

Approach to a patient with fever

Common causes of fever in our daily practice are

1. Viral fever
2. UTI
3. RTI
4. Pneumonia
5. TB
6. Typhoid fever
7. Liver abscess
8. Encephalitis
9. Malaria
10. Acute leukaemia, aplastic anaemia

What are the histories should be taken in a febrile patient?

1. Duration: less than 7 days -usually viral fever, more than 7 days- UTI, RTI, pneumonia, TB, typhoid fever, liver abscess. Fever for more than 1 year in otherwise healthy subject is probably not fever, ask the patient to record temperature first, before going to investigate in details.
2. History of cough: If yes then productive or not. If productive then color mucoid or purulent or blood stained. Purulent sputum usually indicate bacterial infection, blood stained sputum usually indicate pulmonary tuberculosis, bronchial carcinoma. Expectoration of profuse foul smelling sputum occurs in lung abscess, empyema thoracis.
3. Sore throat/difficulty in swallowing-pain in throat, difficulty in swallowing occurs in acute tonsillitis.
4. Chest pain-pleuritis type of unilateral chest pain (chest pain increase after taking deep breath, cough) usually indicate pneumonia.
5. Abdominal pain: Pain in right hypochondriac region occur in liver abscess, pain in loin occur in pyelonephritis, pain in lower abdomen occurs in UTI.

6. Dysuria, foul smelling urine, cloudy urine in UTI
7. History of loose motion: fever for more than 7 days + loose motion=typhoid fever, fever for less than 7 days (usually 3-4 days) +loose motion= viral fever (viral gastro-enteritis)
8. History of disorientation, confusion, alteration of consciousness occurs in encephalitis, meningitis
9. History of bleeding manifestation (e.g. gum bleeding), rash in skin- may be present in acute leukaemia, aplastic anaemia
10. Any large joint (commonly knee, ankle, elbow, shoulder) pain and swelling-occur in septic arthritis.

Examination of a febrile patient

1. Anaemia-usually present in tuberculosis, acute leukaemia, aplastic anaemia.
2. Nutritional status-poor nutritional status indicates patient suffering from chronic febrile illness like tuberculosis.
3. Clubbing-may be present in lung abscess, empyema thoracis.
4. Pulse- to differentiate from factitious fever. Pulse increase with increase of temperature.
5. Blood pressure- hypotension or shock may indicate septicemia
6. Lymphadenopathy-generalized lymphadenopathy occur in acute leukaemia, lymphoma.
7. Bony tenderness-present in acute leukaemia.
8. Bruise, ecchymosis, purpura-acute leukaemia, aplastic anaemia.
9. Oral cavity-tonsils may be enlarged, congested, pus point may be present in acute tonsillitis.
10. Examination of chest-features of consolidation and pleural effusion. Post tussive crepitation (crepitation persisting after cough), creps in apical region- usually in pulmonary TB.
11. Abdomen-hepatomegaly, splenomegaly. Tenderness in renal angle and hypogastric region. Fever with tender hepatomegaly usually occurs in liver abscess. Fever with splenomegaly usually indicate typhoid fever. Fever with tenderness in renal angle and hypogastric region

indicate pyelonephritis and lower UTI respectively. Non-tender hepatomegaly in leukaemia, lymphoma. Ascites may be present in bacterial peritonitis and abdominal TB.

12. Neck rigidity, Kernig's sign, planter reflex should be examined. Fever with neck rigidity, positive kernig's sign, bilateral extensor planter response- in meningo-encephalitis

13. Other symptomatic examination-as for example pain and swelling of knee joint, then examine knee joint for overlying skin, local temperature, tenderness, effusion present or not.

History to locate site of infection in febrile patient

1. History of cough, productive sputum, chest pain, breathlessness = Respiratory system (RTI, pneumonia, pulmonary TB).

2. Burning and frequency of micturition, smoky and foul smelling of urine =Urinary tract (UTI)

3. Severe headache, neck rigidity, alteration of consciousness, convulsion= Brain (encephalitis, meningitis)

4. Anorexia, vomiting, upper abdominal pain, yellow coloration of eye & urine= Acute viral hepatitis.

5. Fever, stepped leader pattern, abdominal pain, diarrhea= Enteric/ Typhoid fever.

6. Pain & swelling of joint-asymmetrical, migratory, H/O of sore throat = Acute rheumatic fever.

7. Generalized weakness, bleeding manifestation (gum bleeding), purpura, echymosis = Haematological system (acute leukaemia, aplastic anaemia).

8. Arthralgia, oral ulcer, facial rash, alopecia = Rheumatological system (SLE).

9. Palpitation, SOB, night sweats, history of valvular/congenital heart diseases = CVS (Infective endocarditis)

Investigation of a patient with fever

Investigation will depend on patient's history and clinical examination.

1. CBC-usually normal in viral fever. High ESR and neutrophilic leucocytosis in pneumonia, liver abscess, acute pyelonephritis etc. Leucopenia in typhoid fever.

2. CBC with PBF-low Hb, high ESR, leucocytosis and blast cell in acute leukaemia. Pancytopenia in aplastic anaemia.
3. Urine R/E-pus cell >5/HPF in female and ≥ 3 /HPF in male in UTI, presence of granular cast usually indicate pyelonephritis.
4. Urine C/S in suspected UTI.
5. Chest X-ray-patchy opacities, consolidation, pleural effusion.
6. USG of whole abdomen-splenomegaly, hepatomegaly, SOL in liver, ascites, abdominal lymphadenopathy.
7. Sputum for Gram and AFB staining and C/S-if patient present with cough with productive sputum. For AFB at least 2 samples-one spot sample and one early morning sample is must, because AFB intermittently enter in to the sputum.
8. Throat swab C/S –in suspected case of acute tonsillitis.
9. Pleural fluid study-to differentiate parapneumonic, tubercular and malignant pleural effusion. Exaudative effusion with increase polymorph (neutrophil) occur in parapneumonic effusion, exaudative effusion with increase lymphocyte occur in tubercular effusion, ADA positive in pleural fluid in case of tuberculosis, in malignant effusion malignant cell may be present.
10. Ascites fluid study- exaudative effusion with increase polymorph (neutrophil) occur in bacterial peritonitis, exaudative effusion with increase lymphocyte in abdominal TB, ADA positive in ascitic fluid in case of tuberculosis.
11. CSF study-in suspected case of encephalitis/ meningo-encephalitis, tubercular meningitis.

Some short cut diagnostic tools

1. Viral fever=fever less than 7 days + bodyache + rhinitis
2. UTI= fever + dysuria, foul smelling urine/cloudy urine + pus cell >3-5/HPF
3. Pneumonia=fever + pleuritic type of chest pain + neutrophilic leucocytosis + consolidation and/or effusion in CXR.
4. Pulmonary TB= Fever and cough for more than 3 weeks + anorexia and weight loss + sputum for AFB positive and/or pachy opacities in CXR.

5. Typhoid fever= fever for more than 7 days + diarrhoea+ splenomegaly + leucopenia (or normal WBC count)
6. Liver abscess=fever (with chills and rigor) + tender hepatomegaly + neutrophilic leucocytosis + SOL in liver in USG.
7. Acute pyelonephritis= fever (with chills and rigor) + pain in loin + neutrophilic leucocytosis + pus cell>3-5/HPF + granular cast in urine + kidney swollen in USG.
8. Encephalitis=fever + alteration or loss of consciousness + planter bilateral extensor.
9. Acute leukaemia= fever +bleeding manifestations like gum bleeding + bony tenderness + generalized lymphadenopathy + hepato-splenomegaly.
10. Lymphoma= fever + generalized lymphadenopathy + hepato-splenomegaly
11. Aplastic anaemia= fever + bleeding manifestations like gum bleeding + no bony tenderness + no generalized lymphadenopathy + no hepato-splenomegaly.

Approach to a patient with acute cough

Acute cough is defined as lasting less than 3 weeks. Causes of acute cough are-

1. Viral respiratory tract infection
2. Pharyngitis
3. Bacterial infection (acute bronchitis)
4. Pneumonia
5. Inhalation of irritant dusts/fumes/allergic cough

What are the histories should be taken in a patient with acute cough?

1. Duration- to determine acute or chronic cough.
2. History of fever (less than 7 days), nasal discharge, headache, bodyache-viral respiratory tract infection.
3. History of fever, cough-productive, mucoid or purulent, wheezing, breathlessness-acute bronchitis.
4. High fever (may be with chills & rigor), cough-productive, localized chest pain-aggravate after coughing, deep inspiration-pneumonia.
5. Pain and irritation in throat, difficulty in swallowing, cough is irritating-more during talking, eating-pharyngitis.
6. History of exposure to dust, fumes (history of similar episode in past)-allergic cough.

Examination of a patient with acute cough

1. Temperature-raised in acute bronchitis & viral RTI.
2. Nasal mucosa congested-in viral RTI.
3. Oro-pharynx-congested in case of pharyngitis.
4. Examination of chest-bilateral ronchi present in case of acute bronchitis. Features of consolidation in pneumonia.

Investigation of a patient with acute cough

1. CBC-neutrophilic leucocytosis in pneumonia.
2. Throat swab C/S- in pharyngitis
3. CXR (P/A)-normal in acute bronchitis & viral RTI, consolidation in pneumonia.

Approach to a patient with chronic cough

Chronic cough which persist for more than 8 weeks. Causes are-

1. Asthma
2. Bronchiectasis
3. Cigarette smoking/smoker's cough
4. Pulmonary tuberculosis
5. Interstitial lung disease
6. Bronchial carcinoma
7. Postviral bronchial hyper-reactivity
8. Drug- ACE inhibitor

What are the histories should be taken in a patient with chronic cough?

1. Duration- to determine acute or chronic cough.
2. Cough-dry, precipitated by exposure to cold, dust, fumes, associated allergic rhinitis -asthma
3. Cough-productive, sputum profuse, more in morning-bronchiectasis.
4. History of fever usually in evening, cough-productive, anorexia, weightloss-pulmonary tuberculosis.
5. History of smoking or tobacco use, haemoptysis, chest pain- bronchial carcinoma.
9. History of viral fever, followed by dry cough- post viral bronchial hyperreactivity
6. Drug history e.g. ACEi.

Examination of a patient with chronic cough

1. Temperature-raised in pulmonary tuberculosis.
2. Clubbing-bronchial carcinoma, bronchiectasis.
3. Cervical lymphadenopathy- bronchial carcinoma, pulmonary TB with co-comitant tubercular lymphadenopathy.
4. Examination of chest-bilateral coarse crepitation in

bronchiectasis. Posttussive crepitation (crepitation persists after cough), crepitation in apical region, pleural effusion in TB. Features of mass lesion in bronchial carcinoma. Breath sound vesicular with prolonged expiration, bilateral polyphonic ronchi present in all over the both side of the chest in asthma.

Investigation of a patient with chronic cough

1. CXR (P/A)

- Asthma-normal
- Bronchiectasis-ring shadow in both lungs.
- Pulmonary TB-patchy opacities in one or both lungs.
- Bronchial carcinoma-mass lesion, rib destruction etc.
- Interstitial lung disease- fine or coarse reticular opacities or small nodules.

2. Sputum for Gram staining and C/S

3. AFB staining- 2 samples, one early morning and one spot sample.

4. Sputum for malignant cell

5. Pleural fluid study if any

6. CT guided FNAC from lung mass.

Approach to a patient with chest pain

Common causes of chest pain in practice

1. IHD
2. Pneumonic consolidation
3. GERD/PUD
4. Musculoskeletal

What are the histories should be taken in a patient with chest pain?

1. Duration- long duration of chest pain is usually due to non-cardiac origin (may be GERD/PUD). Short duration of chest pain may be due to IHD, pneumonic consolidation.
2. Age of onset- chest pain of IHD usually starts after 40 years, pain of pneumonic consolidation and musculoskeletal chest pain can be at any age, GERD/PUD is common in young age group.
3. Site- IHD pain is usually central, pain of pneumonic consolidation is usually peripheral and unilateral. Musculoskeletal chest pain is also peripheral.
4. Severity-pain of pneumonic consolidation and acute MI is usually severe. Pain of angina co-relate with the degree of exertion/exercise. Pain of GERD/PUD is usually mild to moderate.
5. Character-IHD pain is usually describes as tightness, heaviness, squeezing, crushing, constricting and usually a discomfort rather than pain. IHD pain is commonly accompanied by a feeling of breathlessness and sometimes this is the primary complaint. Character of pneumonic consolidation pain is sharp; GERD/PUD pain is burning in character.
6. Aggravating factor-IHD pain aggravates on exertion/exercise, pneumonic consolidation pain aggravates after coughing, deep inspiration and musculoskeletal chest pain aggravate after movement.
7. Relieving factor- IHD pain relieves after taking rest and taking nitrates, GERD/PUD pain relieve after taking antacids.

Examination of a patient with chest pain

1. IHD-examination is usually normal; patient may be sweaty and anxious.
2. Pneumonic consolidation-features of consolidation (percussion note dull, breath sound bronchial, vocal resonance increased).
3. GERD/PUD-examination is usually normal but epigastric tenderness may be present.
4. Musculoskeletal chest pain-pain increased on movements of thoracic spine and tender on palpation.

Investigation of a patient with chest pain

1. ECG- features of myocardial ischemia or infarction in IHD
2. Troponin-I –confirm MI.
3. CXR (P/A)-features of consolidation (homogenous opacity)
4. ETT-indicated when patient is highly suspicious for IHD but ECG & CXR is normal. (ETT should not be done in established IHD (MI, heart failure, unstable angina) patient).
5. Echocardiogram- indicated when patient is highly suspicious for IHD, ECG is normal & cardiomegaly on CXR.
6. Endoscopy of upper GIT- to confirm PUD.

N: B:

- a) Chest pain on exertion/exercise or chest pain aggravate after exercise is usually cardiac chest pain.
- b) Chest pain aggravates after coughing, deep inspiration, movements and tender on palpation is usually non-cardiac chest pain.
- c) Chest pain aggravate after coughing, deep inspiration is usually due to pneumonic consolidation.
- d) Chest pain aggravate after movement is usually musculo-skeletal chest pain.

Approach to a patient with breathlessness

Common causes of breathlessness in practice

1. COPD
2. Asthma
3. Heart failure
4. Anxiety neurosis
5. Huge pleural effusion
6. Pneumothorax

What are the histories should be taken in a patient with breathlessness?

1. Duration- long duration of breathlessness is usually due to asthma. Short duration of breathless may be due to heart failure.
2. Age of onset- breathlessness onset at childhood is usually asthma, onset after 40 years may be COPD or heart failure.
3. Breathlessness precipitated by exposure to cold, dust, fumes, associated allergic rhinitis, patient have dry cough-asthma.
4. History of tobacco use (smoking, use of smokeless tobacco like jorda, gul, even tobacco cultivation and engaged in tobacco processing), no cough or sometimes occasional cough with mucoid sputum-COPD.
5. History of chest pain, palpitation, orthopnea, paroxysmal nocturnal dyspnea-heart failure.
6. Breathlessness intermittent or paroxysmal, not aggravated after exertion -anxiety neurosis.

Examination of a patient with breathlessness

1. Asthma-breath sound vesicular with prolonged expiration, bilateral polyphonic ronchi present in all over the both side of the chest.

2. COPD- breath sound vesicular with prolonged expiration, inspiratory crepitation and expiratory ronchi present, prominence of accessory muscles of respiration (sternocleidomastoid).
3. Heart failure-leg edema, raised JVP, enlarged tender liver-CCF. Pulsus alternans, low blood pressure (may be high in case of hypertensive LVF), gallop rhythm, bilateral fine basal crepitation- acute LVF.
4. Pleural effusion-trachea shifted to opposite side, percussion note dull, breath sound reduce or absent, vocal resonance reduced.
5. Pneumothorax-trachea shifted to opposite side, percussion note hyperresonant, breath sound reduces or absent, vocal resonance reduced.
6. Anxiety neurosis-patient otherwise normal, respiratory rate normal, lungs clear.

Investigation of a patient with breathlessness

1. ECG

-In asthma-normal.

-In COPD- there may be RBBB or RVH, right atrial enlargement (P pulmonale)

-In heart failure- features of myocardial ischemia or infarction.

2.CXR (P/A)

-In asthma-normal

-In COPD-hyperinflation of both lung fields, tubular heart shadow, widening of the intercostals spaces, low flat diaphragm, presence of emphysematous bulla (confirm COPD).

-In heart failure-cardiomegaly.

-Pleural effusion-homogenous opacity with concave upper margin with obliteration of costo-phrenic and cardio-phrenic angle, trachea shifted to opposite side.

-Pneumothorax-increase translucency of the lung shadow, absence of vascular markings, collapse lung margin, trachea shifted to opposite side.

3. Spirometry-obstructive variety (FEV1 reduce, FEV1/FVC ratio reduce) in both asthma and COPD. But reversibility test is positive in asthma, negative in COPD.

4. Echocardiogram- will determine the cause of heart failure e.g. valvular heart disease, ischemic heart disease etc.

Approach to a patient with edema

Common causes of edema in practice

Unilateral

1. Cellulitis
2. DVT (deep venous thrombosis)
3. Lymph edema due to filariasis
4. Immobility (hemiplegia)

Bilateral peripheral edema

1. CCF
2. Cirrhosis of liver with portal hypertension
3. Nephrotic syndrome/CKD
4. Hypothyroidism
5. Malabsorption/protein energy malnutrition
6. Drugs-NSAIDs, steroid, CCB-nifedipine, amlodipine etc.

What are the histories should be taken in a patient with edema?

1. Duration of edema-long duration of edema particularly after journey without any other problems is usually normal.
2. Site of first appear –edema first appear in
 - Face –problem in kidney e.g. AGN, NS/CKD
 - Leg- edema of both leg- problem in heart e.g. CCF and edema in unilateral leg -cellulitis, DVT, lymph edema.
 - Abdomen- problem in liver e.g. CLD
3. History of decrease urine output, passage of high colour urine (AGN, nephrotic syndrome, CKD)
4. History chest pain, palpitation, breathlessness –CCF.

5. History of jaundice-CLD
6. History of steatorrhea (bulky, frothy, foul smelling stool, difficult to flush from the pan and floats in water), weight loss and features of malnutrition- malabsorption syndrome.
7. History of cold intolerance, weight gain, somnolence, voice change, constipation and menorrhagia-hypothyroidism.
8. Dietary history-excess salt intake or taking added salt. Taking excess salt cause fluid retention and edema.
9. History of fever-in case of cellulitis.
10. Drug history - NSAIDs, CCB-nifedipine, amlodipine, OCP etc. Ask whether edema appear after starting any of those drug.

Examination of a patient with edema

1. CCF-pulse low volume, edema-pitting, JVP raised, enlarged tender liver.
2. Cirrhosis of liver with portal hypertension-anaemia, jaundice (may be present), clubbing, leuconychia, spider naevi, gynecomastia, loss of axillary and pubic hair, ascites, splenomegaly, testicular atrophy.
3. Nephrotic syndrome/CKD-puffy face, edema pitting, anaemia and hypertension in case of AGN & CKD.
4. Hypothyroidism-pulse bradycardia, skin-dry, rough;
non-pitting edema, thyroid gland-enlarge, slow and delayed relaxation of ankle jerk.
5. Malabsorption/protein energy malnutrition-anaemia, features of malnutrition, smooth tongue, angular stomatitis.
5. Cellulitis-temperature raised, edema of unilateral leg, erythematous changes of overlying skin, local temperature raise.
6. DVT (deep venous thrombosis)- pitting edema of unilateral leg.
7. Lymph edema due to filariasis- non-pitting edema.

Investigation of a patient with edema

1. CBC- eosinophilia in filariasis, neutrophilic leucocytosis in cellulitis; anaemia in CKD, hypothyroidism and malabsorption syndrome.
2. ECG-in heart failure- features of myocardial ischemia or infarction.
3. CXR (P/A)-in heart failure-cardiomegaly.
4. Echocardiogram- will determine the cause of heart failure e.g. valvular heart disease, ischemic heart disease etc.
5. USG of whole abdomen-to evaluate liver echotexture, ascites, splenomegaly in CLD.
6. Renal function test-Urine R/E, S. creatinine,
7. Liver function test-S. bilirubin, S. albumin, albumin: globulin ratio, prothrombin time
8. Thyroid function test-S. TSH, FT4; high TSH and low FT4 in hypothyroidism.
9. Duplex USG of affected limb-to confirm DVT.

Approach to a patient with haemoptysis

Common causes of haemoptysis in practice

1. Pulmonary tuberculosis
2. Bronchial carcinoma
3. Acute bronchitis
4. Lung abscess
5. Bronchiectasis
6. Mitral stenosis with pulmonary hypertension

What are the histories should be taken in a patient with haemoptysis?

1. History of fever usually in evening, cough-productive, anorexia, weight loss- pulmonary tuberculosis.
2. Cough-productive, sputum profuse, more in morning- bronchiectasis.
3. Fever, weight loss, cough-productive, sputum profuse, foul smelling, more in morning- lung abscess.
4. History of smoking or tobacco use, haemoptysis, chest pain- bronchial carcinoma.
5. History of palpitation, SOB, past history of rheumatic fever- mitral stenosis with pulmonary hypertension.

Examination of a patient with haemoptysis

1. Temperature-raise in pulmonary tuberculosis.
2. Clubbing-bronchial carcinoma, bronchiectasis.
3. Cervical lymphadenopathy- bronchial carcinoma, pulmonary TB with co-comitant tubercular lymphadenopathy.
4. Examination of chest-bilateral coarse crepitation in bronchiectasis. Posttussive crepitation (crepitation persists after cough), crepitation in apical region, pleural effusion in tuberculosis. Features of mass lesion in bronchial carcinoma.

Investigation of a patient with haemoptysis

1. CXR (P/A)

- Bronchiectasis-ring shadow in both lungs.
- Pulmonary TB-patchy opacities in one or both lungs particularly in upper zone.
- Bronchial carcinoma-mass lesion, rib destruction etc.
- Straightening of left border of the heart in mitral stenosis

2. Sputum for Gram staining and C/S

3. Sputum for AFB- 2 samples, one in early morning and one spot sample.

4. Sputum for malignant cell

5. Pleural fluid study if any

6. CT guided FNAC from lung mass.

7. ECG-‘P’ mitrale

8. Echocardiogram- to confirm mitral stenosis.

Approach to a patient with pleural effusion

Common causes of pleural effusion in practice

1. Tubercular pleural effusion
2. Para pneumonic effusion
3. Bronchial carcinoma
4. Heart failure
5. CLD
6. CKD/Nephrotic syndrome

What are the histories should be taken in a patient with pleural effusion?

1. History of low grade fever, cough, weight loss –tubercular pleural effusion.
2. History of high grade fever (with chills & rigor), cough, pleuritic type of chest pain, weight loss –para pneumonic effusion.
3. History of smoking, cough (often with haemoptysis), chest pain-bronchial carcinoma.
4. History of chest pain, palpitation, breathlessness –CCF.
5. History of jaundice in past, haematemesis, melaena-CLD
6. History of hypertension/DM, decrease urine output-CKD.

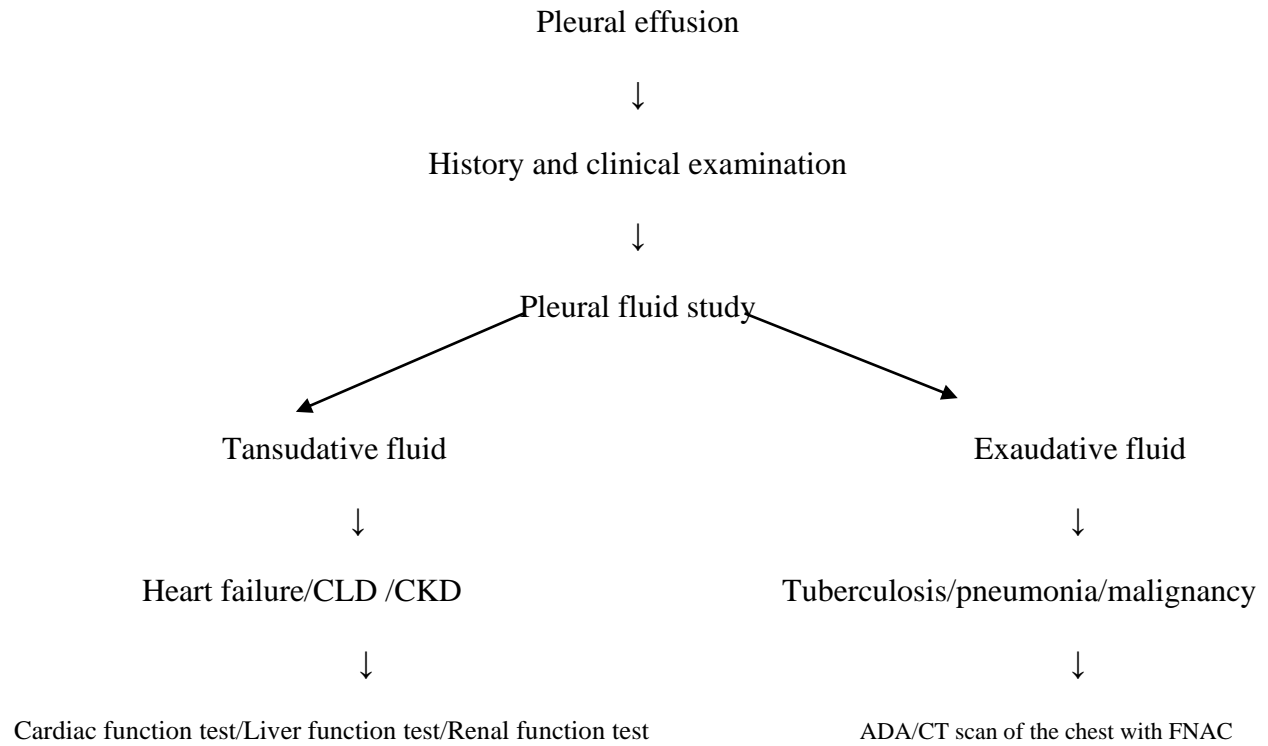
Examination of a patient with pleural effusion

1. Tubercular pleural effusion-temperature raise, weight loss.
2. Para pneumonic effusion-patient is usually toxic, temperature raise, features of consolidation.
3. Bronchial carcinoma-clubbing, cervical lymphadenopathy may be present, features of mass lesion.
4. CCF-pulse low volume, edema-pitting, JVP raised, enlarged tender liver.

5. Cirrhosis of liver with portal hypertension-anaemia, jaundice (may be present), clubbing, leuconychia, spider naevi, gynecomastia, loss of axillary and pubic hair, ascites, splenomegaly, testicular atrophy.
6. Nephrotic syndrome/CKD-puffy face, edema pitting, anaemia and high blood pressure in case of CKD.

Investigation of a patient with pleural effusion

1. CBC- neutrophilic leucocytosis in para pneumonic effusion.
2. CXR-consolidation in para pneumonic effusion, mass lesion in bronchial carcinoma, cardiomegaly in heart failure.
3. ECG-in heart failure- features of myocardial ischemia or infarction
4. Pleural fluid study- exudative fluid with lymphocytes predominant in tubercular pleural effusion, exudative fluid with neutrophil predominant in para pneumonic pleural effusion; transudative fluid in heart failure/CLD/CKD.
5. CT scan of the chest with CT guided FNAC
6. Pleural biopsy
7. Bronchoscopy
8. Liver function test-S. bilirubin, S. albumin, albumin: globulin ratio, prothrombin time
9. USG of whole abdomen- to evaluate liver echotexture, ascites, splenomegaly in CLD, mass lesion in intraabdominal malignancy, bilateral small kidney in case of CKD.
10. Echocardiogram- will determine the cause of heart failure e.g. valvular heart disease, ischemic heart disease etc.
11. Renal function test-Urine R/E, S. creatinine.



Approach to a patient with abdominal pain

An acute abdomen refers to a sudden, severe abdominal pain.

Common causes of acute abdominal pain

1. Acute appendicitis
2. Acute cholecystitis
3. Intestinal obstruction
4. Acute pancreatitis
5. Ureterolithiasis
6. Choledocholithiasis
7. Perforation of hollow viscus
8. Acute pyelonephritis
9. Acute myocardial infarction (inferior MI)

What are the histories should be taken in acute abdominal pain?

1. Duration-to differentiate acute or chronic abdominal pain
2. Severity-acute abdominal pain is usually severe.
3. Site

-Acute appendicitis-pain starts around the umbilical region then settle down to the right iliac fossa.

-Acute cholecystitis-pain in right hypochondriac region, may radiate to right shoulder.

-Intestinal obstruction- in small bowel obstruction the pain tends to be central and mid-abdominal. In large bowel obstruction, the pain is felt in the lower abdomen and the spasms last longer.

-Acute pancreatitis-pain in epigastric region, radiates to back.

-Ureterolithiasis -colicky pain in the flank and ipsilateral lower abdomen; radiates to testicles or vulvar area.

-Choledococholelithiasis-pain in right hypochondriac region.

-Perforation of hollow viscus-pain is initially localized, gradually become generalized due to peritonitis.

-Acute pyelonephritis-pain in loin.

4. Aggravating factor-except acute pyelonephritis and ureterolithiasis all cause of acute abdominal pain aggravate after taking meal.

5. Relieving factor-pain of acute pancreatitis relieves after sitting and leaning forwards, pain of ureterolithiasis relieve after taking NSAID.

6. Associated features

-Vomiting is common in case of acute appendicitis, acute cholecystitis, acute pancreatitis and intestinal obstruction but in intestinal obstruction vomiting is more marked after taking meal and associated with abdominal swelling.

-Haematuria-in ureterolithiasis patient may have haematuria,

-In pyelonephritis patient may complain of high fever (with chills and rigor), dysuria.

-Patient may have jaundice and generalized itching in case of choledococholelithiasis.

-In perforation of hollow viscus-patient may have history of taking NSAID.

-In case of acute MI patient may have palpitation, SOB, excessive sweating.

Examination of patient with acute abdominal pain

1. Jaundice-may be present in choledococholelithiasis.

2. Temperature-raise in acute pyelonephritis.

3. Blood pressure-may be low in perforation of hollow viscus and intestinal obstruction.

4. Examination of abdomen

-Acute appendicitis- Mcburney's point will be tender.

-Acute cholecystitis-Murphy's sign will be positive.

- Intestinal obstruction- asymmetrical swelling of abdomen, visible peristalsis from left to right in small bowel obstruction and right to left in large bowel obstruction. Bowel sound will be increased proximal to the obstruction and absent distal to the obstruction.
- Acute pancreatitis-epigastric region will be tender but soft (no muscle guarding due to retroperitoneal organ) this is characteristic for pancreatitis.
- Ureterolithiasis –tenderness in renal angle and lumbar region.
- Cholelithiasis-tenderness in right hypochondriac region.
- Perforation of hollow viscus-abdomen will be rigid, liver dullness will be obliterated.
- Acute pyelonephritis-tenderness in renal angle.
- Acute myocardial infarction (inferior MI)-no tenderness or muscle rigidity in epigastric region.

Investigation in a patient with acute abdominal pain

1. CBC-neutrophilic leucocytosis in case of acute appendicitis, pancreatitis, pyelonephritis.
2. Urine R/E-pus cell>5/HPF and granular cast in case of pyelonephritis, RBC in case of ureterolithiasis.
3. Serum amylase- increase in acute pancreatitis (may be normal if test done after 48 hours, because amylase excrete through urine)
4. Alkaline phosphatase – increase in cholelithiasis.
5. USG of whole abdomen
 - Acute appendicitis- USG mainly require to exclude renal and ureteric stone and gynecological problems but with advanced USG machine-appendix will be enlarged, and swollen due to inflammation.
 - Acute cholecystitis-wall of gall bladder will be thickened, stone may be present.
 - Intestinal obstruction- dilated bowel loops will be seen.
 - Acute pancreatitis-pancreas will be swollen, concomitant stone in gall bladder may be seen, also can detect any complication of pancreatitis e.g. pseudocyst.

-Ureterolithiasis –stone in ureter.

-Choledococholelithiasis-stone in bile duct.

-Acute pyelonephritis-kidney will be swollen.

6. X-ray abdomen including both dome of the diaphragm in erect posture-crescentic gas shadow under the right dome of the diaphragm in perforation of hollow viscus. Multiple air fluid level in case of intestinal obstruction.

7. ECG and Troponin-I-to exclude acute MI.

Approach to a patient with chronic abdominal pain

Chronic abdominal pain is pain that is present for more than 3 months.

Common causes of chronic abdominal pain

1. PUD
2. IBS
3. Cholelithiasis
4. Renal stone
5. Chronic pancreatitis
6. NUD
7. Psychogenic

What are the histories should be taken in chronic abdominal pain?

1. Duration-to differentiate acute or chronic abdominal pain
2. Severity-chronic abdominal pain is usually mild to moderate
3. Character-burning in case of PUD
4. Site
 - PUD-upper abdominal pain.
 - IBS-diffuse abdominal pain.
 - Cholelithiasis-right hypochondrium
 - Renal stone –lumbar region
 - Chronic pancreatitis- upper abdominal pain.
 - NUD- upper abdominal pain.
 - Psychogenic-pain at multiple sites (not localized).
5. Aggravating factor-in duodenal ulcer pain aggravate in empty stomach, in gastric ulcer pain aggravate after taking meal. Chronic pancreatitis pain also aggravate after taking food.

6. Relieving factor- in duodenal ulcer pain relieve after taking food, in gastric ulcer pain relieve in empty stomach/after vomiting. Chronic pancreatitis pain also relieve in empty stomach or after vomiting.

7. Associated feature-

-PUD-duodenal ulcer-weight gain, gastric ulcer-weight loss.

-IBS-no weight loss, no nocturnal symptom, appetite normal.

-Cholelithiasis-the pain may radiates to right shoulder joint.

-Renal stone –may have haematuria or other urinary problems.

-Chronic pancreatitis- significant weight loss, anorexia, features of DM (frequency of micturition, polydipsia).

-NUD- abdominal fullness, heartburn, nausea, belching.

-Psychogenic-sleep disturbances, emotional liability may be present.

Examination of patient with chronic abdominal pain

Examination of abdomen

-PUD-duodenal point tenderness present.

-IBS-diffuse tenderness may be present.

-Cholelithiasis-tenderness may be present in right hypochondriac region.

-Renal stone – tenderness may be present in lumbar region..

-Chronic pancreatitis- tenderness may be present in umbilical region.

-NUD- normal.

-Psychogenic-normal.

Investigation in a patient with chronic abdominal pain

1. USG of whole abdomen to exclude pancreatic, renal and gall bladder stone.

2. X-ray abdomen to exclude calcification in pancreas.

3. Endoscopy of upper GIT-to confirm gastric or duodenal ulcer.

4. CT scan of abdomen- may show atrophy, calcification or ductal dilatation of the pancreas.
5. Colonoscopy

Approach to a patient with jaundice

Common causes of jaundice in practice

1. Acute viral hepatitis
2. Drug induced hepatitis
3. Obstructive jaundice due to any cause (choledocolithiasis, carcinoma head of the pancreas etc)
4. Thalassemia
5. Septicemia

What are the histories should be taken in a patient with jaundice?

1. Severity of jaundice-severe jaundice is usually seen in obstructive jaundice due to any cause, mild jaundice in thalassemia, septicemia.
2. Prodromal symptoms (fever, nausea, vomiting, arthralgia etc) before onset of jaundice-acute viral hepatitis.
3. History of itching, dark urine, steatorrhea (passes of bulky, frothy stool which floats in water)-obstructive jaundice.
4. History of weakness, palpitation, early fatigability, past history of blood transfusion-thalassemia
5. History of fever, confusion, difficulty in breathing-septicemia.
6. History of taking antitubercular drug, atrovastatin, methotrexate, sulfasalazine, leflunomide, cytotoxic drugs etc-drug induce hepatitis.

(How to differentiate acute viral hepatitis and drug induce hepatitis clinically-in drug induce hepatitis there will be history of taking hepatotoxic drug and absence of prodromal features).

Examination of a patient with jaundice (history of the patient will lead to the clinical examination)

1. Acute viral hepatitis-jaundice (mild to moderate), enlarged tender liver.
2. Obstructive jaundice-jaundice (severe), mark of itching, there may be abdominal lump.
3. Thalassemia- mild jaundice, hepatosplenomegaly.

4. Septicemia-temperature raise, features of primary infection e.g. pneumonia, UTI etc.

Investigation of a patient with jaundice

1. S. bilirubin-increase

2. SGPT/ALT- increase in acute viral and drug induced hepatitis, normal or mildly increase in obstructive jaundice.

3. Alkaline phosphatase-increase in obstructive jaundice.

4. USG of whole abdomen-to differentiate hepatocellular jaundice from obstructive jaundice, also to find out the cause of obstructive jaundice.

5. Prothrombin time-to see the severity of hepatic impairment.

6. Hb electrophoresis to confirm thalassemia

7. CBC, blood, urine culture in septicemia

8. To determine the cause of acute viral hepatitis-anti HAV, anti HEV, HBsAg.

Approach to a patient with ascites

Common causes of ascites in practice

1. CLD
2. Abdominal TB
3. Intraabdominal malignancy with metastasis
4. Heart failure
5. Nephrotic syndrome/CKD

What are the histories should be taken in a patient with ascites?

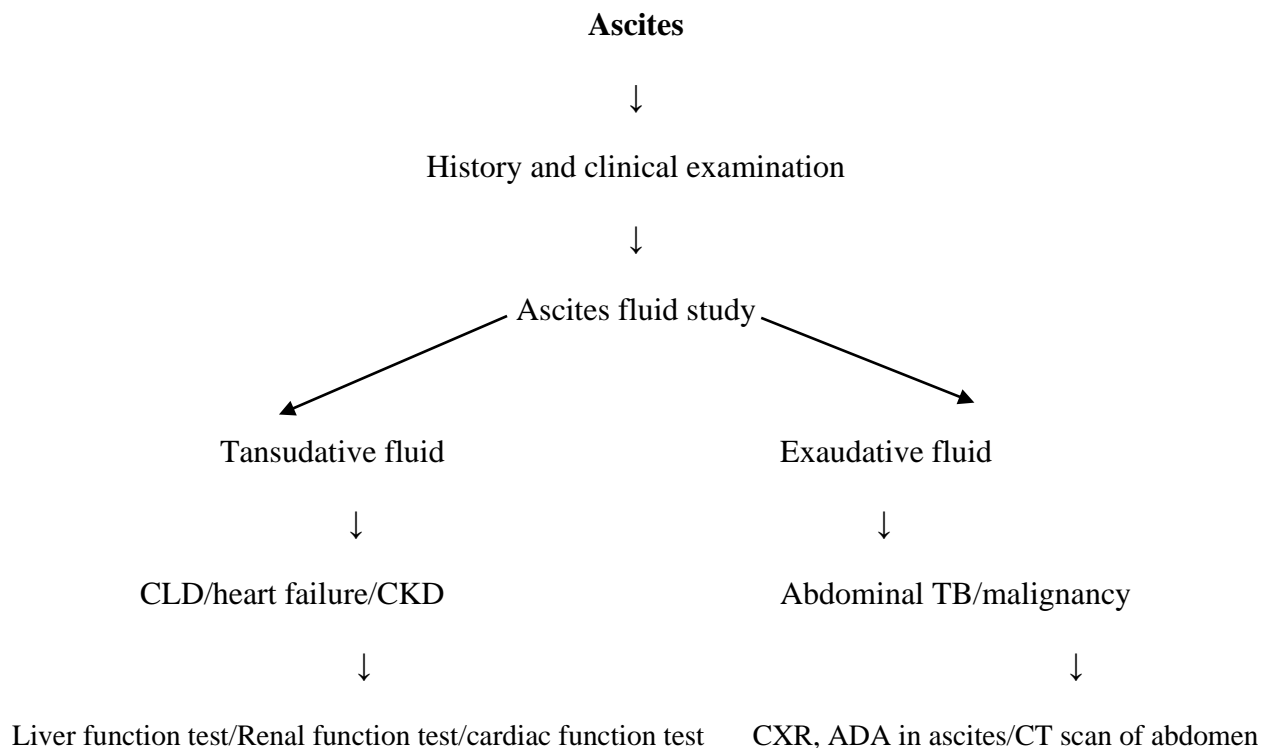
1. History of jaundice in past, haematemesis, melaena-CLD
2. History of fever, cough, weight loss, alteration of bowel habit-abdominal TB.
3. History of hypertension/DM, decrease urine output, anorexia, vomiting-CKD.
4. History chest pain, palpitation, breathlessness –CCF/heart failure.
5. History of abdominal pain, rapid development of ascites- intraabdominal malignancy.

Examination of a patient with ascites

1. Cirrhosis of liver with portal hypertension-anaemia, jaundice (may be present), clubbing, leuconychia, spider naevi, gynecomastia, loss of axillary and pubic hair, ascites, splenomegaly, testicular atrophy.
2. Abdominal TB-temperature raised, anaemia may be present, splenomegaly may be present.
3. Intraabdominal malignancy-anaemia, significant weight loss, abdominal lump.
4. CCF-pulse low volume, edema-pitting, JVP raised, enlarged tender liver.
5. Nephrotic syndrome/CKD-puffy face, edema pitting, anaemia and high blood pressure in case of CKD.

Investigation of a patient with ascites

1. CBC- anaemia may be present in all 5 cases but usually severe in CKD.
2. Liver function test-S. bilirubin, SGPT, S. albumin, albumin: globulin ratio, prothrombin time
3. USG of whole abdomen- to evaluate liver echotexture, ascites, splenomegaly in CLD; mass lesion in intraabdominal malignancy, bilateral small kidney in case of CKD
4. Ascites fluid study-transudative fluid in CLD, ADA positive and exudative fluid with lymphocytes predominant in abdominal TB. Malignant cell may be present in ascites in case of intraabdominal malignancy with peritoneal metastasis.
5. ECG-in heart failure- features of myocardial ischemia or infarction.
6. CXR (P/A)-in heart failure-cardiomegaly may be present.
7. Echocardiogram- will determine the cause of heart failure e.g. valvular heart disease, ischemic heart disease etc.
8. Renal function test-Urine R/E, S. creatinine.



Approach to a patient with haematemesis and melaena

Common causes of haematemesis and melaena in practice

1. PUD
2. Drug induce gastric erosion (e.g. NSAID)
3. Rupture oesophageal varices in CLD with portal hypertension
4. Carcinoma of the stomach

What are the histories should be taken in a patient with haematemesis and melaena?

1. Upper abdominal pain (burning) relation with food (either aggravate or relieve after taking meal)-PUD
2. History of jaundice in past, abdominal swelling- rupture oesophageal varices in CLD with portal hypertension.
3. Upper abdominal pain aggravate after taking meal, anorexia, weight loss- carcinoma stomach.
4. History of taking NSAID (pain killer)-drug induced gastric erosion.

Examination of a patient with haematemesis and melaena

1. PUD-duodenal point tenderness present.
2. CLD with portal hypertension-anaemia, jaundice (may be present), clubbing, leuconychia, spider naevi, gynecomastia, loss of axillary and pubic hair, ascites, splenomegaly, testicular atrophy.
3. Ca stomach-anaemia, significant weight loss, palpable left supra clavicular lymph node (Virchow's gland), abdominal lump.

Investigation of a patient with haematemesis and melaena

1. Endoscopy of upper GIT- will confirm PUD or rupture esophageal varices, ca stomach or drug induced gastric erosion.
2. Other investigation will depend upon endoscopy findings e.g. if endoscopy reveal ulcer then histopathology to exclude malignancy.

Approach to a patient with anaemia

Common causes of anaemia in practice

1. Anaemia of chronic disease e.g. tuberculosis, RA, CKD, hypothyroidism etc
2. Helminthiasis
3. Iron deficiency anaemia (IDA) due to any cause e.g. chronic blood loss from GIT bleeding, piles, menorrhagia etc.
4. Thalassemia
5. Acute leukaemia
6. Aplastic anaemia
7. Megaloblastic anaemia

What are the histories should be taken in a patient with anaemia?

1. Age of the patient-anaemia in younger age group is usually due to thalassemia, anaemia in older age group is usually due to anaemia of chronic disease, malignancy, aplastic anaemia, etc.
2. Sex- in female of reproductive age anaemia may be due to menorrhagia.
3. History of abdominal pain, passes of black tarry stool, fresh bleeding per rectum- IDA.
4. History of yellow coloration of eye and urine-thalassemia.
5. History of bleeding manifestations like gum bleeding, epistaxis, haematemesis, melaena-acute leukaemia, aplastic anaemia.
6. History of anal discomfort, perianal itching-helminthiasis.
7. Vegetarian patient-megaloblastic anaemia.
8. History of any chronic disease e.g.-features of tuberculosis (fever, cough, weight loss), RA (pain in small joints of the hands and feet, morning stiffness), hypothyroidism (weakness, somnolence, weight gain, cold intolerance), CKD (anorexia, vomiting, history of hypertension and/DM).
9. Drug history – history of taking NSAIDs (IDA from NSAID induce GIT bleeding).

Examination of a patient with anaemia (history of the patient will lead to the clinical examination)

1. Anaemia-to see the degree of anaemia. Severe anaemia is commonly due to aplastic anaemia, acute leukaemia, thalassemia etc. anaemia of chronic disease is usually mild to moderate.
2. Thalassemia- mild jaundice, hepatosplenomegaly.
3. Acute leukaemia-gum hypertrophy, bony tenderness, generalized lymphadenopathy, hepatosplenomegaly.
4. Aplastic anaemia-purpura, bruise, ecchymosis.

Investigation of a patient with anaemia

1. CBC with PBF- will clarify the types of anaemia (microcytic, macrocytic, normocytic), also provides information of thalassemia, leukaemia, megaloblastic and aplastic anaemia.
2. S. ferritin-reduce in IDA.
3. Hb electrophoresis to confirm thalassemia.
4. Vitamin B12 assay to diagnose megaloblastic anaemia.
5. Stool R/E-to see the ovum of helminths.
6. Bone marrow examination- will be needed to diagnose/confirm aplastic anaemia and leukaemia.

Approach to a patient with monoarthritis

Common causes of monoarthritis

1. Septic arthritis (including tubercular arthritis)
2. OA (common site-knee OA)
3. Trauma: especially if associated with haemoarthrosis
4. Crystal synovitis like gout, pseudogout
5. Haemoarthrosis associated with clotting abnormality (hemophilia)

What are the histories should be taken in a patient of monoarthritis?

1. Duration- short duration may be due to septic arthritis, trauma; long duration (months to years) is usually due to OA etc.
2. Joint involvement- septic arthritis is common in knee and hip joint. First MTP joint involve in gout. Hemophilic arthropathy commonly involve in knees, elbows, ankles and hips.
3. History of fever-present in septic arthritis.
4. History of fall, trauma may be present in traumatic haemoarthrosis.
5. Redness of the overlying skin-may be present in haemoarthrosis.
6. Functional impairment-there will be loss of movement of the affected joint in case septic arthritis and though painful, movements possible in OA.

Examination of a patient with monoarthritis

1. Examination of the joint-in OA effusion may be present but overlying temperature is normal. In septic arthritis effusion usually present but overlying temperature is raised. In case of haemoarthrosis overlying skin will be erythematous.
2. Movements of the joints-movements of the joint will be lost in case of septic arthritis, haemoarthrosis and movements usually preserve in OA.
3. Temperature-raise in septic arthritis.

Investigation of a patient with monoarthritis

1. CBC-neutrophilic leucocytosis in septic arthritis.
2. Synovial fluid for Gram staining, C/S and ADA.
3. S. uric acid to diagnose or exclude gout.
4. Factor VIII and IX assay to exclude hemophilia
5. X-ray of the affected joint-features of osteoarthritis may be present in OA.

Approach to a patient with polyarthritis

Common causes of polyarthritis

1. Viral arthritis-usually self limiting by 6 weeks
2. Rheumatoid arthritis
3. SLE
4. OA (generalized osteoarthritis).

What are the histories should be taken in a patient of polyarthritis?

1. Duration- shorter duration less than 6 weeks may be due to viral arthritis, long duration (years) is usually due to OA, RA, SLE etc.
2. Joint involvement- in RA and SLE symmetrical small joints of the hands and feet involve, but in SLE there will be only arthralgia (no joint swelling).
3. Progressive or non-progressive- RA usually progressive (over time symptoms worsen). OA is usually not progressive.
4. Morning stiffness-symptom worsen in morning and improves after walking, morning stiffness for more than 1 hour is characteristics of RA. On the other hand OA patient feels better in morning and aggravate after walking/exercise/exertion.
5. History of fever-joint pain preceded by history of fever usually viral arthritis.
6. History of oral ulcer, alopecia, butterfly rash in case of SLE.

Examination of a patient with polyarthritis

Examination of hand joint

- RA- MCP, PIP of both hands will be swollen and tender, Swan neck, Boutonniere deformity may be present.
- SLE-there will be no joint swelling and deformity.
- Viral arthritis- there will be joint swelling but no deformity.

Investigation of a patient with polyarthritis

1. CBC-ESR will be raised in RA, SLE, viral arthritis, normal in OA.

2. RF-positive in RA
3. AntiCCP-highly sensitive and specific for RA, should advise in RA test negative patient.
4. ANA-positive in case of SLE.

Approach to a patient with LBP

Common causes of LBP in daily practice

1. Mechanical LBP (due to overweight, trauma, weight lifting)
2. Osteoarthritis
3. PLID
4. Seronegative arthritis (Ankylosing spondylitis, Reactive arthritis)

What are the histories should be taken in a patient of LBP?

1. Duration- long duration (years) is usually due to OA or Seronegative arthritis (Ankylosing spondylitis, Reactive arthritis). Short duration may be due to mechanical LBP (due to overweight, trauma, weight lifting), PLID etc.
2. Joint involvement- in OA knee, ankle joint may involve. In seronegative arthritis (Ankylosing spondylitis, Reactive arthritis) knee, ankle, elbow, shoulder joint may involve but usually asymmetrical and associated with joint swelling. In mechanical LBP and PLID no other joint involve.
3. Progressive or non-progressive- seronegative arthritis (Ankylosing spondylitis, Reactive arthritis) and PLID is usually progressive (over time symptoms worsen). OA is usually not progressive and mechanical LBP improves with time.
4. Morning stiffness-symptom worsen in morning and improves after walking, this is characteristics of seronegative arthritis (Ankylosing spondylitis, Reactive arthritis). On the other hand OA, PLID and mechanical LBP patient feels better in morning and aggravate after walking.
5. Radiation-usually in PLID pain radiates to lower limb up to toes and associated with tingling, burning sensation of the lower limb.
6. History of weight lifting, history of fall, history of trauma may be present in PLID.
7. Any extraarticular manifestation- redness of eye, history of UTI, circinate balanitis, keratoderma blennorrhagica, nail dystrophy with subungual hyperkeratosis, oral ulcer, may be present in seronegative arthritis.

Examination of a patient with LBP

1. Movements of L/S

-PLID patient cannot stand straight, attempt extension of the L/S initiate severe pain, lateral bending of the lumbosacral spine of the affected side is usually restricted (cause pain), SLR test is positive on the affected side.

-In OA movements of L/S restricted slightly in all directions.

-In seronegative arthritis failure to obliterate the lumbar lordosis on forward flexion, restriction of movements of the lumbar spine in all directions, and possible pain on sacroiliac stressing. As the disease progresses, stiffness increases throughout the spine.

2. Examination of other involve joint-in OA knee and other peripheral large joint may involve and effusion may be present but overlying temperature is normal. In seronegative arthritis knee and other peripheral large joint may involve asymmetrically, effusion may be present but overlying temperature is raised.

Investigation of a patient with LBP

1. ESR-increase in seronegative arthritis, normal in OA, mechanical LBP and PLID
2. X-ray L/S-to see features of OA, bilateral osteophytes
3. X-ray pelvis (A/P) to detect sacro-ilitis
4. MRI of L/S to diagnose PLID

Some short cut diagnostic tools of LBP

- ✓ OA- ESR normal, X-ray of L/S-bilateral osteophytes may be present.
- ✓ PLID- ESR normal, X-ray of L/S-usually normal. MRI of L/S-usually identify the level and extent of PLID.
- ✓ Ankylosing spondylitis-ESR increase, X-ray of pelvis (A/P) reveal bilateral sacroilitis, HLAB27 usually positive.
- ✓ Reactive arthritis-ESR increase, X-ray of pelvis (A/P) reveal unilateral sacroilitis, urine C/S and high vaginal swab C/S may reveal urethritis and causative organism.

Approach to a patient with headache

Common causes of headache in our practice are

1. Tension headache
2. Migraine
3. Sinusitis
4. Infection (meningitis, encephalitis, brain abscess)
5. Intracerebral bleeding (intracerebral haemorrhage, subdural haematoma, subarachnoid hemorrhage etc)
6. Raised intracranial pressure due to any cause (ICSOL, idiopathic intracranial hypertension)

What are the histories should be taken in a patient present with headache?

1. Duration-this is very important in terms of etiology of headache. Headache of longer duration usually due to benign cause e.g. tension headache. But headache of shorter duration is usually due to serious cause like ICSOL, ICH, subdural haematoma etc.
2. Onset-sudden onset of severe headache usually suggests a serious underlying cause, e.g. subarachnoid haemorrhage, intracranial haemorrhage etc.
3. Severity-severe headache usually due to migraine, encephalitis, ICSOL, ICH, SAH etc, tension headache are usually mild to moderate in severity.
4. Site of headache-sudden, severe occipital headache is due to SAH, frontal headache due to sinusitis. Headache that can be located with tip of the finger is usually benign in origin. Migraine headache is usually unilateral.
5. Diurnal variation-headache severe at morning (awakening) gradually improve as the day progress is usually due to raised intracranial pressure (from ICSOL or benign intracranial hypertension), headache increase in severity as the day progress, highest at evening or night is usually due to tension headache. (Tension headache usually associated with sleep disturbance).

6. Presence of vomiting-attack of migraine is usually associated with vomiting. Headache associated with early morning vomiting usually due to raised intracranial pressure (from ICSOL or benign intracranial hypertension).
7. Aggravating factor-migraine headache usually aggravate on exposure to sound, light, noises etc.
8. Relieving factor-headache of raised ICP relieve after taking NSAIDs.

Examination of patient with headache

1. Appearance- anxious looking face may be present in tension headache.
2. Pulse-bradycardia (less than 60 beats/minute) usually indicates raised ICP.
3. Blood pressure- high blood pressure may be present in ICH, SAH patient.
4. Temperature-will be raised in case of encephalitis.
5. Examination of nervous system
 - Neck rigidity, positive Kernig's sign and bilateral planter extensor in meningoencephalitis.
 - Neck rigidity and positive Kernig's sign in SAH.
 - Hemiplegia/hemiparesis, planter extensor (unilateral) in the affected side in ICH.
6. Ophthalmoscopic examination-bilateral papilloedema in raised ICP due to any cause.

Investigation of a patient with headache

Investigation will depend on patient's history and clinical examination. Following investigations are usually enough to identify the cause of headache

1. CBC-leucocytosis may indicate encephalitis/meningoencephalitis.
2. CSF study-increase cell count in encephalitis, plenty RBC in case of SAH.
3. CT/MRI of brain- this test will confirm ICH, SAH, ICSOL.
4. X-ray PNS (OM view) - to diagnose sinusitis.

Some tips

1. Headache is commonly associated with fever due to any cause, commonly severe in viral fever.

2. COPD patient may have headache which indicate he has hypercapnia.

খুব সহজেই মাথা ব্যাথার সারমর্ম হচ্ছেঃ

- ✓ Tension Headache (টেনশনের কারনে মাথা ব্যাথা)= সকালে মাথা ব্যাথা নাই-বিকেল বা সন্ধ্যাই বেশি।
- ✓ Headache due to raised ICP (ব্রেন টিউমার) =সকালে খুব বেশি হয়, দুপুরে ও বিকেলে কমে যায়; বমি হয়, পালস ৬০/মিনিট এর কম।
- ✓ Migraine =মাঝে মাঝে আসে ২-৪ দিন থাকে, মাথার একপাশে সাধারনত ব্যাথা করে, তারপর ভালো হয়।
- ✓ Sinusitis=মাথা ব্যাথা (কপালে হয়), সাথে সর্দি থাকে।

Approach to a patient with unconsciousness

Common causes of unconsciousness in our practice are

1. Acute stroke
2. Encephalitis/Meningoencephalitis

3. Hypoglycemia
4. Diabetic ketoacidosis/HONK
5. Electrolyte Imbalance (hyponatraemia)

What are the histories should be taken in an unconsciousness patient?

1. Duration- shorter duration of unconsciousness usually implies stroke, consciousness usually regain within 24 hours.
2. Onset-sudden (without any warning) loss of consciousness occurs in acute stroke. Gradual onset of unconsciousness usually occurs in encephalitis, hypoglycemia, DKA/HONK and electrolyte imbalance.
3. History of DM and/or hypertension with irregular drug taking history may be present in acute stroke patient.
4. Associated symptoms
 - Weakness of the one side of the body (hemiplegia/hemiparesis) usually occurs in stroke.
 - Fever, headache usually associated with encephalitis/meningoencephalitis.
 - History of DM, missed or delayed meal, accidental increase dose of insulin or drugs, excess exercise/exertion than normal; these features usually present in hypoglycemia.
 - History of DM, stop or reduce dose of insulin or drugs, history of polydipsia, polyuria, dryness of mouth; those features usually present in DKA/HONK.
 - History of vomiting/diarrhea, use of diuretic; usually present in hyponatraemia.

Examination of an unconscious patient

Before starting examination we have to look carefully whether breathing and respiration is normal. There may be nasal obstruction due to discharge, may be fall back of tongue, if so then secure the airway first- give O₂, nasal and oro-pharyngeal suction, airway tube etc.

1. Appearance- acidotic breathing may be present in DKA.

2. Pulse- may be irregularly irregular if there is atrial fibrillation. (Usually thrombus form in left atrium in atrial fibrillation and this thrombus goes to brain and cause stroke).
3. Blood pressure- in acute stroke usually blood pressure remain high, in DKA/HONK blood pressure usually low; even patient may be in shock.
4. Temperature-will be raised in case of encephalitis and may be raised in DKA/HONK due to associated infection.
5. Dehydration-usually present in DKA/HONK. (Dehydration is the differentiating point between hypoglycemia and hyperglycemia clinically, in hypoglycemia dehydration absent but it is more marked in DKA/HONK)
6. Examination of nervous system-patient is unconscious (asses GCS score), may have 7th nerve palsy, hemiplegia/hemiparesis, planter extensor (unilateral) in the affected side in stroke. Planter will be bilaterally extensor in case of encephalitis and hypoglycemia. Neck rigidity, positive Kernig's sign and bilateral planter extensor in meningoencephalitis.
7. Bed side blood sugar test by glucometer - this will differentiate hypoglycemia and DKA/HONK.

Investigation of a patient with loss of consciousness

Investigation will depend on patient's history and clinical examination. Following investigations are usually enough to identify the cause of unconsciousness

1. CBC-neutrophilic leucocytosis may indicate encephalitis/meningoencephalitis.
2. Blood glucose-to confirm hypo or hyperglycemia (DKA/HONK)
3. S. electrolytes-to exclude hyponatraemia
4. CT/MRI of brain- this test will confirm stroke either ischemic or hemorrhagic.

Approach to a patient with weight loss

Common causes of weight loss in our practice

1. DM
2. Tuberculosis

3. Thyrotoxicosis
4. Malignancy

What are the histories should be taken in a patient with weight loss?

1. Rapidity of weight loss- loss of weight in quick succession usually occurs in thyrotoxicosis & DM. Gradual weight loss usually seen in TB and malignancy.
2. Degree of weight loss- usually weight loss is more in case of thyrotoxicosis & DM than TB & malignancy.
3. Associated symptom

DM - normal appetite, increase thirst, frequency of micturition etc.

Tuberculosis- fever, anorexia, cough etc.

Thyrotoxicosis- normal appetite, palpitation, heat intolerance, excessive sweating, sleeplessness.

Malignancy- symptoms depend upon the site of malignancy. As for example- if patient have carcinoma stomach then symptoms are anorexia, upper abdominal pain, vomiting after taking meal etc.

What are the examinations should be done in a patient with weight loss?

1. Anaemia- usually present in case of TB & malignancy.
2. Pulse- tachycardia usually present in thyrotoxicosis.
3. Temperature- usually elevated in case of TB.
4. DM- usually no definitive clinical sign but there may be feature of opportunistic infection (e.g. oral candidiasis) due to immunosuppression.
5. Thyrotoxicosis- lid retraction, lid lag, exophthalmus, tremor present in outstretched hands, thyroid gland may be enlarged.

6. TB- findings depends on site of TB e.g. if pulmonary TB then there may be crepitation in lungs particularly in apical area, if abdominal TB then there may be hepatosplenomegaly and ascites.

7. Malignancy- findings depends on site of malignancy e.g. if in lung (bronchial carcinoma) then there may be features of mass lesion, collapse, supraclavicular lymphadenopathy etc.

What are the investigations should be done in a patient with weight loss?

1. CBC- normal in DM, thyrotoxicosis; anaemia and lymphocytosis in TB.

2. FBS, 2ABF/OGTT to diagnose DM

3. S. TSH, T3, T4 (T3 and T4 will be raised and S. TSH will be low)

4. Sputum for AFB, chest x-ray to diagnose TB, other investigation to diagnose TB will depend on the site of TB e.g. to diagnose abdominal TB-ascites fluid study, ADA in ascites fluid.

5. Investigation to diagnose malignancy will depend on the site e.g. to diagnose bronchial carcinoma sputum for malignant cell, chest x-ray, CT guided FNAC, bronchoscopy with biopsy etc.

Approach to a patient with hiccup

Common causes of hiccup in our practice

1. Physiological
2. Liver abscess
3. Uremia (CKD/AKI)
4. Hyponatraemia
5. Intestinal obstruction

What are the histories should be taken in a patient with hiccup?

1. Duration- physiological hiccup are usually short lived. Persistent hiccup (for more than 24 hours) is usually due to any underlying cause.
2. Associated symptoms
 - a) Physiological – no other symptom, short lived, self limiting etc.
 - b) Liver abscess- fever with chills & rigor, anorexia, right upper abdominal pain etc. Uremia (CKD/AKI) – reduce urine output, nausea, vomiting etc.
 - c) Hyponatraemia- history of vomiting, diarrhoea, history of taking diuretic etc.
 - d) Intestinal obstruction- abdominal pain and distension, vomiting etc.

What are the examinations should be done in a patient with hiccup?

1. Anaemia- may be present in case of CKD.
2. Temperature- usually elevated in case of liver abscess.
3. Liver abscess- patient usually toxic, liver enlarged and tender.
4. Uremia (CKD/AKI) - usually no definitive clinical sign. Blood pressure may be high.
5. Hyponatraemia - usually no definitive clinical sign. Patient may be unconscious or have disturbances of consciousness (confusion, drowsy).
6. Intestinal obstruction- abdomen distended, diffuse tenderness present, absent bowel sound.

What are the investigations should be done in a patient with hiccup?

1. CBC- neutrophilic leucocytosis in liver abscess.

2. USG of whole abdomen- liver enlarged, SOL present in case of liver abscess, bilateral small kidney in CKD.
3. S. electrolytes- to diagnose hyponatraemia.
4. Renal function test- urine R/M/E, S. creatinine to diagnose CKD/AKI.
5. X-ray abdomen in erect posture- multiple air fluid level, enlargement of the diameter of the bowel in intestinal obstruction.