further treatment.
  - \* blood transfusion.
  - \* surgical operation.

e.g. **chief complaint** : central abdominal pain 4 hours before admission.

**Present illness :**

- \* analysis of abdominal pain .
- \* Related system is a gastrointestinal system, so ask in details about the symptoms of this system.
- \* Patient reaction : take drugs, fasting , go to the doctor.
- \* Hospital admission : treatment , investigations.....etc

**IV. Review of systems.**(apart from that mentioned in present illness).

**Central nervous system**

- \* headache
- \* dizziness
- \* vertigo
- \* tremor
- \* parasthesia
- \* visual and hearing disturbance
- \* fit
- \* syncope
- \* coma

**Cardiovascular system**

- \* chest pain
- \* dyspnoea
- \* orthopnea
- \* paroxysmal nocturnal dyspnoea
- \* palpitation
- \* ankle swelling
- \* intermittent claudication

**Respiratory system**

- \* chest pain
- \* dyspnoea
- \* cough
- \* sputum
- \* haemoptysis
- \* wheeze

**Gastrointestinal system**

- \* Appetite
- \* Dysphagia
- \* odynophagia
- \* nausea
- \* vomiting
- \* haematemesis
- \* epigastric pain
- \* heart burn
- \* bowel habit
- \* diarrhea
- \* constipation
- \* melena
- \* flatulence

**Genitourinary system**

- \* Loin pain
- \* irritative symptoms
- \* genital tract ulcers
- \* discharge
- \* obstructive symptoms
- \* haematuria

**Musculoskeletal system**

- \* joint pain
- \* stiffness
- \* swelling
- \* muscle pain
- \* weakness.

**V. Past Medical History and Past Surgical History.**

- \* vaccination
- \* childhood diseases (measles, mumps, diphtheria)
- \* adulthood diseases (diabetes mellitus, hypertension, sickle cell anemia, ischaemic heart diseases, bronchial asthma)
- \* hospital admission (hospital name, ward, time, cause ).
- \* Surgical operations.
- \* blood transfusion

**VI. Family History.**

- \* Is parent died or live
- \* cause of death
- \* if live remember the diseases from which they complain
- \* remember any member of the family who has the same disease like those with genetic predisposition.

**VII. Social History.**

- \* Member per room ratio
- \* income
- \* education
- \* smoking (passive or active)
- \* alcohol intake
- \* sanitation
- \* domestic animals relationship (toxoplasmosis, hydatid disease)

**VIII. Gynecological History.**

- \* Menstrual history
  - menarche
  - length of her period
  - length of menstruation
  - dysmenorrhoea
  - intermenstrual bleeding
- \* contraception (type, duration).

**IX. Drug History.**

- \* chronic use
- \* allergy to penicillin, sulfa
- \* allergy to food



## Pain :-

Anything can be forgotten except the pain because it direct you toward the God and doctors.

Analysis :

1. Site : retrosternal, right upper abdominal, loin pain.....etc.
2. Radiation
  - a. Radiated: pain extending to another site while initial pain persist e.g. ureteric pain.
  - b. Referred :pain appear at a site unrelated to the site of pathology but share with it the same dermatome, e.g. myocardial infarction.
  - c. Shifted : pain appear at another site and disappear from the first site where it firstly appear in it, e.g. acute appendicitis.
3. Character (Nature)
  - a. Constricting (tighting):as in angina pectoris.
  - b. Stabbing (4S): sudden, sever, sharp, short duration.
  - c. Distention(bursting) for encapsulated organs e.g. urinary bladder in case of retention of urine.
  - d. Burning
  - e. Throbbing : inflammation or migraine.
  - f. Colic : (3 criterias):
    - \* intermittent
    - \* hollow viscous(smooth muscle)
      - ⊗ bowel
      - ⊗ bile duct
      - ⊗ ureter
      - ⊗ fallopian tube
      - ⊗ submandibular duct
    - \* contracting against resistance : e.g. obstructing bowel.
  - g. Pricking : as in pericarditis.
  - h. Just a pain(vague) : patient unable to describe it.
4. Severity : assess by the following questions :-
  - a. Prevent patient from doing normal daily work.
  - b. Awake him from sleep or prevent it.
  - c. Force him to rolled around or need urgent medical help.
5. Duration and time of occurrence (frequency): day, night.
6. Aggravating and relieving factors e.g. drugs, movement, rest, eating, position.....etc.
7. Associated symptoms :
  - \* Non specific : fever, sweating, weakness.
  - \* specific : to related system. E.g. vomiting, hematuria.

## Notes :-

- \* Chief complaint : as short as possible.
- \* History of present illness : as long as possible.
- \* Avoid medical terms any where, use patient word.
  - e.g. RIF.....right lower abdomen.
  - Retention of urine.....inability of urine.
- \* Avoid leading questions.
  - e.g. patient has chest pain.....don't ask him( does it radiate to left shoulder ), but ask him (does it radiate to another site like back, abdomen, shoulders.
- \* Don't let your history moulded by the diagnosis of his case as he said or you read it in case sheet.
- \* Negative symptoms is important as positive symptoms .

## **CENTRAL NERVOUS SYSTEM**

1. Headache : as analysis of pain.
2. Dizziness : patient feels that he is unstable and giddy despite the fact that he is stable(patient is balanced).
3. Vertigo :subjective sense of imbalance(patient says, the surrounding is spinning around).  
(2,3)Ask about :
  - \* Onset :gradual or sudden.
  - \* Time of occurrence.
  - \* Precipitating factors e.g. drugs,alcohol,diseases,stress.
  - \* Associated symptoms
4. Syncope : transient loss of consciousness due to cerebral ischaemia.
5. Epilepsy : is tendency to spontaneous intermittent abnormal electrical activity in brain manifested as Seizures.  
Convulsion :are the motor signs of electrical discharge.
6. Coma :state of absolute unconsciousness in which patient not respond to any stimuli and reflexes are absent  
(4,5,6) Ask :

### **Before the attack**

- \* warning symptoms
- \* circumstances e.g. emotion
- \* can patient prevent it.

### **During the attack**

- \* loss of consciousness
- \* does patient injure himself
- \* does patient move
- \* does patient bite his tongue
- \* is patient incontinent for urine or stool
- \* colour of patient
- \* duration of attack
- \* associated symptoms

### **After the attack**

- \* Is patient confused or sleepy.
- \* How much patient remember about the attack and forward.

## Respiratory system

1. **Chest pain**.....ask about :- (as pain analysis)
  - \* site .....peripheral (lateral)
  - \* related to laugh, breathing
  - \* its effects on breathing
2. **Dyspnoea** .....ask about :-
  - \* onset, exertion, resting, time .
  - \* duration ,aggravating, relieving factors ,e.g. dust.
  - \* history of respiratory illness e.g. hay fever, TB.
  - \* exclude cardiac causes heart failure, hypertension.
  - \* orthopnoea, paroxysmal nocturnal dyspnoea.
  - \* Associated symptoms e.g. cough.
  - \* drug history, smoking.
3. **Cough** .....ask about :-
  - \* acute,chronic(onset) e.g. acute pneumonia, chronic bronchitis.
  - \* Duration of attack.
  - \* Productive or not.
  - \* How often does the patient cough.
  - \* Drug history, smoking,past history of bronchial asthma, TB.
  - \* Associated symptoms e.g.wheeze.
4. **Sputum**.....ask about :-
  - \* Amount e.g. teaspoon.
  - \* Color, taste, and smell.
  - \* Consist, ....serous,mucoid, mucopurulent.
  - \* Relation to cough, change in posture.
  - \* Haemoptysis.

## Cardiovascular system

### 1. Chest pain : as in analysis of pain :-

- \* retrosternal, exertional, or resting,
- \* tightening pain in angina pectoris or myocardial infarction.
- \* pricking pain in pericarditis.
- \* aggravated by exertion, emotion, heavy meal, cold.
- \* relived by rest, glyceride trinitrates.

### 2. Palpitation (awareness of heart beat) : ask about

- \* occurrence....rest, how often ?
- \* length and duration
- \* paroxysmal
- \* Regular
- \* associated symptoms
- \* drugs history(sympathomimetics)
- \* coffee tea.

### 3. Dyspnoea (shortness of breath) : ask about

- \* resting or exertional, time, onset
- \* orthopnoea paroxysmal nocturnal dyspnoea
- \* numbers of pillows
- \* exclude respiratory causes e.g. hay fever, wheeze
- \* Associated symptoms
- \* Drug history...B.blockers, heart failure, bronchial asthma.
- \* How many steps can he climb or walk before development of shortness of breath?

### 4. Ankle swelling :

- \* constant or only at night onset, extension
- \* unilateral or bilateral
- \* drug intake e.g. steroid, NSAID, Ca channel blockers
- \* Associated symptoms.

### 5. Intermittent claudication : ischaemic pain in calf muscle felt after walking in a steady pace for 100 yards relieved by rest for few minutes. Recurs again after shorter distances.

Ask about :

- \* distance can patient walk without pain ?
- \* Time need to relieve pain ?
- \* Smoking ....Burger's disease (adult).  
Atherosclerosis (elderly).



## **Gastrointestinal Tract**

### **Dyshagia : ( Difficulty of swallowing)**

Ask about :-

1. Painless or painful
2. Progressive or intermittent.
3. To solid or fluid if both , which first ?
4. The level of which food stick( throat, esophagus )
5. Painful swallowing(odynophagia)
6. Associated symptoms e.g. cough, heart burn.

### **Vomiting : Ask about :-**

**Process :**

1. Does it proceed by nausea ?
2. How often does the patient vomit ?
3. Does it projectile or effortless ?
4. Time .....
  - \* before or after meal ?
  - \* early morning.....uraemia, pregnancy
  - \* evening.....pyloric stenosis.
5. Aggravating, relieving factors, drugs
6. Associated symptoms.....abdominal pain, headache.

**Vomit :**

1. Amount, taste, odor, color.
  - \* Bitter taste.....bile ( obstruction is beyond ampulla of Vater )
  - \* Sour taste.....gastric contents
2. Contents : undigested food, watery material, faeces.
3. Haematemesis

### **Haematemesis : Ask about :-**

1. Is it dark(coffee ground...due acid hematin formation)?....peptic ulcer, esophageal varices.
2. Is it bright color.... Esophageal, pharyngeal lesions
3. Exclude hemoptysis(pink frothy), epistaxis,

### **Abdominal distension : Ask about :**

1. Onset, is it progressive or constant ?
2. What factors associated with variation ?
3. Is it painful ?
4. Does it affect respiration ?
5. Is it relieved by belching, vomiting or defecation ?

### **Diarrhea : ..... Ask about :-**

1. Onset, acute or chronic, intermittent?
2. Associated with tenesmus, urgency?
3. Is it occur at night ? to exclude psychogenic causes ?
4. Is it large volume, small frequent.....small bowel diseases?
5. Is it small volume ,large frequency....large bowel diseases ?
6. Is it formed, semiformal, watery stool ?
7. Color of stool, smell?
8. Does it mix with blood, mucous, or pus ?
9. Specific gravity...float or sink or difficult to wash ?
10. Alcohol, drugs, gastrointestinal surgery ?
11. Associated symptoms e.g. vomiting , abdominal pain ?

**Malena :** (black tarry sticky offensive stool ) Ask about :-

1. Onset, progressive, decrease with time ?
2. Associated with hematemesis (upper gastrointestinal bleeding )
3. Ask about the criteria of malena
4. Ask about symptoms that give a clue to diagnosis e.g. peptic ulcer, drug intake, NSAID, thrombolytic drugs, alcohol, bleeding tendency, esophageal varices ,
5. Foods cause dark stool color ,e.g. meat .
6. Drugs cause dark stool color e.g. ferrous, bismuth(but it is not sticky).

**Haematochezia :( bleeding per rectum )** Ask about :-

1. Is blood mix with or on surface of stool ?
2. Does it appear after passing the stool ?
3. Has the patient ever passed mucous or pus ?
4. Is defecation is painfull ?
5. When does the pain begins : after, before, during, or at time unrelated to defecation ?
6. Associated with protrusion of mass or not ?

Without pain :

1. mucous.....colitis
2. after defecation....haemorrhoid
3. alone, massive and fresh....diverticular disease
4. mixed with stool or the stool is streaked with blood.....carcinoma of colon .

With pain :

1. fissure in ano .
2. carcinoma of rectal canal

**Jaundice :** Ask about :-

1. Past medical and surgical history.
2. Previous jaundice or hepatitis
3. Blood transfusion.
4. Drugs and alcohol history.
5. Family history of jaundice.
6. Occupational history .....doctors, nurses.
7. Sexual history and contact with jaundiced patient
8. Onset, pruritis, previous dyspepsia
9. Urine, stool color, altered bowel habit
10. Biliary colic, abdominal pain, fever and rigor.
11. Appetite and weight change, gastrointestinal bleeding .

# Renal system

**Loin pain :** analysis of pain radiation to groin, mid thigh, scrotum in male,

Ask about :-

1. Associated symptoms of renal system.
2. symptoms of uraemia, headache, drowsiness, vomiting, fit .

**Irritative symptoms :-** ( causes, prostatism, urinary tract infection, others )

1. Frequency : increase number of voiding regardless of volume .
2. Nocturia : (1,2) even caused by urinary tract infection, hypercalcaemia, diabetes, uraemia.
3. Urgency : urgent desire to pass urine .
4. Dysuria : painful micturation (character, site of pain, timing in relation to micturation.
5. Incontinence : the patient can not control the escape of urine .

**Obstructive symptoms : causes :-** prostatism, stricture, tumor

**Poor stream**

**Hesitancy :** the patient hesitate before micturation .

**Double voiding :** or post voiding dribbling .

**Strangary :** painful desire for micturation ,with passage of few drops of urine often blood stained and it is usually indicate ureteric stone

**Retention of urine :** (inability to pass urine ).

**Polyuria :** more than three liters per day ( $>3$  L / d) . causes : diabetes mellitus, diabetes insipidus, chronic renal failure.

**Oligurea :** less than (500-800) ml / day . anuria :  $< 200$  ml / day .

**Haematuria :**

1. Is it painful or painless?
2. Color (bright, clot ),
3. Onset .
4. Blood present in ..... initial .....ureter  
whole stream.....kidney  
at end of stream.....urethral
5. Exclude other causes of red color urine ( beetroot, drugs).



## Points to remember in present illness of some surgical cases

History of lump or ulcer :-

**Duration :** when was it first noticed ?

**First symptom :** what brought it to the patient's notice ? see / felt during washing, pain

**Other symptom :** what symptom does it cause ? if pain , describe it.

**Progressive :** how has it change since it was first noticed ?

**Persistence :** has it ever disappeared or healed ?

**Multiplicity :** has (or had) the patient any other lump or ulcers ?

**Goiter :**

- \* take history of lump.
- \* Associated thyroid status (hyper or hypothyroidism ).  
e.g. ask about :- anxiety, sweating,hotness,.....etc

**Breast :-**

lump, pain, discharge, give history of fit .

Ask about :-

1. menstrual history
2. contraceptive history
3. family history of breast cancer
4. trauma to breast....fat necrosis
5. pregnancies, lactation

**Appendicitis :-**

1. central vague abdominal pain (around umbilicus) .
2. shifted to localize pain at RIF.
3. Anorexia.
4. Vomiting .

**Hernia :**

1. history of lump.
2. Precipitating factors for hernia  
e.g. chronic cough  
straining  
multipara  
surgery
3. is it strangulated ?

**Scrotal swelling :**

1. history of lump .
2. history of trauma .
3. urinary tract symptoms.

**Intestinal obstruction : four cardinal symptoms**

1. colic ( if mechanical )
2. vomiting
3. abdominal distension
4. constipation

**Retention of urine :**

1. onset
2. painfull / painless
3. is there suprapubic pain ?
4. review renal tract symptoms before retention of urine and their progression .

**Operative cases :**

**Chief complaint :** what bring the patient e.g. abdominal pain, lump.

**History of present illness :** second day post operative e.g. appendectomy.

Give history of chief complaint.....

operative preparation.....

investigation,

intravenous fluid...etc

urgent or elective post operative describe each day vomiting, investigation, treatment.



## General Examination

**Definition** :- Is examination of exposed parts of the body (head, neck, hands, and feet).

- A. General inspection (ABCDE ).
- B. General signs ( JACCOL )
- C. Examination of head, neck, hand and feet.
- D. Vital signs after the general examination, must not forgotten.

### A. General inspection :-

- \* Age.
- \* Built.
- \* Consciousness,
- \* Comfortability
- \* Disorientation.
- \* Expression.

E.g. middle age patient of average built sitting or lying comfortably in bed, oriented to time place, persons, not look dyspnic, not look anxious but look in pain.

### B. General signs.

**J** : jaundice.....upper sclera ( need day light ).

**A** : anaemia ....mucous membrane of oral cavity, conjunctiva, face, palm of the hand (palmer creases ).

Anaemia is a laboratory term(investigation), when Hb% < 10%.

But here we say a most appropriate clinical term is (Pallor).

**C** : cyanosis...lips, tongue (differentiate the central from peripheral type of cyanosis) , nails.

**C** : clubbing of fingers

**O** : oedema, at ankle region....press against the shin of tibia, 10 cm above the medial malleolous for ( 30-60) seconds by thumb (exposure up to the knee ) .

**L** : cervical lymphadenopathy.

**Cervical lymph nodes** :

- a. Upper circle : submental, submandibular, preauricular, postauricular, occipital group.
- b. Lower circle : supraclavicular.
- c. Longitudinal group : jugulodigastric ( along the sternoclavicular muscle ).

### C. Examination of :-

#### Head :-

- \* Skin.....any scar, pigmentation, discoloration, mass.
- \* Hair.....normal hair distribution or loss .
- \* Orifices.....eye, ear, nose, oral cavity (any deformities, discharge ).  
Mouth....if any variation, fissuring, cheliosis.  
....Examine.....teeth, gum, tongue, soft palate, uvula, tonsils.

#### Neck :-

- \* Thyroid swelling
- \* Tracheal deviation.
- \* Neck vein if engorged.
- \* Cervical lymph node .

#### Hand, Feet :-

- \* Skin....discoloration (cyanosis, pallor, jaundice) , hair distribution.
- \* Nail ....clubbing, discoloration, kolionychia.
- \* Oedema ....in case of feet examination (as above ).

**Notes** :any cannula,urine catheter, nasogastric tube ....etc should be added to the general examination.

### D. Vital signs

## Vital signs

**Pulse, respiratory rate, blood pressure, temperature.**

**A. Pulse** :-rate, rhythm, volume, synchronisty, character, state of blood vessels wall.

e.g. 87 beat per minute (BPM) regular rhythm, of normal pulse volume and character, no radioradial or radiofemoral delay, and normal state of blood vessels wall.

e.g.

- \* irregular rhythm.....atrial fibrillation .
- \* radiofemoral delay.....coarctation of aorta .
- \* cord like (hard) blood vessels .....atherosclerosis .

### **B. Temperature :**

**Oral temp.  $37 \pm 0.2$  i.e.  $36.8-37.2$  °C**

Rectal temp.....core temp.

Axillary temp. =  $0.5$  °C less than oral temp.

Rectal temp. =  $0.5$  °C more than oral temp.

So

Axillary temp..... Oral temp..... Rectal temp

Pyrexia ..... Oral temp  $> 38.5$  °C

Hyperpyrexia..... Oral temp  $> 40$  °C

**Indications for Rectal temp / Axillary temp. :-**

1. Children
2. Mentally retarded patient.
3. Comatose patient
4. Trauma to mouth
5. Shortly after drinking hot, or cold water.
6. Mouth breather in case of nasogastric tube or blocked nose.

**C. Respiratory rate** 16-20 cycle per minute.

**D. Blood pressure** average 120 / 80 mmHg.

Range : systolic 100-160 mmHg  
: Diastolic 60-90 mmHg.

## Abdominal examination

Always remember :-

- a. permission
- b. position
- c. exposure

then

- a. inspection
- b. palpation
- c. percussion
- d. percussion
- e. auscultation

So, the patient is in supine position with normal anatomical position, the hands beside him and one pillow below the head of him .

Exposure of abdomen from the nipple to the mid thigh, since some abdominal organs found below the rib edges e.g. the liver, and genitalia is part of the abdomen .

Complete abdominal examination need :-

- \* supraclavicular lymph node examination
- \* genitalia
- \* per rectal examination
- \* back examination .

### Inspection :-

#### I. From the foot of the bed .

To see symmetry and shape of the abdomen.

Asymmetry.....organomegaly , mass .

Shape .....

- a. flat.....normally
- b. Scaphoid.....cachexia..congenital diaphragmatic hernia
- c. Distended (6 F)
  - 1. FAT = obesity
  - 2. FLUID = ascites
  - 3. FLATUS = intestinal obstruction
  - 4. FAECES = fecal impaction
  - 5. FETUS = pregnancy
  - 6. FIBROID AND OTHER PELVIC TUMOURS.

#### II.Squatting (kneeling position) from side of the bed.

To see :- epigastric pulsation, visible peristalsis, move with respiration, any movable mass or visible *epigastric pulsation* :- ( ask the patient to hold his breathing and look )

- \* Normally can be seen in thin patient.
- \* Abnormally in right ventricular hypertrophy, aortic aneurysm, mass overlying the stomach and aorta.

*visible peristalsis* :- in stepladder form, due to mesenteric attachment from transverse process of L2 to right sacroiliac joint, so that the movement is from left hypochondrium to right iliac fossa. it is an important sign in pyloric obstruction.

*move with respiration* :-

- \* absence.....peritonitis e.g. due to perforated duodenal ulcer.
- \* More obvious.....emphysema.
- \* Normally....the abdomen move freely with respiration.

#### III.From the side of the bed (always you should be on the right side )

To see :- skin , umbilicus, and hernial orifices.

Skin .....scar, pigmentation, striae, hair distribution, visible or dilated veins.

Umbilicus .....site, shape, discharge.



## Umbilicus

### Site

Normally : midway between xiphisternum and pubic symphysis.

Shifted :

- a. upward : ovarian cyst,  
tumours.
- b. Downward : upper abdominal tumours  
vitelointestinal duct  
ascitis.

### Shape

- \* Flat : normal.
- \* everted : umbilical hernia abdominal distension
- \* inverted.

### Discharge :

- ❖ amount
- ❖ colour
- ❖ type
  - \* Faeces....vitelointestinal duct in infant
  - \* Urine.....urachus in elderly due to obstruction of the neck of urinary bladder as in benign prostatic hyperplasia.
  - \* Blood.....adenoma
  - \* Pus.....infection.

## Skin

### i. Scar

Site e.g. extended from...

Length, transverse or linear.

Age, old or new.

1,2.....upper , lower midline incisions.

3,4,5,6....upper and lower right paramedian incisions and  
upper and lower left paramedian incisions.


7.....kocher incision for cholecystectomy.


8.....grid iron incision.

9.....lower transverse incision(pfennansteil incision) for caesarean section.

### ii. Hair distribution

seen in endocrine disorders.

In male the apex at pubic symphysis and the base at the perineum, may reach to umbilicus. 

In female the apex at the perineum and the base at pubic symphysis, only up to mons pubis. 

### iii. Visible veins (distended)

e.g.

- \* caput medusa in liver cirrhosis.
- \* axillary / femoral vein in inferior vena cava obstruction.

### iv. Striae :-

- \* Striae albicans (white) in :- pregnancy(multipara).  
Ascitis.  
weight gain.  
cushing syndrome.
- \* Striae gravidarum (pink) seen in primigravida.
- \* Linea nigra seen in pregnancy.

### v. pigmentation

: e.g. Cambel De morgan spots in elderly (naevi).



## Palpation :-

Technique :

**Hand** :- horizontal with your wrist and parallel to the patient.

Use palmar aspect of fingers.....superficial palpation.

Use finger tips .....deep palpation

Warm hand.

**Approach** :- away from site of pain (from history or ask the patient).

If no pain, start from anywhere clock or anticlock wise till you reach lastly to umbilicus.

**If patient fail to relax his abdomen.**

- \* Breathing from his mouth.
- \* Flex the knee joints ...abdominal respiration is prominent.
- \* Nicholson's method :- palm of left hand is placed on lower part of sternum. Gradual pressure until you lean on the patient. This prevent thoracic breathing and make abdominal breathing prominent.

Steps :-

- \* Superficial palpation.
  - \* Deep palpation.
  - \* organomegaly
- } For any mass or tenderness.

## PHYSICAL SIGNS

**Rigidity** :- continous abdominal contraction.

**Voluntary** :-....fear / cold(guarding).

**Involuntary** :-.. peritonitis e.g.(board like rigidity).

**Guarding** :- rigidity on palpation an area of moderate tenderness.

**Rebound tenderness(release sign)** :- sudden withdrawal of manual pressure....sharp exacerbation of pain indicate underlying inflamed organ.

**Pointing test** :- ask the patient to point at the site of maximum tenderness . indicate localized tenderness e.g. appendicitis at Mc Burny point.

## Percussion :-

Technique

Finding .....Tympanic (normal)..... gas in the bowel.

Dull.....fluid.

## Auscultation :-

(bowel sounds, vascular bruit).

**bowel sounds** :-

- \* site...hear at RIF due to iliocaecal junction is active area to peristalsis.
- \* Time....at least 2 minutes to confirm it.
- \* Character....noisy gurgling sounds (gas plus fluid).
- ⊗ Absence in peritonitis, paralytic ileus.
- ⊗ Exaggerated in malabsorption, mechanical intestinal obstruction, carcinoid syndrome.

**Vascular bruit** :- along aorta and iliac artery for systolic murmur in case of renal artery stenosis.

Other physical signs :-

**Cough impulse** :- for hernia orifices. If positive ....visible expansile cough impulse.

**Succession splash** :- at least four hours after the meal.

Hold the patient from the pelvis and place your ear near the abdomen and shake the patient.

Tap the epigastric region, short sudden dipping movement.

Positive sign indicate gastric outlet obstruction.

## EXAMINATION OF ABDOMINAL ORGANS

### Liver :-

#### Palpation :-

start from RIF upward towards the right hypochondrium. ask the patient to take deep breath and dip your finger tips into the abdomen with each inspiration since by the diaphragm the liver will be pushed downward in inspiration.

See :-

1. Edge.....defined, tender.
2. Surface.....smooth, lobular.
3. Consistency.....firm, soft.
4. Attachment to the skin.
5. Temperature .....by comparing with opposite side.
6. Thrill .....in \* haemangioma  
\* portal hypertension.

#### Percussion :-

**From above ....**start from angle of Lewis (second intercostal space) tell you change from resonance(lung) to dullness(liver).

**From below.....**start from RIF till you change from tympanic(bowel) to dullness(liver).

- \* Then measure the liver span .....normally about (10-12) cm.
- \* Normally the upper limit of the liver is at fifth intercostal space but in deep expiration may reach to the fourth intercostal space.
- \* Normally the lower margin of the liver is just palpable below the costal margin.

#### Auscultation :-

Important in case of hepatoma(vascular tumour).....auscultate for bruit.

## Spleen

### Palpation :-

Start palpation from RIF toward the left hypochondrium, also ask the patient to take deep breath and with each one dip your finger tips, and look to patient face for any tenderness. by palpation you feel the sharp anterior edge of the spleen which directed downward and medially toward RIF, and sometimes splenic notch may be clearly noticed.

**Percussion :-** .....dullness.

**Auscultation :-** Kenawy's sign = venous hum.

Using the bell of stethoscope putting it just below the xiphoid process, louder on inspiration, found in case of portal hypertension, especially (Egyptian splenomegaly). i.e. splenomegaly also with bilharzial fibrosis.

### Differentiation between enlarged spleen and enlarged left kidney :-

#### 1. by palpation :-

- \* **Go over** :- you can go over (insert your finger between enlarged left kidney and costal cartilage but is not in case of enlarged spleen.
- \* **Spleen enlarged towards RIF** (inferiorly and medially) while left kidney enlarged (posteriorly and medially).
- \* **Splenic notch.**

#### 2. percussion .....spleen .....dullness....

Kidney .....resonance or (tympanic) since enlarged kidney will push the left colonic flexure upward so causing resonance.

#### 3. ballotment .....pathognomonic for enlarged kidney. Examine the back....(enlarged kidney).

## Gall bladder

Apparent gallbladder enlargement.

1. acute cholecystitis
2. mucocele.
3. ca of head of pancreas.
4. ca of gallbladder.

Murphy's sign (sign of cholecystitis).

The left hand is placed on the costal margin so that the thumb lies over the fundus of the gallbladder ( at the point that the costal margin meets the rectus abdominus muscle.

Ask the patient to take deep breath.

Positive sign :- the patient catch his breath, because the descending diaphragm cause the inflamed gall-bladder to hit against the presence of the thumb.

Differentiation between enlarged gallbladder and right kidney enlargement, is by ballottement.

## Urinary bladder

Palpation :-

Similar to gravid uterus to determine the edge of the urinary bladder, by ulnar side of left hand from umbilical level downward.

Percussion :- .....dullness.

Note :-

- \* acute retention of urine .....painfull urinary bladder.
- \* Chronic retention of urine .....painless.



## Kidney

Palpation :- bimanual.  
ballottement.

### **Bimanual examination :-**

Both right and left kidney from right side.

Put the left hand posteriorly on the renal angle or costovertebral angle = between twelfth rib and lateral border of sacrospinalis muscle.

Put the right hand anteriorly and use the palp of the finger to palpate.

The two hands approximate as expiration is in progress.

Sometimes, the lower pole of the right kidney is palpable especially in thin people.

**Renal ballottement :-** is pathognomonic for renal enlargement (each kidney examine from its side).

Right hand(watching hand)is placed over the right flankwhile the left hand(displacing hand)is placed posteriorly. The left hand is pushed and then restored to its original place. If the kidney enlarged it must touch the right hand(watching).

### **Renal angle test :-**

The patient is in sitting position and hold his arm in front of him.

The doctor place his thumb at the renal angle and short tabbing (pricking), if no tenderness, you can increase the strength of movement.

The sign is of great value in determining deep seated tenderness.

### **Examination for free fluid(ascitis)**

**Shifting dullness**(quantity of fluid is as minimum as 500 ml)

Start percussion from the midline at level of umbilicus till you reach a point in which the sound will change from tympanic to dullness. Fix your left hand at that site, ask the patient to move slightly to opposite side and wait for 30-60 seconds(to give a time to fluid to re accumulate)then percouss backward, you will see change from dullness to tympanic .so this is a shifted dullness.

Note :- this may happen in case of intestinal obstruction by the distended coils of small intestine.

**Transmitted thrill**(large amount of fluid more than 1000 ml)

One hand is placed on one side of the abdomen and the other hand is placed on other side. So, you can pricking by one hand and felt the transmitted thrill on other side like a mechanical waves.

But you must stop the fat thrill by putting a hand at the center of abdomen, you can use the hand of the patient or your thumb.

**Dipping :-** a procedure used to examine for organomegally in case of ascitis.



## Appendicitis

### Signs

1. **Hamberger's sign** :- for appetite.
2. **Pointing test** :- ask the patient to point to site of maximum tenderness by one finger, and usually lies at Mc Burny's point which lies at the junction of the lateral third and medial two third of the line joining the anterior superior iliac spine and umbilicus.
3. **Rebound tenderness** :- sudden lifting of the hand from site of tenderness will cause pain and this indicate peritonitis.
4. **Bed shaking test** :- pain(peritonitis)which either localized or generalized.
5. **Rovsing sign** :- palpation of left iliac fossa will cause pain in RIF.
6. **Psoas sign** :- patient lie on the left side and hyperextend the right hip joint, this will cause a pain due to irritation of psoas muscle.
7. **Obturator sign** :- flex the knee with internal rotation of the hip, will lead to stretch of obturator internus and causing a pain in the supra pubic area.

## Examination of a lump

1. local examination.....inspection / palpation / physical sign / percussion / auscultation .
2. regional examination.....regional lymph node / local tissue(artery, nerves, bone and joint.
3. Systemic examination .

### Local examination

#### A. Inspection(4S)

- \* Site
- \* Size
- \* Shape :- spherical, pear, ....or irregular shape.
- \* State :- of overlying skin .....pigmentation, dilated or visible vein, oedema, sign of inflammation, scar.

#### B. Palpation :-

- \* Surface / edge / consistency .
  - \* Temperature / tenderness .
  - \* Attachment to skin, muscle.
1. Surface :- smooth, nodular, irregular.
  2. Edge :- well defined or not.
  3. Consistency :-

	English	American
<b>Soft</b>	Relaxed biceps	Ear lobe
<b>Firm</b>	Contracted biceps	Tip of nose
<b>Hard</b>	Contracted biceps of athlete	forehead
<b>Stony hard</b>	wall	wall

4. Temperature :- use dorsum of the hand (little thickness, little sweat gland ).  
Compare it with other area.
5. Tenderness :-
6. Attachment to the skin :- push the skin to see if it is movable. i.e. not attached to it.
7. Attachment to the muscle :- ask the patient to tense ( contract ) the muscle then check mobility Of the lump. If it is possible in all directions, so, it is not attached. If it is possible in one side or less felt so, it is consider to be attached.

#### C. Physical signs :- to know the composition of the lump

1. Fluctuation.
2. Transillumination.
3. Slipping test.
4. Emptying sign.
5. Reducibility.
6. Indentation sign.
7. Pulsation.

**Fluctuation** :-means presence of fluid in the lump.

Put index and middle fingers of left hand at two opposite sides of the mass and push the center of the mass by the right index finger. You will feel something pushing your two fingers to the sides.

If the mass is large, fix one index finger and push by the other index finger, check in two different directions.

Note :- lipoma give positive test since fat is fluid in body temperature.

### **Transillumination :-**

In dark room, apply the torch tightly to the organ involved, if the lump is transilluminated, a glowing light can be seen.

In non dark room, use dark X-ray film and make a tube from it, place the light under or near the mass.

Positive test in :-

1. Vaginal hydrocele. Long standing hydrocele is negative due to fibrosis.
2. Spinal meningocele.
3. Cystic hygroma.
4. Young child inguinal hernia.

### **Slipping test :-**

Pathognomonic for lipoma .

When the edges of swelling is pressed with index finger, it slips from beneath the finger.

### **Emptying sign(compression sign) :-**

When compress the swelling , diminished or disappeared, and when release the pressure, it is refill slowly.

Positive sign seen in :-

1. Cavernous hemangioma.
2. Meningocele with narrow neck.
3. Lymphangiomata.

### **Reducibility :-**

Feature of hernia.

Reducible lump can pushed away into another space but not reappear spontaneously, without application of opposite force e.g. ask the patient to cough, so that cough impulse will be positive.

### **Indentation :-**

When mass indented with finger, it remained indented.

Positive sign seen in :-

1. Certain cysts ( sebaceous cyst, large dermoid )
2. Mass of solid faeces.

### **Pulsation**

Expansile impulse : occur in aneurysm and vascular tumours.

Transmitted pulsation : transmitted pulsation from neighbouring artery.

How you can differentiate expansile impulse from transmitted pulsation ?

By placing two pens over the mass.

If the pens move up only, it is a transmitted impulse. ↑ ↑

If the pens up and partly, it is an expansile impulse. ↖ ↗

### **D. Auscultation .**

Systolic bruit in vascular lump.

Bowel sound, lump containing bowel.(note :- by percussion it is tympanic).

### **Regional examination**

- \* Examination of draining lymph node .
- \* State of local tissue ( arteries, nerves, bone and joint ) .

## Examination of intrabdominal lump

Inspection :- see :-

a.movement with respiration if the lump is visible.

b.Relation to abdominal wall or abdominal organs by :-

- \* Ask the patient to elevate his shoulder and head against pressure by your hand....contraction of abdominal muscles.

If the lump become more prominent, so it is related to abdominal wall ( extraperitoneal ).

If the lump is decrease in size or disappear, so it is related to abdominal organs ( intraperitoneal ).

- \* Carnett's test :-

Ask the patient to elevate his feet from the bed keeping the leg extended and knees are still. This will lead to abdominal muscles contraction.

Palpation :- site, size, surface, edge, consistency, physical signs.

Knee-elbow position :- useful in determining that the pulsation is transmitted or expansile.

Percussion :- resonance indicate presence of gas (bowel).

Dullness seen in abscess.

Auscultation :- as above.



### Examination of hernia (Inguinal hernia)

- Inguinal canal :- about 3.15 cm extended between :-
- Deep inguinal ring = 1/2 inch= 1.25 cm above the midpoint of inguinal ligament.
- Superficial inguinal ring =1.25 cm above the pubic tubercle or at the mid inguinal point.
- The midpoint of inguinal ligament : at an equal distance between the anterior superior spine and pubic tubercle.
- The mid inguinal point : at an equal distance between the anterior superior spine and pubic symphysis.

### Boundaries :- (Extremely Injured Face Can Indicate Traumatic Lacing)

Roof (anterior) :

- a. external oblique aponeurosis
- b. conjoined muscle(internal oblique + transversus abdominus ).

Floor (posterior) :

- a. transversalis fascia.
- b. Conjoined tendon.
- c. Inferior epigastric vessels.

Superior : Conjoined tendon ( internal oblique + transversus abdominus ).

Inferior : a.inguinal ligament  
b.lacunar ligament.

### Contents :

In male :

- a. spermatic cord.
- b. ilioinguinal nerve.
- c. genital branch of genitofemoral nerve.

In female :

- a. round ligament.
- b. ilioinguinal nerve.
- c. genital branch of genitofemoral nerve.

**Spermatic cord : ( sperm in ringer lactate : spermatic cord, ilioinguinal nerve, round ligament ).**

3 covering (ICE)	3 vessels (ADDUCT)	3 nerves (GCS)	3 different structures
External spermatic fascia	Vas deference	Genital branch of genitofemoral nerve.	Lymphatic vessels
Cremastric fascia	Testicular artery	Cremastric nerve.	Autonomic nerve
Internal spermatic fascia	Testicular vein	Sympathetic plexus around artery of ductus deference.	Process vaginalis

Examination :

Strip the patient below the waist, standing position.

See any lump.

#### Ask yourself

1. Unilateral or bilateral.
2. Does extended down into scrotum.
3. Inguinal(above and medial to pubic tubercle) or femoral hernia(below and lateral to pubic tubercle).
4. Do tests for hernia examination.

#### local examination

1. Inspect 4 S( site, size, shape, surface ).
2. Palpation : surface, consistency, temperature, tenderness
3. physical signs : reducibility, cough impulse.
4. Auscultation and Percussion: bowel content.

Expansile cough impulse :

1. Ask the patient to cough and see.
2. Ask the patient to cough with your fingers compress the lump firmly.

Note :Absence of cough impulse not exclude hernia because the neck of the sac may be blocked by adhesion.

**Tests for hernial examination :**

1. Three fingers test( Zieman test ).
2. Occlusion test.
3. Invagination test.

**1. Zieman test :**

- \* Indexfinger : on indirect(deep ring).
- \* Middle finger : on direct (superficial ring).
- \* Ring finger : femoral.

The fingers are maintained in these position, the patient instructed to hold his nose and blow (effective more than coughing) and felt at any one of these site for hernia.

**2. Occlusion test :**

Reduce the hernia and close the deep inguinal ring and ask the patient to cough.

So, if swelling is seen in superficial ring this indicate that it is a direct hernia. And if not seen so, it is indirect hernia.

**3. Invagination test :**

**To differentiate inguinal from femoral hernia:**

The little finger is introduced into inguinal canal, so if the lump is appeared or disappeared on coughing. This indicate that it is a femoral hernia.

**Also it is helpful to differentiate direct from indirect inguinal hernia:**

If the lump is felt at the tip of the finger, so it is an indirect hernia.

If the lump is felt on the back of the finger, so it is a direct hernia.

### **Reduction of hernia :**

Put your hand on the lump and left it upward and backward.

Taxis : ask the patient to flex the thigh and knee, the digit of your hand will surround the swelling and form a funnel leading to superficial inguinal ring while those of the other hand grasp the swelling and gentle squeezing.

#### ***Contraindication to Taxis :***

- a. Intestinal obstruction.
- b. Oedema of overlying skin.

### **Scrotal examination ;**

- \* Grasp the swelling between fingers and thumb, ascertain whether its possible to get above the swelling or not.  
If possible, it is not hernia.
- \* Grasp the neck of swelling between finger and thumb and ask the patient to cough, note the cough impulse.

### ***Do not forget :***

Other types of hernia.

Differential diagnosis of femoral hernia.

Causes of hernia, its treatment.

In summary

As hernia :

1. unilateral or bilateral.
2. Inguinal or femoral.
3. Descend to scrotum(indirect).
4. Tests of hernia examination.

As a lump :

1. Inspection
2. Palpation
3. Physical sign
4. Percussion and auscultation.

## Breast examination

1. Inspection
2. Palpation.
3. Examination of axillary.
4. Examination of the arm.

Exposure : down to the waist.

Position : patient : sit upright, leg outstretched.

Examiner : stand in front of her.

### Inspection : 3S + VAN.

2. Size : under, over developed.
3. Symmetry : compare two breast.
4. Visible : lump or ulcer.  
Scar or striae.  
Or dilated veins
5. Skin :  
Tethering : due to involvement of Cooper ligament by carcinoma.  
Peau d' orange: oedema of skin due to lymphatic blockage by involvement of dermal and subdermal lymph node with carcinoma.  
Redness : inflammation. Mastitis carcinomatosa.
6. Areola :
  - \* Degree of pigmentation.
  - \* Retention cyst of Montgomery glands.
  - \* Fissure or cracking.
7. Nipple :
  - \* Level of two nipples(left breast normally hangs slightly).
  - \* Direction..outward and downward.
  - \* Discharge....cracking. eczema. Retraction.
  - \* Discoloration.

### Palpation :-

Note :

1. Ask the patient about site of the lump she noticed it.
2. Firstly examine the healthy breast.
3. Divid the breast into four quadrants and use tips of fingers to palpate.
4. Palpate behind the nipple and the axillary tail.
5. Then examine the affected breast.

Lump :

1. site,
2. size,
3. shape,
4. tenderness,
5. temperature,
6. consistency,
7. surface,
8. edge,
9. fixity to the skin,
10. fixity to deep structure.



### ***Pectoralis fascia :***

Patient place her hand lightly on her hip with thumb behind, pick up the lump between the fingers and try to move it in horizontal then vertical direction. Now, ask the patient to press her hand firmly on her hip and test the mobility.

### ***Serratus anterior*** ( i.e. lump at periphery of lower outer quadrants).

Ask the patient to place the hand of affected breast up on your shoulder and to press it.

As a role, if the mass move in all direction, it is not attached. If it is move in one direction, it is attached.

### ***Skin tethering :***

Can be demonstrated by :

- a. Moving the lump from side to side and watch to see if skin dimple at extremes of movement.
- b. Early tethering can be seen by gentle squeezing of the skin.

### ***Nipple :***

- \* If on deep palpation of the nipple there is palpable movable mass, see if moving this lump increase of causing nipple retraction.
- \* If there is nipple retraction, press gently on both sides of it to see if it can everted.
- \* If there is nipple discharge, see :
  1. Source ; by gently press each segment of the breast and areola.
  2. Colour :
    - \* red- blood .....ductal carcinoma or papilloma.
    - \* Yellow : serum or pus .....pus, fibroadenosis, contraception.
    - \* Green : serum or debries .....fibroadenosis, duct ectasia.
    - \* White ; milk .....lactation.

### ***Examination of axillary lymph node***

- \* axillary lymph node : 52 lymph node on each axilla.  
6 groups of axillary lymph node(Apical, central, interpectoral, lateral, infraclavicular, subscapular).
- \* The right axilla examined with left hand and vice versa.

### ***Technique :***

1. Elevate the patient arm and outstretch it upward, palpate the apical part of the axilla for apical lymph nodes.
2. Bring the patient arm down and let it rest loosely on your examining hand, palpate again for apical lymph nodes, your other hand is used to support the patient's shoulder.
3. Slide your fingers against the rib cage and examine for central lymph nodes.
4. Then pinch anteriorly between the axilla and the chest wall to examine interpectoral lymph nodes.
5. Palpate against the surgical neck of humerus in the fold of axilla superiorly for lateral lymph nodes.
6. Palpate in the depression below the lateral aspect of the clavicle for infraclavicular lymph nodes.
7. Cross the patient hand against her neck so that the scapula wings and pinch for subscapular lymph nodes.
8. Your finding about : site, size, number, tenderness, consistency, fixity.

### ***Examination of the arm :***

- a. Swelling.
- b. Oedema(lymphoedema).
- c. Arterial, venous or neurological abnormalities.

### ***Note :***

***It is very important to examine the abdomen for any organomegaly (metastasis), also spine for metastasis.***