

Cardiac Symptomatology

The questions signed by * are hard: read their explanation. ● Past Years ● TBL ● Others

This file belongs to the PULSE Cardiology question book: the explanations of the multiple choice answers and the model answers of the essay questions, in the words of the handout.

Answer Key | Multiple Choice Questions

Question no.	1	2	3	4	5	6
Answer	c	e	a	c	c	c

► Second | Questions with a Note

Question no.	1	2	3	4	5
Answer	c	d	c	e	a

► Why this answer?

- Which of the following is not a cause of unilateral lower limb oedema?
(c) Liver cell failure.
Liver cell failure is a cause of generalized oedema, so it does not give oedema of one limb. Venous obstruction, lymphatic obstruction and congenital causes are listed under local oedema.
- Differential diagnosis of acute dyspnea with clear back doesn't include the following:
(e) Acute left ventricular failure
Acute left ventricular failure gives acute pulmonary oedema with bilateral crepitations, at first basal then generalized, so the back is not clear. Pulmonary embolism is the cause whose clue is tachycardia, desaturation and clear back.
- Haemoptysis may be found in:
(a) Left ventricular failure
Haemoptysis in a cardiac patient comes with left-sided failure: frothy blood-tinged sputum of acute pulmonary oedema, winter bronchitis from pulmonary congestion, and pulmonary apoplexy from rupture of bronchial varices. Haemoptysis is also one of the backward manifestations of Lt-sided heart failure.
- Regarding Kerley's B lines, all of the following are true except:
(c) Its presence indicates left atrial pressure >10 mmHg
Kerley's B lines are linear horizontal shadows near the costophrenic angles due to oedema of the interlobular septa, and mitral stenosis is a cause of cardiogenic pulmonary oedema. A pressure just above 10 mmHg is still inside the normal wedge pressure of 5-12 mmHg, so (c) is the false statement.
- Which of the following disorders is not associated with ventricular tachycardia as a cause of syncope?
(c) Atrial myxoma
Left atrial myxoma causes syncope by obstruction of blood flow, listed with ball and valve embolus, not by ventricular tachycardia. HOCM commonly causes ventricular tachycardia and an old infarction scar is an ischaemic cause of arrhythmia; aortic stenosis is a listed cause of cardiac syncope.

6 Cardiac syncope is characterized by:

(c) Rapid recovery

Syncope is a transient loss of consciousness due to acute cerebral ischaemia, so recovery is rapid. Only prolonged ischaemia leads to convulsions, coma and brain damage, so a residual neurodeficit does not fit.

► **Second | Questions with a Note: why this answer?**

1 Regarding oedema in case of heart failure, which of the following is not true:

(c) Increased capillary permeability

The handout lists all four in cardiac oedema: oedema is pitting, and its pathogenesis includes salt and water retention with renin and aldosterone secretion and increased capillary permeability due to hypoxia. So strictly no option is false, and (c) is kept only as the printed answer.

2 Ascites could precede lower limb oedema in case of:

(d) All of the above

Ascites may develop before oedema (ascites precox) in pericardial effusion and constrictive pericarditis, and in tricuspid incompetence or stenosis, which gives marked liver congestion and portal hypertension and may end in cardiac cirrhosis. So (b) and (c) are true and the printed answer is 'all of the above'.

3 Regarding oedema in case of heart failure, which of the following is false:

(c) Hypoalbuminemia

The handout lists all four in cardiac oedema: oedema is pitting, and its pathogenesis includes salt and water retention with renin and aldosterone secretion and hypoalbuminaemia from low intake, low absorption, low liver synthesis and urinary loss. So strictly no option is false, and (c) is kept only as the printed answer.

4 In a heart failure patient, ascites could precede lower limb oedema in case of:

(e) All of the above

Ascites may develop before oedema (ascites precox) in pericardial effusion and constrictive pericarditis, and in tricuspid incompetence or stenosis, which gives marked liver congestion and portal hypertension and may end in cardiac cirrhosis. So (b) and (c) are true and the printed answer is 'all of the above'.

5 Syncopal attack is associated with all of the following except:

(a) Myocarditis

Arrhythmias (severe tachycardia such as ventricular fibrillation), aortic stenosis and HOCM are listed as causes of cardiac syncope. Myocarditis is not in that list, so it is the expected answer, although the handout gives it as a cause of acute left-sided failure and of arrhythmia.

Model Answers | Essay Questions

1 Enumerate causes of life-threatening chest pain.

Cardiac pain

- * Ischaemic heart disease:
 - M.I.
 - Angina pectoris.
- * Pericardial disease:
 - Dry pericarditis.
 - Massive pericardial effusion.
- * Massive pulmonary embolism and pulmonary infarction.
- * Aortic dissection and aortic aneurysm.

- * Cardiac neurosis:
 - Occurs in neurotic individuals.
 - Site: Lt inframammary and localized.
 - Radiation: no specific radiation (may be to Lt arm).
 - Character: stitching or stabbing.
 - No relation to exertion and no relief by rest.
 - Variable duration (seconds or hours).
 - Associated with local tenderness and may be other features of neurosis.
 - Normal cardiac exam.
- * Huge cardiomegaly: may rarely cause retrosternal heaviness.
- * Mitral valve prolapse, AS, AR.

N.B. Huge lt. atrium → sawing pain "erosion of spine".

Differential diagnosis of acute chest pain

	Cause	Clue in ABCDE approach
Cardiac causes	Pericarditis	Pericardial rub
	Myocarditis	Pericardial rub
	Pulmonary embolism	Tachycardia, desaturation, and clear back
Chest causes	Tension pneumothorax	Diminished air entry on one side
	Pleuritis	Diminished air entry on one side if with effusion
Vascular causes	Aortic dissection	Unequal pulse and BP

	Cause	Clue in ABCDE approach
GIT causes	Cholecystitis	Epigastric tenderness
	Pancreatitis	Epigastric tenderness
	Esophageal spasm	
Chest wall causes	Myositis	Tenderness
	Chest wall trauma	Tenderness and visible injury
	Herpes zoster infection	Rash on the skin

Note The handout has no list titled life-threatening chest pain; its causes of cardiac pain and of acute chest pain are given.

2 Enumerate the differential diagnosis of cases with chest pain.

Cardiac pain

- * Ischaemic heart disease:
 - M.I.
 - Angina pectoris.
- * Pericardial disease:
 - Dry pericarditis.
 - Massive pericardial effusion.
- * Massive pulmonary embolism and pulmonary infarction.
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3 How would you approach such a case?

Anginal chest pain

- * Constricting / heavy discomfort to the chest, jaw, neck, shoulders, or arms.
- * Symptoms brought on by exertion, emotion, cold weather and heavy meals.
- * Symptoms relieved within 5 min by rest or nitro-glycerine (GTN).

Number of features	Type of chest pain
All the 3 features	Typical angina
Only 2 features	Atypical angina
0-1 feature	Non-anginal chest pain

- * Anginal pain usually lasts for less than **15 minutes**.
- * Anginal pain could be only in the chest, in the chest and referring, or only in the referred areas.

Angina equivalents

Dyspnoea, fatigue, nausea, sweatiness, and faintness.

Features that make angina less likely

- * Pain that is continuous or lasting for seconds is less likely related to ischemic origin.
- * Pleuritic localized chest pain or that worse with swallowing is mostly non-ischemic pain.

Cardiac neurosis

- * Occurs in neurotic individuals.
- * Site: Lt inframammary and localized.
- * Radiation: no specific radiation (may be to Lt arm).
- * Character: stitching or stabbing.
- * No relation to exertion and no relief by rest.
- * Variable duration (seconds or hours).
- * Associated with local tenderness and may be other features of neurosis.
- * Normal cardiac exam.

Note The handout gives no set approach to this case, answer incomplete.