

2020-01 Trial Exam

SAQ 5

Thoracic Aortic Dissection

You are caring for a 50 year old male patient who presented after sudden onset of severe tearing chest pain radiating through to his back. You suspect a thoracic aortic dissection. His observations are as follows:

T 36.7, HR 110, BP 190/110, Sats 98%, RR 25,
GCS15

Read the stem carefully. Look at the patient's age, gender, history, observations.

Unless otherwise phrased (e.g. "for any patient...") tailor your answer to this patient.

- ◆ In *addition to analgesia*, give your two (2) *initial* therapeutic (medication) interventions, *in order* with clinical end-points, if this patient has a Stanford type B dissection

- ◆ The stem tells you that analgesia has been given. You won't score by giving analgesia!
- ◆ It says "Initial" so make sure they are the first or most important. And "in the order" you will give them.

	Therapeutic Intervention	Clinical end point
1st	Esmolol/labetolol (Also accepted metoprolol & CCB)	Titrate to HR < 60
2nd	SNP/GTN infusion (also accepted titrated hydralazine or labetolol)	Titrate to BP after HR control. SBP < 120

- ◆ 1st- Must control rate first then the BP. Agents for BP that can have a reflex tachycardia should not be given before rate control as shear stresses will increase. (This is controversial but should be the order in an exam answer). If rate control was NOT given before BP control then zero was scored for the subquestion.
- ◆ I accepted end point of HR <80. I accepted SBP target of 100-120. IV infusion is best as titratable and can be turned off if there's an overshoot. Dose was not required (as not asked for).
- ◆ The patient needs to be slow and low. I did not allow targets that were too high (e.g. BP <160 HR <120)

What it Said

- ◆ Your patient suddenly deteriorates and becomes hypotensive. State 4 potential reasons for the patient's hypotension . For each reason, state how you would elucidate the cause within the ED

What it SHOULD have said (wrong version got into exam)

- ◆ Prior to initiation of your treatment he drops his BP to 70 / 40. His other vital signs are unchanged
- ◆ State 4 potential reasons for the patient's hypotension . For each reason, state how you would elucidate the cause within the ED

- ◆ You need to give 4 separate and distinct reasons for the deterioration. Giving rupture into chest AND rupture into abdomen will only score once.
- ◆ This is a common reason for missing points in the SAQ. Try to avoid too similar answers.
- ◆ Please note that the wording asked for your diagnostic approach "within" the ED. So CT is not going to score as outside ED. Be careful with your terminology here. Make sure you say Bedside or mobile CXR, Bedside or POCUS echo, BELS etc (Else 1/2 marks if just say CXR)

Causes

- ◆ Ruptured Aorta
 - ◆ Mobile CXR/POCUS showing effusion. Be careful re abdominal rupture and POCUS as Abdo aorta is retroperitoneal. Don't put both as will only score for one (too similar)
- ◆ False Hypotension (Brachial/subclavian flap on one arm)
 - ◆ Normal BP in other arm. Absent pulse in only one limb
- ◆ Pericardial tamponade
 - ◆ pericardial effusion on POCUS/BELS. Better answers gave US signs of tamponade
- ◆ Medication effect/anaphylaxis (accepted due to question wording change). Marks only given for one or other, not both
 - ◆ Improvement with ceasing infusion and fluids/ other signs anaphylaxis clinically and Improvement with anaphylaxis Rx

Causes

- ◆ Cardiogenic shock 2° Coronary occlusion
 - ◆ AMI on ECG. NB needed to state that there were acute ischaemic/infarct changes
- ◆ Acute aortic valve regurgitation
 - ◆ Ao regurg on POCUS/new diastolic murmur
- ◆ Neurogenic shock from spinal artery infarct
 - ◆ paralysis and sensory deficit on examination. warm peripheries. Relative bradycardia

Cut Mark

- ◆ part "a" 3/4, part "b" 6/8
- ◆ 9/12
- ◆ This is a quintessential EM topic. You should know it well. Therefore high required marks to be "Just at standard". You should have an approach and appropriate clinical end points for this condition. Thus the 3 out of 4 for part a (Prob should be 4/4 actually). Also the altered wording allowed medication issue to be an obvious and easy mark, => needed to think of one less other cause meant higher cut mark

Tips

- ◆ Carefully read the stem. Every piece of information is important.
 - ◆ So in this case- Interventions had to be in order, actions to determine cause had to be in ED. Causes of Hypotension had to be acute etc
- ◆ Don't give answers already in the stem. So analgesia as an intervention wouldn't score as the stem says its already been given.
- ◆ Don't make stuff up. E.g. don't put as an intervention that you will reverse anti-coagulation when the patient isn't said to be on any (and is likely NOT in them). It won't score and wastes your time.
- ◆ Categorise your answers to avoid too similar responses or missing important responses. Show prioritisation.

Tips

- ◆ Consultant level answer- the answer shows a consultant level of understanding and specificity
- ◆ Be specific, appropriate to the question's patient/situation.
- ◆ Justify your responses.
- ◆ Be accurate- don't say "spinal shock" when you mean "neurogenic shock"

Tips

- ◆ Not consultant level
 - ◆ “Tamponade”
 - ◆ “Bedside echo”
 - ◆ “Hypovolaemic shock”
- ◆ Consultant level answer
 - ◆ “Retrograde Aortic dissection with rupture into pericardium causing pericardial tamponade”
 - ◆ “Bedside echo looking for large pericardial effusion with diastolic collapse of RV”
 - ◆ “Aortic rupture into thorax with hypovolaemic shock”

Tips

- ◆ Not consultant level
 - ◆ “Spinal shock” (Incorrect term)
 - ◆ “Cardiogenic shock”
- ◆ Consultant level answer
 - ◆ “Dissection of spinal arteries with spinal infarct and neurogenic shock”
 - ◆ “Dissection of coronary arteries with resultant coronary infarction and cardiogenic shock”

Tips-General for SAQ

- ◆ Avoid non-standard acronyms.
 - ◆ Remember that examiners come from all regions inc NZ. They may not know what you mean, and you may lose marks
- ◆ Be explicit
 - ◆ Do not imply things. Do not assume the examiner knows what you meant or what you implied. If it's not written down it won't score
- ◆ Poor writing = Don't apply for paper exam.