CHEST PAIN

Introduce yourself , take permission

Patient profile (name , age , occupation , marital status)

Chief complaint + duration

Analysis of the Chief Complaint

Site:

a) Retrosternal → ACS, Angina, Pericarditis

b) Lateral → PE, Pneumonia, Shingles

Onset

a) Sudden → ACS, PE

b) Gradual → Angina, Pneumonia

Character

a) Heaviness → ACS, Angina

b) Stabbing → PE, Pneumonia, Pericarditis

c) Tearing → Aortic dissection

Radiation

a) Left shoulder, neck and teeth → ACS, Angina

b) Back → Aortic dissection

(DDX: ACS, Angina, PE, Pneumonia, Pericarditis, Shingles, Trauma, GERD)

****Investigations:**

1. ACS + Angina → ECG and cardiac enzymes

2. Pneumonia → CXR, ESR, CRP

3. PE → CT-angiogram, D-dimer

4.GERD → 24-hour monitoring.

Associated symptoms (finish the CC analysis then ask about them ↓)

Timing (Course and pattern)

a) Intermittent or episodic, how much it lasts →ACS, Angina

b) Persistent for more than 30 minutes → MI

Exacerbating:

a) Exertion, Emotion, Cold, After meals→ ACS, Angina

b) Movement, respiration and cough, lying supine → PE, Pneumonia, Pericarditis

Relieving:

a) Rest AND NTG → Angina b) eating → GERD, ACS.

b) **Leaning forward,** Sitting up, Analgesics, NSAIDS → Pericarditis

Severity 1. Very severe (ACS, Aortic dissection) 2. Mild (esophageal).

Associated symptoms

I. CVS: Sweating, Nausea, vomiting and impending death → MI

a) SOB b) Orthopnea c) PND d) Ankle swelling, Palpitation, Syncope.

II. RS: Fever & chills, contact with sick patient → Pneumonia

a) Cough and sputum → Pneumonia

b) Hemoptysis, leg pain and swelling → PE

c) Cyanosis → PE

III. GI

Heart burn, regurgitation, Hematemesis and melena → GERD, Esophagitis

IV. MSS

a) Skin rash → Shingles

b) Joint pain → SLE

V. Depression: Mood and loss of interest .

Risk Factors (always ask about smoking and alcohol)

I. ACS → HTN, DM, Hyperlipidemia, Family history, Smoking

II. Viral etiologies may be preceded by flu-like respiratory or GI symptoms → Percardiaitis

III. Trauma → Pneumothorax

IV. PE (DVT) → Recent travel, Surgery, Immobility, Pregnancy, OCP, Previous DVTs

Review of systems

Past medical and surgical HTN, hyperlipidemia, DM, previous caths and stents, recent infections, previous heart surgeries

Drug Hx NSAIDs, B-blockers, Thyroxine, Cocaine AND **Vaccine Hx** if Pneumonia **Allergies:** Drug ..etc

Family Hx Family Hx of heart disease or premature CAD (♂<55 , ♀<65)

Social Hx: Smoking history (# of pack years), alcohol, travel history

Chest Pain

1- Intermittent (Angina Vs. Esophageal spasm)

2- Acute

1. **Acute coronary syndrome**
2. **Aortic dissection**
3. **Pericarditis**
4. **Esophageal Spasm**
5. **Pneumothorax**
6. **Musculoskeletal pain**

Premature CAD

- **In the patient**

CAD < 55 years in female, < 45 years in male

- **In the family**

First degree relative

CAD < 65 years in female, < 55 years in male

4.3 Cardiovascular causes of chest pain and their characteristics

	Angina	Myocardial infarction	Aortic dissection	Pericardial pain	Oesophageal pain
Site	Retrosternal	Retrosternal	Interscapular/retrosternal	Retrosternal or left-sided	Retrosternal or epigastric
Onset	Progressive increase in intensity over 1–2 minutes	Rapid over a few minutes	Very sudden	Gradual; postural change may suddenly aggravate	Over 1–2 minutes; can be sudden (spasm)
Character	Constricting, heavy	Constricting, heavy	Tearing or ripping	Sharp, 'stabbing', pleuritic	Gripping, tight or burning
Radiation	Sometimes arm(s), neck, epigastrium	Often to arm(s), neck, jaw, sometimes epigastrium	Back, between shoulders	Left shoulder or back	Often to back, sometimes to arms
Associated features	Breathlessness	Sweating, nausea, vomiting, breathlessness, feeling of impending death (angor animi)	Sweating, syncope, focal neurological signs, signs of limb ischaemia, mesenteric ischaemia	Flu-like prodrome, breathlessness, fever	Heartburn, acid reflux
Timing	Intermittent, with episodes lasting 2–10 minutes	Acute presentation; prolonged duration	Acute presentation; prolonged duration	Acute presentation; variable duration	Intermittent, often at night-time; variable duration
Exacerbating/ relieving factors	Triggered by emotion, exertion, especially if cold, windy Relieved by rest, nitrates	'Stress' and exercise rare triggers, usually spontaneous Not relieved by rest or nitrates	Spontaneous No manoeuvres relieve pain	Sitting up/lying down may affect intensity NSAIDs help	Lying flat/some foods may trigger Not relieved by rest; nitrates sometimes relieve
Severity	Mild to moderate	Usually severe	Very severe	Can be severe	Usually mild but oesophageal spasm can mimic myocardial infarction
Cause	Coronary atherosclerosis, aortic stenosis, hypertrophic cardiomyopathy	Plaque rupture and coronary artery occlusion	Thoracic aortic dissection rupture	Pericarditis (usually viral, also post myocardial infarction)	Oesophageal spasm, reflux, hiatus hernia

NSAIDs, *non-steroidal anti-inflammatory drugs.*

Palpitation

Introduce yourself , take permission
Patient profile (name, age, occupation, marital status)
Chief complaint + duration
Analysis of the Chief Complaint (OPCERATS)
Onset (sudden or gradual) **Progression get worse or better with time** **Character: (regular or irregular) (tachycardia or bradycardia).** **Exacerbating, Relieving:** -Stress, Exercise, caffeine, alcohol, smoking **Timing (Course/ pattern)** IF Lasts for a few minutes or Constant **Severity (loss of consciousness, dizziness)**
Associated symptoms **I. CVS:** (HF OR IHD) Chest pain, Orthopnea, PND, lower limb edema, SOB, Palpitation, intermittent claudication. **II. SVT, Afib:** Polyuria, light headedness, chest tightness. **III. Ventricular arrhythmia:** Presyncope, and syncope. **IV. Hyperthyroidism:** heat intolerance, weight loss, diarrhea **V. Infection and sepsis** → Fever. **VI. Anemia:** Fatigue, Pallor or Jaundice, Weakness. **VII. Psychological:** Anxiety (nervousness, insomnia, tachypnea). **VIII. Pheochromocytoma** (episodic headache + sweating).
Review of systems
Past medical and surgical -IHD (Previous MI) -Valvular heart disease (Mitral stenosis) → Atrial fibrillation Previous admission. Previous surgeries.
Drug Hx (Thyroxine, B-agonists , Decongestants , Anti-depressants)
Family Hx Family hx of heart disease or sudden death
Social Hx: Smoking history (# of pack years), alcohol, travel history, diet (caffeine .. etc.).

(DDX: Atrial fibrillation, Hyperthyroidism, Phechromocytoma, Anxiety, Anemia)

****Investigations:**

1. **CBC.**
2. **ECG.**
3. Echocardiogram.
4. Thyroid function test.
5. Urine metanephrins.

4.6 Descriptions of arrhythmias

	Extrasystoles	Sinus tachycardia	Supraventricular tachycardia	Atrial fibrillation	Ventricular tachycardia
Site	–	–	–	–	–
Onset	Sudden	Gradual	Sudden, with 'jump'	Sudden	Sudden
Character	'Jump', missed beat or flutter	Regular, fast, 'pounding'	Regular, fast	Irregular, usually fast; slower in elderly	Regular, fast
Radiation	–	–	–	–	–
Associated features	Nil	Anxiety	Polyuria, lightheadedness, chest tightness	Polyuria, breathlessness Syncope uncommon	Presyncope, syncope, chest tightness
Timing	Brief	A few minutes	Minutes to hours	Variable	Variable
Exacerbating/ relieving factors	Fatigue, caffeine, alcohol may trigger Often relieved by walking (increases sinus rate)	Exercise or anxiety may trigger	Usually at rest, trivial movements, e.g. bending, may trigger Vagal manœuvres may relieve	Exercise or alcohol may trigger; often spontaneous	Exercise may trigger; often spontaneous
Severity	Mild (usually)	Mild to moderate	Moderate to severe	Very variable, may be asymptomatic	Often severe