# GOLD STANDARD FOR FOCUSED HISTORY (OSCEs)



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# How to take Focused History

The general structure of focused history is:

- 1- Chief compliant analysis
- 2- Associated symptoms (by system or by DDx)
- 3- Risk factors for the DDx
- 4- Others (family, past medical and social history)

Everyone must ask about these main points for a proper focused history but the order could be different.

In this guide we used the following:

- For the C.C analysis we used the (SOCRATES) mnemonic for all the symptoms, so by collecting the questions of the analysis in this mnemonic that makes them easier to remember
- For the associated symptoms, we organized the related symptoms by system, so you ask about the related symptoms (from each system) to your chief compliant ONLY;

That makes them easier to remember (you only have to memorize the systemic review symptoms and start picking the related symptoms instead of memorizing thesymptoms of each DDx),

Another advantage is that this way won't repeat the same questions so many times and waste time in the OSCE

- In risk factors you ask about the risk factors (obviously!) for your DDx
- □ In others, same as associated you ask about the main related things

P.S. Organizing the associated symptoms by system is NOT the same as doing a systemic review.

So in this guide you will know why you asked each question (in the C.C analysis or the associated symptoms) and what DDx go with each symptom

Note: This way of organizing the associated symptoms by system is not from me, it was explained by an internal medicine doctor's during the rounds and from Focused History Taking for (OSCEs) second edition book .

# 1) CHEST PAIN

(DDx: ACS, Angina, PE, Pneumonia, Pericarditis, Shingles, Trauma)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site : Where exactly is the pain? Can you point to where it is?
    - a) Retrosternal  $\rightarrow$  ACS, Angina, Pericarditis
    - b) Lateral  $\rightarrow$  PE, Pneumonia, Shingles
  - II. Onset : When did it start? Did it come on suddenly or gradually? What were you doing at the time?

(duration, sudden or gradual, progression, first time)

- a) Sudden  $\rightarrow$  ACS, PE
- b) Gradual  $\rightarrow$  Angina, Pneumonia
- III. Character: How would you describe the pain?
  - a) Heaviness  $\rightarrow$  ACS, Angina
  - b) Stabbing  $\rightarrow$  PE, Pneumonia, Pericarditis
  - c) Tearing  $\rightarrow$  Aortic dissection
- IV. Radiation : Does the pain go anywhere?
  - a) Left shoulder, neck and teeth  $\rightarrow$  ACS, Angina
  - b) Back  $\rightarrow$  Aortic dissection
- V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
- VI. **T**iming
  - a) Continuous or intermittent
  - b) Day or night
  - c) At exertion or at rest
  - d) Time of each episode
  - VII. Exacerbating & Relieving factors: anything make the pain better or worse? Is it worse when you walk? Does it go away with rest? Is there any relation to eating food? Is it better when you are in any particular position e.g. sitting up? Is it worse when taking deep breaths?
    - Exacerbating:
      - a) Exertion  $\rightarrow$  ACS, Angina
    - b) Movement, respiration and cough  $\rightarrow$  PE, Pneumonia, Pericarditis Relieving:
      - a) Rest  $\rightarrow$  Angina
      - b) NTG  $\rightarrow$  Angina
      - c) Leaning forward  $\rightarrow$  Pericarditis
- VIII. Severity: How bad is the pain on a scale of 1–10, with 10 being the worst pain you can imagine? How would you score it at its worst?
- B. Associated symptoms

- I. General
  - a) Sweating  $\rightarrow MI$
  - b) Nausea & vomiting  $\rightarrow MI$
  - c) Fever & chills  $\rightarrow$  Pneumonia
- II. CVS
  - a) SOB
  - b) Orthopnea

Heart Failure

- c) PNDd) Ankle swelling
- III. RS
  - a) Cough and sputum  $\rightarrow$  Pneumonia
  - b) Hemoptysis  $\rightarrow$  Pneumonia, PE
  - c) Cyanosis  $\rightarrow PE$
- IV. GI
  - a) Heart burn or regurgitation  $\rightarrow$  GERD, Esophagitis
- V. MSS
  - a) Skin rash  $\rightarrow$  Shingles
  - b) Joint pain  $\rightarrow$  SLE
- C. Risk Factors (always ask about smoking and alcohol)
  - I. ACS  $\rightarrow$  Age, HTN, DM, Hyperlipidemia, Family history, Smoking
  - II.  $PE(DVT) \rightarrow Recent travel, Surgery, Immobility, Pregnancy, OCP, Previous DVTs$
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs
  - V. Allergy
  - VI. Trauma

- F. Social history
  - I. Smoking
  - II. Alcohol

\*\*Investigations:

- 1. ACS + Angina  $\rightarrow$  ECG and cardiac enzymes
- 2. Pneumonia  $\rightarrow$  CXR
- 3.  $PE \rightarrow CT$ -angiogram , D-dimer
- 4. CTPA or V/Q scan if PE suspected
- 5. CT angiogram if suspecting aortic dissection
- Bloods FBC, U&Es, CRP and troponin (baseline and 12 hours); caution re Ddimer
- 7. Coronary angiography, functional imaging or CT calcium scoring for diagnosis of coronary artery disease (if stable angina suspected)
- 8. Coronary angiography in ACS
- 9. Endoscopy

# **DIFFERENTIAL DIAGNOSIS**

Think of cardiac causes in patients over the age of 50 years. Similarly, unless there is a family history, consider other causes in younger patients. COMMON

#### **STABLE ANGINA**

- Central chest pain that may radiate to the arm and/or jaw
- Pain brought on by exercise and relieved by rest; no relation to food
- Associated breathlessness, but sweating, nausea and vomiting are not typical
- It is less likely to be simple angina if the pain remains after 20 minutes of rest and there is no relief from GTN spray

#### GASTRO-OESOPHAGEAL REFLUX DISEASE

- Retrosternal burning sensation, worse on lying flat, after eating large meals, bending forward or straining
- When describing the pain, the patient typically makes a fist and presses it up and down against his/her sternum
- Relieved by swallowing saliva, water or taking antacids
- Associated with the sensation of some regurgitation of acid and a sour taste

#### MUSCULOSKELETAL PAIN (INCLUDING COSTOCHONDRITIS AKA TIETZE'S SYNDROME)

- Localised, superficial pleuritic pain with no other associated symptoms
- There may or may not be a previous history of trauma
- Consider in younger patients with long-standing chest pain

#### **PNEUMONIA**

- History of cough and purulent sputum with general malaise and fever
- Pleuritic chest pain with haemoptysis, wheezing and shortness of breath
- There may be a background history of respiratory disease (e.g. COPD)

#### SERIOUS ACUTE CORONARY SYNDROME

- Sudden severe crushing central pain that may radiate to the arm and/or jaw
- Associated breathlessness, nausea, vomiting and sweating
- Typically, an old, obese male smoker with a sedentary lifestyle
- Angina often co-exists, but the pain is described as different to their usual pain

#### **AORTIC DISSECTION**

- Sudden onset of severe tearing/ripping pain felt between the shoulder blades
- Possible recent history of trauma including road traffic accidents; background of hypertension or Ehler– Danlos/Marfan's syndrome

• Wide range of secondary symptoms reflecting interruption of blood flow from the aorta, including acutely ischaemic limbs, stroke or even acute myocardial infarction

#### **PULMONARY EMBOLISM**

- Sudden onset of pleuritic pain; associated shortness of breath, fever and haemoptysis
- They may have noticed a swollen, hot tender leg unilaterally previously
- Risk factors include malignancy, pregnancy, clotting disorders, recent long-haul flights, or surgery with subsequent immobility

#### **TENSION PNEUMOTHORAX**

- Sudden onset of pleuritic chest pain with associated shortness of breath
- Background history of lung disease or collagen disease such as Marfan's syndrome or recent chest trauma (including recent insertion of a central line)

#### PERICARDITIS

- Pleuritic pain typically felt retrosternally and aggravated by coughing
- Classically the pain is better on sitting forward and worse on lying flat

#### MANAGEMENT

- In suspected ACS, initially manage with morphine, high-flow oxygen, glyceryl trinitrate and aspirin (MONA) ± other antiplatelet and heparin as per local protocol; after confirmation of ACS, PCI or thrombolysis depending on services available locally; longterm management includes ACE inhibitors, beta-blockers and statins
- Aortic dissection IV beta-blockers and nitrates initially; Stanford type A dissections require surgery; type B dissections are usually managed medically
- Tension pneumothorax Large bore needle decompression in the second intercostal space mid-clavicular line, with subsequent chest drain placement, typically fifth intercostal space mid-axillary line
- PE Low molecular weight heparin and warfarin commencement
- Reflux Trial of protein pump inhibitor or test for H. pylori in first instance
- Angina Beta-blocker or calcium channel antagonist is first-line therapy

# 2) **SOB**

(DDx: HF, Anemia, Asthma, COPD, Pneumonia, Bronchiectasis, PE, Restrictive Lung Disease, Pneumothorax)

- A. Chief Compliant analysis (SOCRATES) :
  - I. <del>Site</del>
  - II. Onset (duration, sudden or gradual, progression, first time)
  - III. Character
  - IV. Radiation
  - $\forall$ . Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - <del>VI.</del> **T**iming
    - a) continuous or intermittent
    - b) Day or Night:
      - $\circ$  Night  $\rightarrow$  Asthma
    - c) At exertion or at rest
    - d) Time of each episode
  - VII. Exacerbating & Relieving factors : Does anything relieve your breathlessness when it comes on? If you rest for a while does it improve? Do inhalers help? Does anything make it worse? Is it worse lying flat?
  - VIII. Severity : How far can you walk before the breathlessness stops you? Can you climb a flight of stairs in one go? If not, how many can you manage? Is it there at rest?
- **B.** Associated symptoms
  - I. General
    - a) Fever and chills  $\rightarrow$  Pneumonia
    - b) Weight loss
    - c) Fatigue and dizziness  $\rightarrow$  Anemia
  - II. CVS

- a) Chest Pain
- b) Palpitations
- c) Orthopnea
- d) PND

**Heart Failure** 

e) Ankle swelling

#### III. RS

- a) Cough  $\rightarrow$  Asthma, COPD, Pneumonia, Bronchiectasis, RLD
- b) Sputum :
  - $\circ$  Dry  $\rightarrow$  Asthma, RLD
  - $\circ$  Small amount  $\rightarrow$  COPD
  - $\circ$  Large amount  $\rightarrow$  Bronchiectasis
  - $\circ$  Yellow or green  $\rightarrow$  Pneumonia
- c) Hemoptysis  $\rightarrow$  PE, Pneumonia, Bronchiectasis (blood streaked)
- d) Pleuritic Chest pain  $\rightarrow$  PE, Pneumonia
- e) Wheezing  $\rightarrow$  Asthma, COPD
- IV. GI
  - a) Upper or lower GI bleeding  $\rightarrow$  Anemia
- V. MSS
  - a) Lymphadenopathy
  - b) Skin rash RLD
  - c) Arthritis
- **C.** Risk Factors (always ask about smoking and alcohol)
  - I.  $HF \rightarrow$  Previous MI, HTN, DM, Smoking, Vulvular heart disease
  - II. COPD  $\rightarrow$  Smoking
  - III.  $PE \rightarrow Previous DVT$ , Recent travel, Long surgery, OCP, Pregnancy, Immobility
  - IV. Bronchiectasis  $\rightarrow$  Recurrent infections and admissions
  - V.  $RLD \rightarrow Exposure to asbestos or dust, Occupation$
  - VI. Anemia  $\rightarrow$  UGI bleeding (aspirin use), Bleeding from another site, Hemolytic anemia (jaundice / family Hx), Nutrition
- **D.** Family history
  - I. Same condition
  - II. Chronic illness

### E. Past medical history

- I. Previous attacks
- II. Surgeries or admission
- III. Chronic illnesses (DM, HTN, Hyperlipidemia)
- IV. Drugs
- V. Allergy
- F. Social history
  - I. Smoking + Alcohol
  - II. Occupation  $\rightarrow \mathsf{RLD}$
  - III. Married with kids  $\rightarrow$  Rule out Bronchiectasis associated with Cystic fibrosis

\*\*Investigations:

- 1. CXR  $\rightarrow$  Pneumonia, Pulmonary edema, Asthma, COPD
- 2. Spirometry  $\rightarrow$  Asthma, COPD, RLD
- 3. CT-angiography And D-dimer  $\rightarrow$  PE
- 4. CBC  $\rightarrow$  Anemia
- 5. Full cardiorespiratory examination and bedside observations
- 6. ECG
- 7. FBC, U&Es, cardiac markers and BNP
- 8. ABG
- 9. Peak flow and pulmonary function tests for asthma and COPD, respectively
- 10. Echocardiography to assess heart failure
- 11. Coronary angiogram to assess for acute coronary syndrome
- 12. High-resolution CT of chest to assess for pulmonary fibrosis

# DIFFERENTIAL DIAGNOSIS ACUTE/SUB-ACUTE

# Asthma exacerbation

- Sudden onset of wheezing and breathlessness
- Often precipitated by a trigger such as exercise, cold air, dust or pollen
- Recurrent problem, often with atopic background (e.g. eczema and hay fever)
- Diurnal variation of asthma classically causes night-time coughing istory of cough and purulent sputum with general malaise and fever
- Pleuritic chest pain with haemoptysis, wheezing and shortness of breath
- There may be a background history of respiratory disease (e.g. COPD)

# Acute pulmonary oedema

- Severe breathlessness often precipitated by ACS, arrhythmia or deterioration of deteriorating renal function
- Orthopnoea, paroxysmal nocturnal dyspnoea and cough (frothy pink sputum) Acute coronary syndrome
- Sudden, severe, crushing central pain that may radiate to the arm and/or jaw

- May be "silent" though, with only breathlessness, particularly in the elderly
- Associated nausea, vomiting and sweating

#### **Pulmonary embolism**

- Sudden onset of pleuritic pain with breathlessness, fever and haemoptysis
- There may have been a swollen, hot tender leg unilaterally previously
- Risk factors include malignancy, pregnancy, clotting disorders, recent long-haul flights or surgery with subsequent immobility

### **Tension pneumothorax**

- Sudden onset of pleuritic chest pain with associated shortness of breath
- Background history of lung disease or collagen disease such as Marfan's syndrome or recent chest trauma (including recent insertion of a central line)

### **CHRONIC Lung malignancy**

- Weight loss and haemoptysis are red flags; significant smoking history
- Progressive breathlessness, hoarse voice, dysphagia, wheezing, stridor, recurrent chest infections and chest discomfort are all features
- Paraneoplastic syndrome also possible due to ectopic hormone production e.g. Cushing's or syndrome of inappropriate antidiuretic hormone secretion (SIADH) – These are usually related to small cell lung cancer

### Chronic obstructive pulmonary disease

- Constant breathlessness, long smoking history, chronic cough, wheeze and sputum
- Progressive with increasing exertional dyspnoea and increasing disability Can also develop acute, infective and non-infective exacerbations that can present similarly to an asthma exacerbation

# **Interstitial lung disease**

- Chronic and progressive breathlessness on exertion
- Wheezing, chest pain, haemoptysis and sputum are not typically seen
- Many environmental and occupational risk factors e.g. farmer's lung

# **Chronic heart failure**

- Exertional dyspnoea, orthopnoea and paroxysmal nocturnal dyspnoea
- Background history of heart disease (e.g. IHD or hypertension)

# MANAGEMENT

- ABCDE approach in acutely unwell patients if unable to give history
- Smoking cessation and pulmonary rehabilitation are key in the long term
- Oxygen should be given to any patient with low saturations, with target range of
- 94–98% in most patients, and 88–92% in those with COPD
- Acute exacerbation 100% oxygen, inhaled or nebulised salbutamol and oral/IV steroids; ipratropium, magnesium sulphate and ICU referral if poor response
- In suspected ACS, initially manage with morphine, 100% oxygen, nitrate (GTN

spray) and aspirin (MONA); after confirmation of ACS, PCI or thrombolysis depending on services available locally; long-term management includes ACE inhibitors, betablockers and statins

- Acute pulmonary oedema IV furosemide and nitrate infusion as BP tolerates
- COPD exacerbation Antibiotics, bronchodilators, oxygen and steroids
- PE Low molecular weight heparin and warfarin commencement
- Pneumonia Antibiotics; a CURB 65 score of 2 or more requires admission

# 3) **Palpitation**

(DDx: Arrhythmia, Thyrotoxicosis, Anemia, Pheochromocytoma)

A. Chief Compliant analysis (SOCRATES) :

I. Site

- II. **O**nset (duration, first time) : When did you first notice them?
- III. Character: When they occur, does your heart pound fast or slow?
- IV. Rhythm
  - a) Regular
  - b) Irregular

### IV. Radiation

- V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
- VI. **T**iming : How long do they last for? Do they come on at a particular time? During exercise? How often do you get palpitations?
  - a) Continuous or intermittent:
    - $\circ$  Continuous  $\rightarrow$  Thyrotoxicosis
    - $\circ$  Intermittent  $\rightarrow$  Arrhythmia
  - b) Duration of each episode
  - c) Has a Specific timing?
- VII. Exacerbating & Relieving factors : Does anything help stop the palpitations?
  - Exacerbating (Precipitating) :
    - a) Exercise
    - b) Large meals
    - c) Stress
    - d) Alcohol
    - e) Coffee
    - f) Smoking
  - Relieving?

VIII. Severity  $\rightarrow$  Cause syncope?

#### B. Associated symptoms

- I. General
  - a) Fever
  - b) Fatigue  $\rightarrow$  Anemia
  - c) Weight loss  $\rightarrow$  Hyperthyroidism, CA
  - d) Increased appetite  $\rightarrow$  Hyperthyroidism
  - e) Sweating  $\rightarrow$  Hyperthyroidism / Pheochromocytoma
  - f) Heat intolerance & irritability  $\rightarrow$  Hyperthyroidism
  - g) Headache  $\rightarrow$  Pheochromocytoma
- II. CVS
  - a) SOB
  - b) Orthopnea

### **Heart Failure**

- c) PNDd) Ankle swelling
- e) Chest Pain
- **C.** Risk Factors (always ask about smoking and alcohol)
  - I. Arrhythmia  $\rightarrow$  IHD, Family Hx, HF, Valvular heart disease, Rheumatic fever
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history

- I. Previous attacks
- II. Surgeries or admission
- III. Chronic illnesses (DM, HTN, Hyperlipidemia)
- IV. Drugs  $\rightarrow$  Digoxin, Salbutamol
- V. Allergy
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Heavy coffee drinking
  - IV. Marital status
  - v. Occupation

# INVESTIGATIONS

- Full cardiovascular examination
- 12-lead ECG
- 24–48 hour ambulatory ECG tape
- Transtelephonic event monitoring for less frequent attacks
- FBC, U&Es and TFTs
- Urgent echocardiogram if any red flags are present/concern about cardiomyopathy
- Anxiety questionnaire e.g. HAD10
- Electrophysiological studies
- BP monitoring and 24-hour urine catecholamines if suspecting.

phaeochromocytoma

# **DIFFERENTIAL DIAGNOSIS**

# CARDIAC CAUSES

Palpitations may represent an arrhythmia, but most arrhythmias do not produce palpitations. Syncope or a history of IHD makes ventricular tachycardia and other serious arrhythmias more likely, requiring more prompt investigation.

# Ventricular tachycardia (most serious)

- Often short lived and asymptomatic, but prolonged episodes may cause haemodynamic compromise
- Typically occurs in patients with cardiac pathology such as IHD, heart failure, cardiomyopathies or long QT syndrome
- Family history may reveal a sudden death in a family member Atrial fibrillation
- Often asymptomatic but there may be signs and symptoms of heart failure
- There may be a recent history of a cardiac event or major surgery
- May be paroxysmal, persistent or permanent
- Causes include IHD, valvular disease, thyrotoxicosis, alcohol and pneumonia

### Supraventricular tachycardia

- Paroxysmal palpitations and sometimes associated syncope
- E.g. Wolff–Parkinson–White syndrome

### Ectopic beats

- Typically, patients feel a skipped beat, followed by an uncomfortable lurch in the chest; some patients describe an inability to catch their breath
- The palpitations may be more evident when the patient lies flat, commonly at night time (related to the natural slowing of the heart rate at this time)

# NON-CARDIAC CAUSES

# Anxiety (most common)

- History of anxiety, agitations, sweating, nausea and dry mouth
- An intense feeling of panic or anxiety usually precedes the palpitations
- Palpitations are often regular, slightly fast and tend to come and go gradually

#### **Thyrotoxicosis**

• History of weight loss, heat intolerance, hair loss, altered appetite, loose bowels, tremor, neck swelling, palpitations and menstrual irregularity

### Phaeochromocytoma

- Very rare catecholamine-secreting tumour of the adrenal glands
- Patient typically presents with hypertension, sweats, palpitations and tremor
- May be associated with multiple endocrine neoplasia type 2 (medullary thyroid carcinoma, parathyroid gland hyperplasia and phaeochromocytoma)

#### MANAGEMENT

- Avoid substances that predispose to palpitations, such as caffeine and alcohol
- Supraventricular tachycardias vagal manoeuvres (e.g. carotid massage or valsalva manoeuvre); IV adenosine if vagal manoeuvres fail; radiofrequency catheter ablation of an identified focus for long-term cure
- Ventricular tachycardia High-flow oxygen; if haemodynamically unstable, treat as a cardiac arrest according to ALS protocol; if stable, may initially be treated with lignocaine or amiodarone; if there is underlying structural heart disease, prophylactic medication and an implantable cardio-defibrillator should be considered
- Thyrotoxicosis Propranolol; carbimazole/propylthiouracil; Radioiodine or subtotal/total thyroidectomy (plus lifelong thyroxine) if anti-thyroid drugs fail
- Atrial fibrillation Rate control achieved using either beta-blockers or rate-limiting calcium channel blockers; rhythm control achieved using flecainide, IV amiodarone or by DC cardioversion; if high risk of stroke, start warfarin
- Anxiety Counselling, CBT, SSRIs or benzodiazepines for severe anxiety; symptoms can be controlled with beta-blockers
- Ectopic beats Usually no treatment required; they are not associated with a poor prognosis, and education is all that is needed to reassure patients

# 4) Cough

(DDx: Asthma, GERD, COPD, Pneumonia, CA, TB, PE, RLD, HF, Atopy)

A. Chief Compliant analysis (SOCRATES) :

I. <mark>S</mark>ite

- II. Onset (duration, sudden or gradual, progression, first time)
- III. Character
  - a) Dry  $\rightarrow$  Asthma, RLD, GERD
  - b) With sputum (amount / color / smell ) → COPD, Pneumonia ( yellow or green )
  - c) With hemoptysis ( Frank blood / blood stained )  $\rightarrow$  Pneumonia / CA / TB / PE
- IV. Radiation
- V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
- VI. **T**iming
  - a) Continuous or intermittent
  - b) Day or night :
    - Night  $\rightarrow$  Asthma, GERD
    - Day (Morning)  $\rightarrow$  COPD
  - c) Time of each episode
- VII. Exacerbating & Relieving factors

- VIII. Severity  $\rightarrow$  Is it so severe that it causes syncope or vomiting?
- B. Associated symptoms
  - I. General
    - a) Fever & chills  $\rightarrow$  Pneumonia, TB
    - b) Weight loss  $\rightarrow$  CA, TB
    - c) Fatigue
    - d) Night sweating  $\rightarrow$  TB
  - II. RS
    - a) Pleuritic chest pain  $\rightarrow$  Pneumonia, PE
    - b) Wheeze  $\rightarrow$  Asthma, COPD
    - c) SOB  $\rightarrow$  Asthma, COPD, PE, RLD, HF
    - d) Nasal discharge  $\rightarrow$  Atopy
- III. CVS
  - a) Orthopnea
  - b) PND Heart Failure
  - c) Ankle swelling
- IV. GI
  - a) Heart burn or regurgitation  $\rightarrow$  GERD
- V. MSS
  - a) Skin rash
  - b) Arthritis RLD (sarcoidosis)
  - c) Neck mass
- C. Risk Factors (always ask about smoking and alcohol)
  - I. COPD  $\rightarrow$  Smoking
  - II. Asthma  $\rightarrow$  Allergy, House ventilation
  - III.  $TB \rightarrow Previous TB$ , Contact with TB
  - IV.  $PE \rightarrow Previous DVT$ , Recent travel, Long surgery, OCP, Pregnancy, Immobility
  - V.  $RLD \rightarrow Exposure to asbestos or dust, Occupation$
  - VI.  $HF \rightarrow$  Previous MI, HTN, DM, Smoking, Vulvular heart disease
- **D.** Family history

- I. Same condition
- II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs  $\rightarrow$  ACE inhibitors
  - V. Allergy
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Marital status
  - IV. Occupation
  - V. House Ventilation

### INVESTIGATIONS

- Full cardiorespiratory examination
- FBC, U&Es, LFTs and blood culture
- Sputum culture
- Chest x-ray
- Peak flow and pulmonary function tests for asthma and COPD, respectively
- CT thorax
- Bronchoscopy

# **DIFFERENTIAL DIAGNOSIS**

ACUTE (<3 WEEKS)

# URTI/post-nasal drip (most common)

- This is a common cause of a cough in a non-smoking adult
- Short history of an irritating cough with a recent URTI, but otherwise well
- Runny nose, congestion, sore throat, sinusitis and throat clearing

# Pneumonia

- History of cough and purulent sputum production with malaise and fever
- There may be pleuritic chest pain, haemoptysis, wheezing and breathlessness
- Often a background history of respiratory disease (e.g. COPD/bronchiectasis)

# **ACE inhibitors**

- ACE inhibitors cause a dry cough in 5 to 20% of patients
- No other symptoms present
- Usually presents within a week of starting therapy, but can be up to 6 months

# SUB-ACUTE (3-8 WEEKS)

### Lung malignancy (most serious)

- Weight loss and haemoptysis are red flags; significant smoking history
- Progressive breathlessness, hoarse voice, dysphagia, wheezing, stridor, recurrent chest infections and chest discomfort are all features

• Paraneoplastic syndrome also possible due to ectopic hormone production e.g. Cushing's syndrome or SIADH – These are usually related to small cell lung cancer

#### Gastro-oesophageal reflux disease

- Typically, overweight patient with retrosternal burning pain worse on lying flat
- Acid brash, with regurgitation of sour material after eating large meals
- May have a hoarse voice in the morning and periodically clear their throat

### CHRONIC (>8 WEEKS)

### Asthma

- Diurnal variation Cough worse at night and in the morning
- Coughing is worse in cold air or after exercise
- May be associated with wheezing and breathlessness
- Often a background history of atopy, such as eczema and hay fever

#### Chronic obstructive pulmonary disease

- Constant breathlessness, with episodes of exacerbation due to infection
- Long smoking history, with chronic cough, wheeze and sputum production
- Progressive, with increasing exertional dyspnoea and increasing disability

### **Bronchiectasis**

- Precipitated by recurrent infections or a particularly bad chest infection
- Production of large amounts of sputum ("cupfuls") each day
- Haemoptysis and breathlessness may be present
- Cystic fibrosis is associated with bronchiectasis

# MANAGEMENT

- Pneumonia Antibiotics; a CURB 65 score of 2 or more requires admission
- Asthma Stepwise approach, starting with inhaled salbutamol PRN; regular inhaled corticosteroid may be added, and then a long acting beta2-agonist; leukotriene antagonists, theophylline and oral steroids may also be needed
- COPD Stop smoking, inhaled bronchodilators, inhaled corticosteroids and consider long-term domiciliary oxygen therapy
- Lung cancer Urgent referral; surgery, chemotherapy and/or radiotherapy Reflux Proton pump inhibitor and antacids
- ACE inhibitor cough Stop and switch to angiotensin receptor blocker

# 5) Hemoptysis

(DDx: CA, TB, Bronchiectasis, PE)

- A. Chief Compliant analysis (SOCRATES) :
  I. Site
  - II. Onset (duration, first time)
  - III. Character
    - a) Amount of blood
    - b) Painful?
    - c) Fresh blood or streaked or stained with sputum?
  - IV. Radiation
  - $\forall$ . Associated symptoms (finish the CC analysis then ask about them ↓)
  - <del>VI.</del> **T**iming
    - a) Times per day

VII. Exacerbating & Relieving factors

VIII. Severity

\*IMPORTANT: ask if there is bleeding from other site, or any drug use

- **B.** Associated symptoms
  - I. General
    - a) Fever & chills  $\rightarrow$  TB, Pneumonia
    - b) Weight loss  $\rightarrow$  TB, CA
    - c) Night sweating  $\rightarrow$  TB
    - d) Fatigue
  - II. CVS
    - a) SOB
    - b) Orthopnea

Heart Failure

- c) PND
- d) Ankle swelling
- e) Chest pain

III. RS

- a) Cough and sputum
- b) SOB
- c) Chest pain
- **C.** Risk Factors (always ask about smoking and alcohol)
  - I. Bleeding disorder → Bleeding from other site, Drugs {Anti-coagulants (Heparin or Warfarin) / NSAIDS (Aspirin) }
  - II.  $CA \rightarrow Age > 50$ , Male, Smoking, Family Hx
  - III.  $TB \rightarrow Hx$  of TB, Contact with TB
  - IV. Bronchiectasis  $\rightarrow$  Recurrent infections
  - V.  $PE \rightarrow Hx \text{ of } DVT, Risk \text{ factors of } DVT$
- D. Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs  $\rightarrow$  Anti-coagulants (Heparin or Warfarin), NSAIDS (Aspirin)
  - V. Allergy
  - VI. Trauma
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Marital status / children
  - IV. Occupation

INVESTIGATIONS

- Look at the sputum. Is there any blood? Send sputum culture
- FBC, U&Es, LFTs, clotting, CRP and ESR
- D-dimer may be considered to rule out PE ± CTPA
- Blood cultures
- Mantoux test/Quantiferon-TB Gold
- Chest x-ray
- CT chest
- Bronchoscopy

#### **DIFFERENTIAL DIAGNOSIS**

#### **ACUTE BRONCHITIS (MOST COMMON)**

- Few day's history of fever, malaise and cough with shortness of breath
- Mucopurulent sputum streaked with blood

#### LUNG MALIGNANCY (MOST SERIOUS)

- Weight loss and haemoptysis are red flags for lung cancer
- Patients may also complain of progressive breathlessness, a hoarse voice, dysphagia, wheezing or stridor, recurrent chest infections or chest discomfort
- Risk factors include increasing age, smoking history, occupational exposure to asbestos and other hazardous industrial dusts
- Patients may also have symptoms of a paraneoplastic syndrome such as Cushing's (central obesity, bruising, thin skin etc.), dermatomyositis or SIADH

#### **PULMONARY EMBOLISM**

- Pleuritic chest pain with shortness of breath
- · Associated fever, tachycardia and occasionally haemoptysis
- Possible background history of a pro-coagulant state such as malignancy, pregnancy or antithrombin 3 deficiency
- Similarly, there may be a history of recent air travel or operation with long periods of

immobilisation. The patient may also complain of a painful swollen leg

#### **PNEUMONIA**

• Rapid onset over a day or so of shortness of breath, cough, pleuritic chest pain, fever and general malaise

• Classically rusty brown sputum

#### **TUBERCULOSIS**

- Long-standing fever, malaise, lymphadenopathy and weight loss
- Classically produces night sweats
- Risk factors for infection including immunosuppression, travel to endemic areas, alcoholism and IV drug users

#### **LUNG ABSCESS**

- Production of copious amounts of blood-stained foul-smelling sputum
- Often significant preceding pneumonia or similar seeding event such as infective endocarditis, foreign body aspiration or trauma
- Swinging fevers, pleuritic chest pain, cough and weight loss BRONCHIECTASIS
- Precipitated by recurrent infections or a particularly bad chest infection
- Production of large amounts of sputum ("cupfuls") each day
- Haemoptysis and breathlessness may be present
- Cystic fibrosis is associated with bronchiectasis

#### MANAGEMENT

- PE High-dose low-molecular-weight heparin and warfarin
- Tuberculosis 6 months treatment with isoniazid and rifampicin with the addition for the first 2 months of pyrazinamide and ethambutol
- Pneumonia Antibiotics; a CURB 65 score of 2 or more requires admission
- Lung cancer Urgent referral; surgery, chemotherapy and/or radiotherapy
- Bronchiectasis Antibiotics; mucolytics and chest physiotherapy; bronchial artery embolization can be considered for massive haemoptysis
- Lung abscess IV antibiotics; percutaneous drainage via CT guidance

# 6) Leg Swelling

(DDx: DVT, Cellulitis, HF, Liver cirrhosis, Renal failure, Trauma, Hypoproteinemia, Rheumatoid Arthritis, Hypothyroidism)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
    - a) Extent of swelling
    - b) Other site of swelling
  - II. Onset (duration, sudden or gradual, progression, first time)
  - III. Character (with)
    - a) Redness
    - b) Hotness
    - c) Tenderness
  - IV. Radiation
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - VI. **Timing**
  - VII. Exacerbating & Relieving factors
  - VIII. Severity  $\rightarrow$  loss of the limb function?

# **B.** Associated symptoms

### I. Unilateral Swelling

### a) DVT : Limb $\rightarrow$ Redness, Hotness, Tenderness PE Symptoms $\rightarrow$ Chest pain, SOB, Hemoptysis Risk factors $\rightarrow$ recent travel, surgery, immobility, pregnancy, OCP, previous DVTs

- b) Cellulitis  $\rightarrow$  Fever & Chills, Brown areas, Rapid progression, Ulcers
- c) Rheumatoid Arthritis  $\rightarrow$  Morning stiffness, Joint Pain
- d) Trauma

#### II. Bilateral Swelling

- a)  $HF \rightarrow Cough$ , Orthopnea, PND
- b) Liver cirrhosis → Bleeding tendency, Abdominal distention, Hx of HBV infection, spider nevi
- c) Renal failure → Frequency, Nocturia, Urine (color/smell/ amount)
- d) Hypoproteinemia  $\rightarrow$  Nutrition, Malabsorption
- e) Hypothyroidism  $\rightarrow$  Weight gain, Cold intolerance, Lethargy and Fatigue
- C. Family history
  - I. Same condition
  - II. Chronic illness
- **D.** Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs
  - V. Allergy
  - VI. Trauma
- E. Social history
  - I. Smoking
  - II. Alcohol
  - III. Occupation

\*\*Investigations:

- 1. Doppler U/S and D-dimer  $\rightarrow$  DVT
- 2. Liver function test (LFT)  $\rightarrow$  Liver cirrhosis
- 3. Kidney function test (KFT)  $\rightarrow$  Renal failure
- 4. Thyroid function test (TFT)  $\rightarrow$  Hypothyroidism
- 5. CBC  $\rightarrow$  Cellulitis

# 7) Neck Mass

(DDx: Lymphadenopathy: (TB / Sarcoidosis / Lymphoma / Metastasis / URTI),

Thyroid enlargement: (Multinodular goiter / Grave's disease / Thyroid CA))

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
    - a) Central  $\rightarrow$  Thyroid enlargement, Thyroglossal cyst
    - b) Lateral  $\rightarrow$  Lymphadenopathy, branchial cyst
  - II. **O**nset (duration, progression)
  - III. Character
    - a) Consistency
    - b) Tenderness
    - c) Mobility
    - d) Movement with swallowing
    - e) Due to Trauma?

IV. Radiation

- V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
- VI. **T**iming

VII. Exacerbating & Relieving factors

VIII. Severity

\*IMPORTANT: ask if there is trauma or previous radiation exposure

### **B.** Associated symptoms

- I. Lymphadenopathy
  - a) URTI  $\rightarrow$  Fever & Chills, Sore throat, Cough, Nasal discharge
  - b) TB  $\rightarrow$  Fever, Hemoptysis, Night sweats, Weight loss
  - c) Lymphoma or Leukemia → SOB, Fatigue, Bleeding tendency, Recurrent infections, Bone pain
  - d) Sarcoidosis  $\rightarrow$  SOB, Skin lesions, Joint pain, Uveitis
- II. Thyroid
  - a) Hyperthyroidism (Grave's disease, Toxic Multinodular goiter)
    - □ Due to mass effect → Breathing difficulty, Hoarseness of voice, Dysphagia, Chronic sore throat

- □ Due to ↑ TH → Fatigue, Sweating, Weight loss, Increased appetite, Headache, Restlessness, Palpitation, Diarrhea, Heat intolerance
- b) Hypothyroidism (Hashimoto's thyroiditis, Iodine deficiency)
  - Pallor, Jaundice, Cold intolerance, Brittle hair, Limb swelling, Slow speech, Hoarseness of voice, Decreased appetite, Weight gain, Constipation
- C. Risk Factors (always ask about smoking and alcohol)
  - I.  $TB \rightarrow Hx$  of TB, Contact with TB
  - **II.** Malignancy → Smoking, Alcohol, **Previous exposure to Radiation**
  - III. Autoimmune thyroid diseases  $\rightarrow$  Female, Hx of other autoimmune diseases
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs
  - V. Allergy
  - VI. Trauma
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Occupation

# **DIFFERENTIAL DIAGNOSIS**

Lymphadenopathy refers to nodes that are abnormal in size, consistency or number and can be either "localised" or "generalised" if more than one group is affected. Lymph nodes are generally considered normal up to 1 cm in diameter, apart from the jugulodigastric node, which can be up to 1.5 cm.

#### **REACTIVE LYMPHADENOPATHY (MOST COMMON)**

- May last up to 4 weeks and are usually associated with signs and symptoms of a local infection relative to the affected lymph node e.g. tonsillitis to level 2 (jugulodigastric) lymph nodes
- Reactive lymph nodes tend to be regular, soft-to-firm on palpation and mobile METASTATIC

#### **CARCINOMA (MOST SERIOUS)**

- Head and neck malignancies metastasise to cervical nodes relative to their location
- Persistent hoarseness, sore throat, pain on swallowing, cough or sensation of lump in
- the throat could suggest an underlying head and neck tumour
- Smoking, alcohol and old age are risk factors for head and neck malignancies
- Cancerous nodes are typically hard and irregular when palpated

#### **LYMPHOMA**

- B symptoms of weight loss, drenching night sweats and fever may be present
- The lymph nodes are typically firm and rubbery to palpate

• Hodgkin's lymphoma, more common in adulthood, has two peaks of incidence – age 20–25 years and >70 years, but can occur at any age

#### **TUBERCULOSIS**

- Affected lymph nodes may be large
- Long-standing fever, malaise, weight loss and night sweats (classically)
- A history of foreign travel or contact with someone who has TB may well be given
- Other risk factors include immunosuppression, alcoholism and IV drug users

#### SIALOLITHIASIS (SALIVARY GLAND OBSTRUCTION)

- Intermittent and post-prandial pain and swelling in the submandibular or parotid gland
- May be provoked by dehydration
- Can get secondary infection with redness, pain and potentially abscess formation

#### **BRANCHIAL CYST**

- Congenital epithelial cyst that arises on the lateral part of the neck
- Smooth, soft and non-tender; usually presents in the second or third decade of life as a smooth, slowly enlarging lateral neck mass that may increase in size after an upper respiratory tract infection

#### **CYSTIC HYGROMA**

• Congenital multiloculated lymphatic lesion that presents either on antenatal scanning, at birth or in the first 2 years of life

- Classically found in the left posterior triangle of the neck EPIDERMOID CYST (AKA SEBACEOUS CYST)
- Sebaceous cysts are intradermal (skin cannot be drawn over them)
- They have a characteristic punctum
- They most commonly appear on the face, trunk, neck, extremities and the scalp
- Commonly become infected, causing a tender lump with discharge from the punctum

#### ABSCESS

- Red, hot and fluctuant swelling in a feverish patient
- Local spreadTHYROID SWELLING/GOITRE

• Hypothyroidism and hyperthyroidism can cause different types of goitre, although most people with a goitre are euthyroid

- Moves on swallowing
- Thyroglossal duct cysts move with protrusion of the tongue

#### PAROTITIS

- Can be due to infection (bacterial or mumps), autoimmune problems (e.g. Sjogren's syndrome) or obstruction (e.g. sialolithiasis)
- Swelling of parotid gland causing pain and enlargement of the gland

#### **CAROTID ARTERY ANEURYSM**

- Large, pulsatile mass when palpating carotid artery; rare CAROTID BODY TUMOUR
- Occurs at bifurcation of carotids
- Can be associated with other tumours

\*\*Investigations:

- 1. Biopsy
- 2. Thyroid function test (TFT)

#### MANAGEMENT

- A 4-week observation period is appropriate if likely benign lymphadenopathy
- Head and neck cancer Urgent referral; surgery, chemotherapy and/or radiotherapy
- Lymphoma Chemotherapy
- Tuberculosis 6 months treatment with isoniazid and rifampicin with the addition for the first 2 months of pyrazinamide and ethambutol
- Sialolithiasis Hydration, massage, citrus, basket retrieval, shock wave therapy, surgery
- Goitre Dependent on cause and symptoms as may be asymptomatic; thyroxine replacement, radioactive iodine, surgery
- Sebaceous cyst, branchial cyst and cystic hygroma Excision if problematic
- Abscess Incision and adequate drainage
- Parotitis Antibiotics if infective in nature

# 8) Upper GI bleeding

(DDx: Mallory-Weiss tears, Esophageal varices (complication of cirrhosis), PUD complication)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
  - H. Onset (duration, progression, first time)
  - III. Character
    - a) Amount  $\rightarrow$  Large and fresh  $\rightarrow$  Esophageal varices
    - b) Color (fresh / clotted / coffee ground)
    - c) Smell
  - IV. Radiation
  - $\forall$ . Associated symptoms (finish the CC analysis then ask about them ↓)
  - ₩. **T**iming
    - a) How many times?
    - b) Recurrent vomiting before bleeding?
  - VII. Exacerbating & Relieving factors
  - VIII. Severity

\*IMPORTANT: ask if there is bleeding from other site, any drug use

- B. Associated symptoms
  - I. GI
    - a) Heartburn and regurgitation
    - b) Dyspepsia
    - c) Nausea & Vomiting
    - d) Abdominal Pain  $\rightarrow$  Epigastric  $\rightarrow$  PUD
    - e) Abdominal Distention
    - f) Jaundice / change in urine & stool color / itching  $\rightarrow$  Cirrhosis
    - g) Diarrhea or constipation
    - h) Melena
- C. Risk Factors (always ask about smoking and alcohol)

- I. Bleeding disorder → Bleeding from other site, Drugs {Anti-coagulants (Heparin or Warfarin) / NSAIDS (Aspirin) }
- II.  $PUD \rightarrow Smoking, NSAIDS, Alcohol$
- III. Cirrhosis  $\rightarrow$  Alcohol, Blood transfusion, HBV infection, Easy bruising, Limb swelling
- IV. Mallory-Weiss  $\rightarrow$  Binge drinking
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs  $\rightarrow$  Anti-coagulants (Heparin or Warfarin) / NSAIDS (Aspirin)
  - V. Allergy
- F. Social history
  - I. Smoking + Alcohol

# 9) Epigastric pain

(DDx: PUD, GERD, Inferior wall MI, Hepatitis, Cholecystitis, Pancreatitis, Gastritis)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
  - II. Onset (duration, sudden or gradual, progression, first time)
  - III. Character
  - IV. Radiation
    - a) RUQ & scapula  $\rightarrow$  Cholecystitis
    - b) Back  $\rightarrow$  Pancreatitis
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - VI. **T**iming
    - a) Continuous or intermittent
    - b) Time of each episode
  - VII. Exacerbating & Relieving factors
    - Exacerbating:

- a) Food  $\rightarrow$  Gastric ulcer, Cholecystitis
- b) Position & Movement
- Relieving:
  - a) Food  $\rightarrow$  Duodenal ulcer
  - b) Position & Movement (leaning forward)  $\rightarrow$  Pancreatitis
- VIII. Severity
- B. Associated symptoms
  - I. General
    - a) Fever
    - b) Weight loss
    - c) Loss of appetite
  - II. GI
    - a) Heartburn & regurgitation  $\rightarrow$  GERD
    - b) Dysphagia
    - c) Dyspepsia  $\rightarrow$  PUD
    - d) Nausea & Vomiting  $\rightarrow$  bloody  $\rightarrow$  PUD
    - e) Abdominal Distention
    - f) Jaundice / change in urine or stool color / itching  $\rightarrow$  Hepatitis
    - g) Diarrhea or Constipation
    - h) Melena
- III. CVS
  - a) Chest pain
  - b) SOB
  - c) Sweating
- C. Risk Factors (always ask about smoking and alcohol)

MI

- I. PUD  $\rightarrow$  Smoking, NSAIDS, Alcohol
- II. Hepatitis  $\rightarrow$  Alcohol, blood Transfusion, HBV infection, DM, contact with patient having Hepatitis
- III. MI  $\rightarrow$  Smoking, HTN, DM, Hyperlipidemia, Family Hx
- IV. Cholecystitis→ Family Hx of gall bladder stones
- **D.** Family history
  - I. Same condition
  - II. Chronic illness

- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs
  - V. Allergy
  - VI. Trauma
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Marital status
  - IV. Occupation

\*\*Investigations:

1. PUD  $\rightarrow$  Upper GI endoscope

# 10) Abdominal Distension

(DDx: Fluid (HF/RF/Liver Cirrhosis/Protein losing

enteropathy/Malnutrition/Overhydration), flatus or feces (constipation/obstruction), fetus, fat) {The 5 F's}

- A. Chief Compliant analysis (SOCRATES) :
  I. Site
  - II. Onset (duration, progression, first time)
  - III. Character
    - a) Painful?
    - b) Swelling on other site?
  - IV. Radiation
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - VI. **Timing**
  - VII. Exacerbating & Relieving factors
  - VIII. Severity
- B. Associated symptoms

- I. CVS
  - a) SOB
  - b) Orthopnea
  - c) PND

### **Heart Failure**

- d) Ankle swelling
- e) Palpitations
- II. GI
  - a) Nausea & Vomiting  $\rightarrow$  Intestinal Obstruction, Cirrhosis, RF
  - b) UGI bleeding  $\rightarrow$  Cirrhosis ( $\uparrow$  Bleeding tendency)
  - c) Diarrhea  $\rightarrow RF$
  - d) Constipation
  - e) Jaundice  $\rightarrow$  Cirrhosis
- III. UGS
  - a) Renal Pain
  - b) Urine (amount/color/frequency) Renal Failure
  - c) Edema around the eyes
- C. Risk Factors (always ask about smoking and alcohol)
  - I.  $HF \rightarrow$  Previous MI, HTN, DM, Smoking, Vulvular heart disease
  - II. Cirrhosis  $\rightarrow$  Alcohol, Hx of hepatitis, Hx of blood Transfusion
  - III.  $RF \rightarrow DM$ , Polycystic kidney disease, HTN
- D. Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs  $\rightarrow$  Steroids, IV Fluids
  - V. Allergy
  - VI. Blood Transfusion
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Marital status
  - IV. Occupation

\*\*Investigations:

- 1. Abdominal X-Ray
- 2. Abdominal CT scan

# 11) Jaundice

(DDx: Hemolytic anemia, Hepatitis, Cirrhosis, Obstructive Jaundice)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
    - a) Eyes
    - b) Skin
  - II. Onset (duration, sudden or gradual, progression, first time)
  - III. Character
    - a) With Itching
    - b) with change in urine & stool color ( dark urine + pale stool  $\rightarrow$  Obstructive Jaundice )
  - IV. Radiation
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - VI. **T**iming
  - VII. Exacerbating & Relieving factors
  - VIII. Severity
- B. Associated symptoms
  - I. Anemia  $\rightarrow$  Fatigue, Dizziness, Pallor, SOB, Chest pain, Cold hand and feet
  - II. Hepatitis  $\rightarrow$  Fever, RUQ pain, Nausea & Vomiting
- III. Cirrhosis  $\rightarrow$  Ascites, Limb swelling, Bleeding tendency
- IV. Obstructive Jaundice→ Fever, RUQ pain, Dark urine and pale stool
- **C.** Risk Factors (always ask about smoking and alcohol)
  - I. Anemia  $\rightarrow$  Family Hx of blood diseases (Thalassemia / G6PD)
  - II. Hepatitis  $\rightarrow$  Family member with Jaundice, Hx of blood Transfusion
  - III. Cirrhosis  $\rightarrow$  Alcohol, Hx of hepatitis
  - IV. Obstructive Jaundice  $\rightarrow$  Family Hx of gallstones, Hx of cholecystitis

#### **D.** Family history

- I. Same condition
- II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs  $\rightarrow$  INH, Rifampicin, Methotrexate
  - V. Allergy
  - VI. Trauma
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Marital status
  - IV. Occupation

\*\*Investigations:

- 1. Serum bilirubin
- 2. ALT/AST  $\rightarrow$  Acute Hepatitis
- 3. ALP/GGT  $\rightarrow$  Biliary disease
- 4. PT/albumin  $\rightarrow$  Cirrhosis
- 5. CBC/retics  $\rightarrow$  Hemolytic anemia
- 6. U/S , CT , ERCP  $\rightarrow$  stones, masses, strictures
- 7.

# **DIFFERENTIAL DIAGNOSIS**

Jaundice is usually classified as pre-hepatic, hepatic or post-hepatic and a good history should establish which of these is most likely to be the underlying cause. Remember, jaundice may occasionally reflect a combination of both hepatic and post-hepatic causes. The key to the OSCE history is to identify whether the jaundice is pre-, intra- or post-hepatic and then to isolate the most likely aetiology. The differential diagnosis for jaundice is vast.

# **PRE-HEPATIC JAUNDICE**

Unconjugated bilirubin is elevated in pre-hepatic jaundice. The patient does not develop pale stools or dark urine.

#### **GILBERT'S SYNDROME (MOST COMMON)**

- Congenital hyperbilirubinaemia present in 5% of population
- Often present with jaundice at time of any viral illness
- Crigler–Najjar syndrome is another more severe congenital hyperbilirubinaemia

#### MALARIA

- Transmitted by mosquitos after travel to an endemic area
- Fever, myalgia, headache, malaise at least 6 days after transmission

#### HAEMOLYSIS

- Abnormal breakdown of red blood cells
- Can be due to an inherited condition (e.g. G6PD deficiency) autoimmune haemolytic anaemia, hypersplenism and various other less common causes

# **HEPATOCELLULAR JAUNDICE**

Both unconjugated and conjugated bilirubin can be elevated in pre-hepatic jaundice. Pale urine and dark stools may be present in hepatocellular jaundice.

#### **HEPATITIS**

- Alcoholic hepatitis
- Viral hepatitis A (contaminated food), B and C (sexual contact; IVDU), infectious mononucleosis ("kissing disease")
- Drug-induced hepatitis e.g. from paracetamol overdose
- Autoimmune hepatitis

#### **HEPATOCELLULAR CARCINOMA**

• Most commonly secondary to chronic hepatitis B or C infection • Can be secondary to alcoholic hepatitis, primary biliary cirrhosis and hereditary haemochromatosis

#### METASTATIC DISEASE FROM OTHER PRIMARY SITE (MOST SERIOUS)

• Colorectal, lung, breast, pancreatic, stomach, melanoma and neuroendocrine cancers are the most common types that spread to the liver

#### **OTHER CAUSES**

- Wilson's disease
- Hereditary haemochromatosis
- Hepatic congestion from cardiac failure

# **POST-HEPATIC JAUNDICE**

Conjugated bilirubin is elevated in post-hepatic jaundice. Pale stools and dark urine are features due to the absence of bile salts being released into the digestive system to absorb fats and the presence of conjugated bilirubin in the urine, respectively.

#### PANCREATIC CARCINOMA (MOST SERIOUS)

- Painless jaundice from obstruction of biliary tree by the head of the pancreas
- Poor prognosis

#### GALLSTONES

- Common in females; those aged near 40 years; and obese
- Painful
- Only cause jaundice if they obstruct the common bile duct

#### **OTHER CAUSES**

- Porta hepatis lymph nodes
- Primary biliary cirrhosis
- Primary sclerosing cholangitis

#### MANAGEMENT

- No treatment required for Gilbert's syndrome
- Antibiotics for malaria
- Antiviral therapy for viral hepatitis
- Cessation of alcohol consumption in alcoholic liver disease
- Acetylcysteine for paracetamol overdose
- Regular phlebotomy for haemochromatosis
- Caeruloplasmin for Wilson's disease
- Cholecystectomy and ERCP for gallstones causing bile duct obstruction
- Surgery, chemotherapy and radiotherapy for hepatic and pancreatic cancer depending on

extent and metastatic involvement

# 12) Diarrhea

(DDx: Gastroenteritis, Bacillary dysentery or Ameba, IBD, Colon CA, PUD, IBS, Celiac disease)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
  - II. Onset (duration)
  - III. Character
    - a) Consistency:
      - $\circ$  Normal
      - Watery  $\rightarrow$  IBD (Crohn's)
      - $\circ$  Loose  $\rightarrow$  Ameba
    - b) Color (fatty /pale)
    - c) Volume:
      - $\circ$  Small  $\rightarrow$  IBD (Ulcerative Colitis)
      - $\circ$  Large  $\rightarrow$  Ameba
    - d) Smell
    - e) With Blood:
      - $\circ$  Fresh  $\rightarrow$  Ameba, IBD (Ulcerative Colitis)
      - Clotted
      - $\circ$  Black tarry  $\rightarrow$  PUD
    - f) With pain and straining
  - IV. Radiation
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - VI. **T**iming
    - a) Times per day
    - b) Specific time
  - VII. Exacerbating & Relieving factors
    - Exacerbating:
      - a) Food
    - Relieving:
      - a) Defecation
      - b) Drugs

VIII. Severity

### **B.** Associated symptoms

- V. General
  - a) Fever & chills  $\rightarrow$  Gastroenteritis
  - b) Weight loss  $\rightarrow$  Colon CA, Celiac disease, Crohn's disease
  - c) Fatigue and dizziness  $\rightarrow$  Colon CA, Celiac disease

### VI. GI

- a) Mouth ulcers  $\rightarrow$  IBD, Celiac Disease
- b) Nausea & Vomiting  $\rightarrow$  GE, PUD (if bloody vomit)
- c) Abdominal pain  $\rightarrow$  GE, IBD (Crohn's), Celiac disease, CA
- d) Abdominal distention  $\rightarrow$  IBS
- e) Alternating constipation  $\rightarrow$  IBS
- VII. MSS
  - a) Skin rash
  - b) Joint Pain IBD
  - c) Eye Symptoms
- VIII. Dehydration Symptoms
  - a) Dry mucous membranes
  - b) Headache
  - c) Fatigue
  - d) Dizziness
- C. Risk Factors (always ask about smoking and alcohol)
  - I.  $GE \rightarrow Eating anything spoiled$
  - II. Bacillary dysentery / ameba  $\rightarrow$  Recent travel to endemic area
  - III. IBD  $\rightarrow$  Family hx
  - IV. Colon  $CA \rightarrow Low$  fiber diet, family hx
  - V. Celiac  $\rightarrow$  Family hx, hx of allergy
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs  $\rightarrow$  Antibiotics, NSAID, Laxatives
  - V. Allergy
- F. Social history

I. Smoking

II. Alcohol

\*\*Investigations:

- 1. Stool Culture  $\rightarrow$  Infectious Colitis
- 2. Endoscope  $\rightarrow$  Colon CA, IBD, Celiac disease

# 13) Constipation

(DDx: IBD, IBS, Colon CA, Hypothyroidism, DM, Intestinal obstruction, Hemorrhoid, Perianal fissure)

- A. Chief Compliant analysis (SOCRATES) :
  - I. <mark>S</mark>ite
  - II. Onset (duration, sudden or gradual)
  - III. Character
    - a) Consistency (hard/soft/watery)
    - b) Color (fatty /pale)
    - c) Volume (small/large)
    - d) Smell
    - e) With mucous
    - f) With Blood  $\rightarrow$  Hemorrhoid, Perianal fissure, Colon CA
    - g) With Pain  $\rightarrow$  Hemorrhoid, Perianal fissure
  - IV. Radiation
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - VI. **T**iming
    - a) Times per day
    - b) Specific time
  - VII. Exacerbating & Relieving factors
    - Exacerbating:
      - a) Food
      - b) Drugs
    - Relieving:
      - a) Drugs

VIII. Severity

- B. Associated symptoms
  - I. General

- a) Weight
  - $\circ$  Loss  $\rightarrow$  Colon CA, IBD (Crohn's disease), DM
  - $\circ$  Gain  $\rightarrow$  Hypothyroidism
- b) Fatigue  $\rightarrow$  Colon CA, Hypothyroidism
- c) Anorexia  $\rightarrow$  Colon CA
- d) Cold intolerance  $\rightarrow$  Hypothyroidism
- e) Polyuria, Polydipsia, Polyphagia  $\rightarrow DM$

#### II. GI

- a) Mouth ulcers  $\rightarrow$  IBD
- b) Nausea & Vomiting  $\rightarrow$  Intestinal obstruction
- c) Abdominal pain  $\rightarrow$  IBD (Crohn's), Intestinal obstruction
- d) Abdominal distention  $\rightarrow$  IBS, Intestinal obstruction
- e) Alternating diarrhea  $\rightarrow$  IBS
- f) Anal pain or itching  $\rightarrow$  Hemorrhoid, Perianal fissure

#### III. MSS

- a) Skin rash
- b) Joint Pain IBD
- c) Eye Symptoms
- C. Risk Factors (always ask about smoking and alcohol)
  - I. IBD  $\rightarrow$  Family hx
  - II. Colon  $CA \rightarrow Low$  fiber diet, family hx
  - III. Intestinal obstruction (Adhesions)  $\rightarrow$  Previous surgeries
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs
  - V. Allergy
- F. Social history
  - I. Smoking
  - II. Alcohol

#### \*\*Investigations:

- 1. Endoscope  $\rightarrow$  IBD, Colon CA
- 2. Rectoscope  $\rightarrow$  Hemorrhoid
- 3. Blood Sugar  $\rightarrow$  DM
- 4. Thyroid Function Test (TFT)  $\rightarrow$  Hypothyroidism

# 14) Fatigue with low Hb

(DDx: Nutritional Anemia (Iron or B12 deficiency), Bleeding disorders, Hemolytic anemia)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
  - II. Onset (duration, sudden or gradual, progression, first time)
  - III. Character
  - IV. Radiation
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
  - VI. **T**iming
    - e) Continuous or intermittent
    - f) Day or night
    - g) At exertion or at rest
  - VII. **Exacerbating & Relieving factors**
  - VIII. Severity
- B. Associated symptoms
  - I. CVS
    - a) Palpitation
    - b) SOB
    - c) Orthopnea
    - d) PND
    - e) Ankle swelling
  - II. Other

- a) Bleeding disorders → Hematemesis, Melina, Bleeding per rectum, Hematuria, Menorrhagia, Epistaxis, Gum Bleeding, bruises, Petechiae, Ecchymosis
- b) Hemolytic anemia → Dark Urine, Pallor, Jaundice, Pale stool
- C. Risk Factors (always ask about smoking and alcohol)
  - I. Nutritional Anemia  $\rightarrow$  Diet
  - II. Bleeding disorders → Bleeding from other site, Drugs {Anti-coagulants (Heparin or Warfarin) / NSAIDS (Aspirin) }
  - III. Hemolytic Anemia  $\rightarrow$  G6PD deficiency, Family Hx
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, hyperlipidemia)
  - IV. Drugs
  - V. Allergy
- F. Social history
  - I. Smoking
  - II. Alcohol

# 15) **Bleeding**

(DDx: ITP, TTP, HUS, DIC, Leukemia, Lymphoma, Renal Failure, Liver Failure, Malabsorbtion, Hemophilia)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
    - a) From Mucous Membranes
    - b) Under the skin
    - c) Inside joints
  - II. Onset (duration, sudden or gradual, progression, first time)
  - III. Character (of rash if the bleeding is under the skin)
    - a) Type (Petechiae/Purpura/Ecchymosis)
    - b) Color
    - c) Size
    - d) Shape
    - e) Site
    - f) Itching
    - g) Pain
    - h) Blanchable or not

# IV. Radiation

- V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
- VI. **T**iming
  - a) Continuous or intermittent
  - b) Time of each episode of bleeding
- VII. Exacerbating & Relieving factors
- VIII. Severity
- B. Associated symptoms
  - I. ITP  $\rightarrow$  Bleeding from mucous membranes
  - II. TTP  $\rightarrow$  Fever, Microangiopathic hemolytic anemia, Renal failure, Neurological manifestations
- III.  $HUS \rightarrow Same as TTP but without Fever or Neurological manifestations$
- IV. Leukemia  $\rightarrow$  Fatigue, Weight loss, Anorexia, Recurrent infections
- C. Family history

- I. Same condition
- II. Chronic illness
- D. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, hyperlipidemia)
  - IV. Drugs
  - V. Allergy
- E. Social history
  - I. Smoking
  - II. Alcohol

# 16) Joint Pain

(DDx: RA, SLE, Scleroderma, Inflammatory myopathy, Spondyloarthropathies, Gout, Enteropathic Arthritis, Septic arthritis, FMF, Behcet's disease)

- A. Chief Compliant analysis (SOCRATES) :
  - I. Site
    - a) Which joints?
      - $\circ$  Small  $\rightarrow$  RA
      - $\circ$  Large  $\rightarrow$  Septic arthritis
    - b) How many joints affected?
      - One → Gout (1<sup>st</sup> MTP joint), FMF
      - $\circ$  Multiple  $\rightarrow$  RA, SLE
    - c) Symmetrical joint involvement?
      - $\circ \ \mathsf{Yes} \to \mathsf{RA}$
      - $\circ$  No  $\rightarrow$  Ankylosing spondylitis (Spondyloarthropathy)
  - II. Onset (duration, sudden or gradual, progression, first time)
  - III. Character
    - a) Migratory  $\rightarrow$  RA
    - b) Redness
    - c) Swelling
    - d) Joint deformities  $\rightarrow RA$
  - IV. Radiation
  - V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )

- VI. **T**iming
  - a) Continuous or intermittent
  - b) Day or Night  $\rightarrow$  Night: Gout
  - c) Morning Stiffness  $\rightarrow$  RA, Ankylosing spondylitis

### VII. Exacerbating & Relieving factors

- Exacerbating:
  - a) Movement
  - b) Cold weather  $\rightarrow RA$
- Relieving:
  - a) Rest
  - b) Movement  $\rightarrow$  Ankylosing spondylitis
  - c) Drugs
- VIII. Severity  $\rightarrow$  affect movement and daily activities?
- **B.** Associated symptoms
  - I. General
    - a) Fever  $\rightarrow$  FMF, Septic Arthritis
    - b) Weight loss
    - c) Anorexia
    - d) Fatigue
  - II. MSS
    - a) Skin rash  $\rightarrow$  SLE, Dermatomyositis (Inflammatory myopathy)
    - b) Skin Nodules  $\rightarrow RA$
    - c) Muscle weakness → Polymositis (Inflammatory myopathy)
    - d) Skin thickening  $\rightarrow$  Scleroderma
    - e) Back pain  $\rightarrow$  Ankylosing spondylitis
- III. CVS
  - a) Chest pain  $\rightarrow$  SLE, FMF
  - b) SOB
- IV. RS
  - a) Cough
  - b) Hemoptysis
- V. UGS
  - a) Hematuria
  - b) Flank Pain

- c) Genital Ulcers  $\rightarrow$  Behcet's disease
- VI. GI
  - a) Mouth Ulcers  $\rightarrow$  Behcet's disease, SLE
  - b) Dysphagia  $\rightarrow$  Scleroderma
  - c) Vomiting
  - d) Abdominal pain  $\rightarrow$  FMF, Enteropathic Arthritis
  - e) Diarrhea or Constipation
- VII. Eye Symptoms  $\rightarrow$  Ankylosing spondylitis, Behcet's disease
- **C.** Disease Characteristics
  - I. RA  $\rightarrow$  Female, Age > 40, Small joints with swelling, Symmetrical, Deformities, Rheumatoid nodules
  - II. SLE  $\rightarrow$  Malar rash, Discoid rash, Photosensitivity, Serositis (pleura+peritoneum), Renal involvement, Oral ulcers, Neurologic involvement, Hematologic involvement
  - III. Scleroderma  $\rightarrow$  Thickening of skin, Raynaud phenomenon, Esophageal deformities, Renal Failure, CREST syndrome, Lung fibrosis
  - IV. Inflammatory Myopathy → Polymositis : proximal muscle weakness, difficulty swallowing, arthralgia, myalgia Dermatomyositis : same but with skin rash
  - V. Ankylosing spondylitis  $\rightarrow$  Lower back joints, Morning stiffness, Asymmetrical involvement, uveitis
  - VI. Gout  $\rightarrow$  Mono arthritis, first MTP joint, comes at night, with redness, hotness, swelling, pain goes after 3- 4 weeks
  - VII. Septic Arthritis  $\rightarrow$  after infection
  - VIII. FMF  $\rightarrow$  Fever, Abdominal pain, Mono arthritis, Chest pain
  - IX. Behcet's disease  $\rightarrow$  Oral and genital ulcers, Erythema nodosum, Uveitis
- **D.** Family history
  - I. Same condition
  - II. Chronic illness

- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs
  - V. Allergy
  - VI. Trauma

#### F. Social history

- I. Smoking
- II. Alcohol
- III. Marital status
- IV. Occupation

\*\*Investigations:

- 1.  $RA \rightarrow RF/anti-CCP/ESR$
- 2. SLE  $\rightarrow$  ANA/anti-smith AB/ant-ds DNA AB
- 3. Scleroderma  $\rightarrow$  ANA/anti-centromere AB
- 4. Inflammatory myopathies  $\rightarrow$  creatinine phosphokinase/aldose
- 5. Gout  $\rightarrow$  synovial fluid analysis (urate crystals)

# 17) Red Urine

(DDx: Bloody (Hematuria): (Kidney Stones / Pyelonephritis / Renal CA Transitional cell CA/ Polycystic kidney disease / Prostate enlargement /Nephritic syndrome),

Dark brown: (Obstructive Jaundice due to gallstones or CA / Hemolytic anemia / Rhabdomyolysis ,Drugs, Dyes)

A. Chief Compliant analysis (SOCRATES) :

I. Site

- II. Onset (duration, sudden or gradual, progression, first time)
- III. Character
  - a) Color
    - $\circ$  Red  $\rightarrow$  Blood, Dyes, Drugs
    - $\circ$  Dark brown  $\rightarrow$  Hemolytic anemia
  - b) Part of stream
    - $\circ$  Initial  $\rightarrow$  Urethritis
    - o Total → Polycystic kidney disease, Nephritic syndrome, Pyelonephritis, Renal CA
    - $\circ \quad \text{Terminal} \rightarrow \text{Prostate enlargement}$
  - c) Clots  $\rightarrow$  indicates severity
  - d) Smell
    - $\circ \quad \mathsf{Foul} \to \mathsf{UTI}$
  - e) Amount
  - f) With Pain
    - $\circ \ \ \text{Yes} \rightarrow \text{Pyelonephritis}$
    - $\circ$  No  $\rightarrow$  Malignancy
- IV. Radiation
- V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
- VI. **T**iming
  - a) Continuous or intermittent
  - b) Times per day

VII. Exacerbating & Relieving factors

VIII. Severity

\*IMPORTANT: ask if there is bleeding from other site, any drug use, or dyes

- B. Associated symptoms
  - I. General
    - a) Fever & Chills  $\rightarrow$  Pyelonephritis
    - b) Weight loss  $\rightarrow$  Malignancy
  - II. UGS
    - a) Flank pain  $\rightarrow$  Kidney Stones
    - b) Dysuria  $\rightarrow$  Urethritis
    - c) Frequency
    - d) Urgency
    - e) Nocturia Benign Prostatic Hyperplasia
    - f) Straining
    - g) Poor stream
- III. GI
  - a) Nausea & Vomiting  $\rightarrow$  Pyelonephritis, Obstructive Jaundice
  - b) Abdominal pain
  - c) Jaundice Obstructive Jaundice (due to
  - d) Pale stool \_\_\_\_\_ gallstones)
- IV. CVS
  - a) Chest pain  $\rightarrow$  Nephritic syndrome secondary to SLE
  - b) Palpitations  $\rightarrow$  Pyelonephritis
  - c) Ankle edema  $\rightarrow$  Nephritic syndrome
- V. MSS
  - a) Skin rash (malar rash)
  - b) Joint Pain SLE
  - c) Raynaud phenomena
  - d) Muscle pain or trauma  $\rightarrow$  Rhabdomyolysis

- **C.** Risk Factors (always ask about smoking and alcohol)
  - I. Kidney Stones  $\rightarrow$  Family Hx of stones, Diet

- II. Hemolytic Anemia  $\rightarrow$  G6PD deficiency, Family Hx
- **III.** Nephritic Syndrome (due to PSGN)  $\rightarrow$  **Sore throat in the last 10 days**
- IV. Rhabdomyolysis  $\rightarrow$  Strenuous exercise
- V. Food  $\rightarrow$  Dyes, Beetroot
- VI. Malignancy  $\rightarrow$  Age > 50
- **D.** Family history
  - I. Same condition
  - II. Chronic illness
- E. Past medical history
  - I. Previous attacks
  - II. Surgeries or admission
  - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - IV. Drugs  $\rightarrow$  Rifampicin, Cyclophosphamide, Aspirin, Anticoagulants
  - V. Allergy
  - VI. Trauma
- F. Social history
  - I. Smoking
  - II. Alcohol
  - III. Occupation

# **DIFFERENTIAL DIAGNOSIS**

Haematuria can be frank or microscopic. The causes of these are generally quite different. Frank haematuria is more likely due to a lower urinary tract lesion, whereas microscopic haematuria is suggestive of glomerular disease. This is not a perfect rule however. Frank haematuria has a 20–25% chance of being due to malignancy which is why it is much more aggressively investigated than microscopic haematuria. Microscopic haematuria is relatively more common and should only be considered pathological when recurring or associated with lower urinary tract symptoms.

### MALIGNANCY RENAL CELL CARCINOMA

- Triad of flank pain, haematuria and an abdominal mass (late presentation)
- Can be found incidentally on examination in patients with hypertension or anaemia
- Constitutional symptoms of weight loss, fever and fatigue
- May present with paraneoplastic syndrome causing excessive renin, parathyroid hormone or erythropoietin

### **TRANSITIONAL CELL CARCINOMA**

- Painless, intermittent haematuria in older males is a worrying sign
- Can affect the ureters or urethra, but most commonly affects the bladder
- The classical association is working with industrial dyes, but nowadays smoking is by far the biggest risk factor in the UK
- Schistosomiasis is the biggest cause of bladder cancer elsewhere (e.g. Africa) RENAL CALCULI
- Acute onset of excruciating flank/abdominal pain, radiating from "loin to groin," with associated nausea and vomiting
- Pain in renal colic is more constant than in biliary/intestinal colic, but often there are periods of relief in which the patient has a dull ache
- Often however calculi are asymptomatic and found incidentally on imaging
- Typically affects men in their 30s to 50s

# URINARY TRACT INFECTION

- Cystitis typically produces urinary frequency, urgency and dysuria
- Fever, suprapubic pain and urethral discharge may also be present
- The urine may be cloudy with a foul odour and of course may contain blood
- Common in females, unusual in males (due to sizes of their respective urethras)
- Catheterisation is a major risk factor as it provides a conduit for bacteria
- In the elderly, the only symptom may be delirium

#### **GLOMERULONEPHRITIS**

• Can cause nephritis with frank haematuria, or nephrotic syndrome

• Many different causes; there may be an associated preceding URTI (poststreptococcal or IgA nephropathy); haemoptysis (Goodpasture's syndrome); or systemic features, such as a rash, suggestive of vasculitis

#### **OTHER**

- Urinary tract injury Blunt, penetrating or iatrogenic (e.g. catheterisation)
- Coagulopathy e.g. haemophilia
- Prostatitis
- BPH and prostatic carcinoma (although haematuria not typically seen)
- Beetroot Turns urine

\*\*Investigations:

- 1. CBC with reticulocytes  $\rightarrow$  Hemolytic Anemia
- 2. U/S & X-Ray  $\rightarrow$  Stones
- 3. Cystoscopy  $\rightarrow$  Malignancy

# MANAGEMENT

- Frank haematuria requires urgent referral on to urology or nephrology
- Bladder cancer Transurethral resection for superficial tumours; radical cystectomy and urinary diversion for invasive disease; possibly chemotherapy
- Renal cell carcinoma Nephrectomy
- Renal calculi <5 mm usually pass on its own; extracorporeal lithotripsy or endoscopic stone removal for medium-sized stones; rarely, intracorporal or open operations are required for larger/persistent stones
- UTI Antibiotics e.g. trimethoprim in simple uncomplicated cystitis
- Nephrotic syndrome Treat cause; furosemide, ACE inhibitors and calcium channel blockers to control fluid retention and hypertension
- Rapidly progressive glomerulonephritis requires prompt treatment with high doses of steroids and cyclophosphamide

# 18) Weight Change

(DDx: Loss: Malabsorption syndromes, Hyperthyroidism, DM, Malignancy, Addison's disease, IBD, PUD

Gain: Hypothyroidism, Cushing syndrome, Binge eating disorder)

A. Chief Compliant analysis (SOCRATES) :

<del>I. <mark>S</mark>ite</del>

- II. **O**nset (duration)
- III. Character
  - a) How many Kg?
  - b) Your current weight
  - c) Last time you weigh yourself / How much?
- IV. Radiation
- V. Associated symptoms (finish the CC analysis then ask about them  $\downarrow$ )
- VI. **T**iming
- VII. Exacerbating & Relieving factors
- VIII. Severity

\*IMPORTANT: ask if it's intentional or not? , How is appetite? How is diet? , is there any problem that prevents eating (teeth pain/odynophagia)?

### B. Associated symptoms

- I. Malabsorption  $\rightarrow$  Abdominal pain, Abdominal distention, Diarrhea, Anemia (pallor/fatigue/SOB), Dry skin
- II. Hyperthyroidism  $\rightarrow$  Sweating, Heat intolerance, Diarrhea, Palpitation, Increased Appetite, Tremors
- III.  $DM \rightarrow Polyuria$ , Polydipsia, Polyphagia
- IV. Malignancy  $\rightarrow$  Fever, Night sweating
- V. Addison's disease  $\rightarrow$  Hyperpigmentation, Postural hypotension, Fatigue, Changes in hair distribution

- VI. IBD  $\rightarrow$  Lower abdominal pain, Nausea & Vomiting, Constipation, Diarrhea, Flatus, Loss of appetite
- VII.  $PUD \rightarrow Epigastric pain related to food, Bloating, Melena, Upper GI bleeding$
- VIII. Hypothyroidism  $\rightarrow$  Decreased appetite, Constipation, Cold intolerance, Hair loss
  - IX. Cushing syndrome  $\rightarrow$  Moon face, Abdominal striae, Buffalo hump, Skin thinning, Amenorrhea
  - **C.** Family history
    - I. Same condition
    - II. Chronic illness
  - **D.** Past medical history
    - I. Previous attacks
    - II. Surgeries or admission
    - III. Chronic illnesses (DM, HTN, Hyperlipidemia)
    - IV. Drugs
    - V. Allergy
  - E. Social history
    - I. Smoking
    - II. Alcohol

#### **DIFFERENTIAL DIAGNOSIS**

Weight loss is due to either inadequate intake, malabsorption, reduced anabolism, increased catabolism or a combination. Essentially, if calories used up are greater than intake, then weight loss will occur. Increased catabolism is common in acute and chronic infections but is seen in malignancy, inflammatory conditions, post-surgery. Surgical sieves (e.g. CANDITIME – below) can be useful ways of reciting causes of any given condition. Weight loss may represent

#### **CONGENITAL (FAILURE TO THRIVE)**

- Genetic or chromosomal abnormalities e.g. Down's syndrome and cystic fibrosis
- Constitutional

#### **ACQUIRED NEOPLASM**

• Primary or secondary malignancy

#### DEGENERATIVE

- COPD
- Multiple sclerosis

#### **INFECTION/INFLAMMATORY**

- Viral Short coryzal illness or more chronic infection (e.g. CMV, EBV or HIV)
- Bacterial (e.g. streptococcal pneumonia) or fungal (e.g. cryptococcal pneumonia)
- Other infection (e.g. TB)
- Inflammatory conditions CTD (e.g. SLE), RA, IBD or vasculitis

#### TRAUMA (LESS LIKELY CAUSE FOR WEIGHT LOSS) Iatrogenic/Idiopathic

• Recent major surgery (e.g. gastrectomy)

#### **Miscellaneous**

- Anorexia nervosa
- Depression and/or other psychiatric diagnoses

#### Endocrine

• Hyperthyroidism

#### \*\*Investigations:

- 1. Malabsorption  $\rightarrow$  Lower GI endoscopy
- 2. Hyperthyroidism/Hypothyroidism  $\rightarrow$  TFT
- 3. DM  $\rightarrow$  Fasting blood glucose level, OGTT
- 4. Addison's disease  $\rightarrow$  ACTH stimulation test
- 5. PUD  $\rightarrow$  Upper GI endoscopy
- 6. Cushing  $\rightarrow$  24-h urine cortisol, low-dose dexamethasone test

# 19) Follow up DM

- A. Analysis
  - I. Onset  $\rightarrow$  How long do you have DM?
  - II. Character  $\rightarrow$  Is your blood sugar controlled? / Do you measure it regularly? / How much is the reading?
  - III. Drugs  $\rightarrow$  on insulin or oral hypoglycemic drugs? / any drug complications?
  - IV. Exercise and diet
  - V. Obesity and BMI
  - VI. Polyphagia or Polydipsia?
  - VII. Lab results (if the patient is educated)
- B. Complications
  - I. Retinopathy  $\rightarrow$  Decreased or loss of vision
  - II. Nephropathy  $\rightarrow$  Polyuria, Anuria, Frothy urine, Uremia (Nausea & Vomiting / Abdominal pain)
- III. Neuropathy  $\rightarrow$  Paresthesia of limbs, Urinary incontinence
- IV. Atherosclerosis  $\rightarrow$  MI (Chest pain / SOB), CVA (Headache / Paralysis), PVD (Foot ulcers / Intermittent claudication), Hx of MI or CVA
- V. Hypoglycemia  $\rightarrow$  Hunger, Tremor, Palpitation, Sweating, Pallor, Irritability, Confusion, Seizures
- VI. DKA  $\rightarrow$  Nausea & Vomiting, Polyuria, Polydipsia, Anorexia, Kussmaul breathing, Tachycardia, Dehydration
- VII. Other  $\rightarrow$  Hair loss, Easy bruising, Delayed wound healing, Sexual dysfunction
- C. Family history
  - I. Same condition
  - II. Chronic illness
- **D.** Past medical history
  - I. Surgeries or admission
  - II. Chronic illnesses (DM, HTN, Hyperlipidemia)
  - III. Drugs
  - IV. Allergy
- E. Social history
  - I. Smoking
  - II. Alcohol

# 20) Follow up IBD

- A. Analysis
  - I. Onset  $\rightarrow$  How long do you have the disease? / what was the first symptom?
  - II. Character  $\rightarrow$  Is it controlled? / how many attacks until now?
  - III. Drugs  $\rightarrow$  what drugs do you take? / Compliance? / any drug complications?
- **B.** Current Symptoms
  - I. General
    - a) Weight loss
    - b) Fever
    - c) Fatigue
    - d) Anorexia
  - II. GI
    - a) Mouth ulcers
    - b) Abdominal pain (analysis page )
    - c) Diarrhea (analysis page )
      - $\circ \quad \text{Watery} \rightarrow \text{Crohn's disease}$
      - $\circ \ \ \text{Bloody} \rightarrow \text{Ulcerative colitis}$
    - d) Rectal Bleeding
  - III. MSS
    - a) Skin Rash
    - b) Joint Pain
    - c) Eye Symptoms

### C. Complications

# **Crohn's Disease**

- I. Intestinal Obstruction  $\rightarrow$  change in bowel habit, constipation, tenesmus
- II. Anal fistulas  $\rightarrow$  anal or perianal discharge , pruritus
- III. Enterovesical fistulas  $\rightarrow$  dysuria, recurrent bladder infections
- IV. Enterovaginal fistulas  $\rightarrow$  dyspareunia , feculent vaginal discharge
- V. Anemia and malnutrition  $\rightarrow$  fatigue, pallor, dyspnea, tachycardia , easy bruising

### Ulcerative Colitis

- I. Toxic megacolon  $\rightarrow$  severe diarrhea, cramps, fever, abdominal distention
- II. Perforation  $\rightarrow$  Severe abdominal pain, Abdominal distension, Fever, Nausea & Vomiting
- III. Colon CA
- IV. Primary sclerosing cholangitis  $\rightarrow$  jaundice, symptoms of liver failure (upper GI bleeding, ascites, encephalopathy)
  - D. Family history
    - I. Same condition
    - II. Chronic illness
  - E. Past medical history
    - I. Surgeries or admission
    - II. Chronic illnesses (DM, HTN, hyperlipidemia)
    - III. Drugs
    - IV. Blood transfusion
    - V. Allergy
  - F. Social history
    - I. Smoking
    - II. Alcohol

# **Systemic Review**

#### I. General

- a) Fever
- b) Fatigue
- c) Weight Loss
- d) Anorexia
- e) Sweating

#### II. CVS

- a) Chest Pain
- b) SOB
- c) Orthopnea
- d) PND
- e) Palpitations
- f) Syncope attack
- g) Ankle Swelling
- h) Intermittent Claudication

#### III. RS

- Upper
  - a) Sneezing
  - b) Nasal Discharge
  - c) Nasal obstruction
  - d) Epistaxis
  - e) Sore throat
  - f) Hoarseness of voice
  - g) Stridor
- □ Lower
  - a) Chest Pain
  - b) SOB
  - c) Cough
  - d) Sputum
  - e) Wheezing
  - f) Hemoptysis

#### IV. GI

- a) Mouth ulcers
- b) Dysphagia / Odynophagia
- c) Heart burn
- d) Nausea & Vomiting
- e) Abdominal Pain
- f) Abdominal Distension
- g) Change in Bowel habits (Diarrhea / Constipation)
- h) Change in stool color
- i) GI bleeding (Hematemesis / Hematochezia / Melena)

#### V. UGS

- Urology
  - $\circ$  Pain
    - a) Dysuria
    - b) Flank Pain
    - c) Supra-pubic Pain
  - o Urine
    - a) Color
    - b) Amount
    - c) Smell
    - d) Any Blood
  - Lower Urinary Tract Symptoms (LUTS)
    - a) Frequency
    - b) Urgency
    - c) Nocturia
    - d) Straining
    - e) Poor stream
    - f) Intermittency
    - g) Incontinence

- Male tract
  - a) Erectile Dysfunction
  - b) Urethral Discharge
  - c) Ejaculation Problem
- Female Tract
  - a) Age of menarche and menopause
  - b) Regularity and amount or menstruation
  - c) Number of births and abortions
  - d) Vaginal discharge or pruritus

#### VI. MSS

- a) Skin Rash
- b) Joint Pain or Swelling
- c) Muscle Pain

#### VII. CNS

- a) Loss of consciousness
- b) Headache
- c) Sleep disturbances

#### VIII. ES

- a) Cold or heat intolerance
- b) Excessive sweating

#### IX. HLS

- a) Symptoms of anemia (Pallor/Fatigue/SOB/Palpitations)
- b) Recurrent fevers
- c) Increased Bleeding tendency

# Goode luck

References

- Focused History Taking for (OSCEs) second edition

-Internal focused history (JUST medicinal club team)