

Name:	J Lowe	Observations at start	CRT:	2s	
D.O.B.:	31/01 (70 Y)	RR:	Vent setting	Temp:	36.8
Address:	(Insert local address)	ETCO2:	4.5	BM:	9.6
		Sats:	97%	Weight:	110kg
Hospital ID:	779 241 4469	Heart rate:	110	Allergy	NKDA
Ward:	General surgery	BP:	105/65		
Background to scenario		Specific set up			
A patient undergoing an emergency inguinal hernia repair (for a strangulated hernia) under a general anaesthetic, suffers a STEMI during the operation.		Mannequin, on operating table Intubated, Cannulated, fluids attached, Draped for surgery Anaesthetic chart and medication ECGs showing cardiac ischaemia (show as ECGs are performed during the scenario)			
Required embedded faculty/actors		Required participants			
Junior anaesthetist Surgeon		Anaesthetist ODP/surgeon/theatre staff can be participants in MDT sim			
Past Medical History					
HTN, T2DM, IHD – 3 NSTEMIs in past 10 years, 2 treated conservatively, last one a year ago treated with angioplasty Smoker 10/day. Minimal alcohol. Poor exercise tolerance – due to joint pain Lonsstanding inguinal hernia, multiple recent admissions with strangulation/obstruction. No airway concerns					
Drugs Home			Drugs Hospital		
Ramipril, Bisoprolol, Atorvastatin, Aspirin, Metformin, Lansoprazole, Paracetamol, Naproxen, Tramadol PRN			Anaesthetic induction and maintenance of choice Antibiotics – as per local protocol		
Brief to participants					
You are the anaesthetic on call team, you have been asked to help by a junior anaesthetist covering an elective general surgery list, as their consultant has just stepped out for a break Junior anaesthetist: Patient history as above. Induction of anaesthesia was uneventful, grade 1 intubation. They have been given antibiotics and surgery has just begun. The HR has been erratic and I'm not really sure how to proceed, I've given some morphine, some rocuronium and fluid so far.					
Scenario Direction					
Stage 1					
A	Intubated and ventilated,				
B	RR 12-14, sats 97% (on FiO2 0.5) ETCO2 4.5				
C	HR 110, BP 105/65 Junior anaesthetist notices change in (3 lead) ECG morphology. ST elevation if 12-lead performed				
DE	Anaesthetised with choice of anaesthetic TIVA/sevoflurane Draped for surgery, surgery has just begun. Surgeon unaware of anaesthetic/patient concerns until specifically told so.				
Rx	Recognise developing critical incident, communicate this with team Assess patient, develop differential diagnosis, consider cardiac ischaemia Call for help (as appropriate for level) Treat as per local protocol/QRH handbook 12 lead ECG, consider cardiac arrest trolley Ensure oxygenation, analgesia, treat haemodynamic instability, Consider GTN				
Stage 2					
A	Intubated and ventilated				
B	RR 12-14, sats 92% (unless O2 increased), ETCO2 4.8				
C	HR 148, BP 85/32. ECG ST elevation (on 12 lead) – ventricular arrhythmia if untreated If ECHO performed – new regional wall motion abnormalities				
DE	Anaesthetised				
Rx	Call for help (if not already) Ensure theatre team are aware of critical incident Stop/rapid completion of surgery Consider need for anti-coagulation/antiplatelet therapy Consider/refer to cardiology for revascularisation, discussion re next steps and post op destination				

Guidelines	
Association of Anaesthetists QRH handbook Cardiac ischaemia https://anaesthetists.org/Portals/0/PDFs/QRH/QRH_3-12_Cardiac_ischaemia_v2.pdf?ver=2019-08-23-113328-470	
Guidance for Patient Role	
Opening lines/questions/cues/key responses Under GA	Relevant HPC / PMH
Concerns	Actions
Guidance for ODP role	Guidance for Surgeon
Opening lines/questions/cues/responses/Concerns Will they be ok? He was absolutely fine when we started the operation Competent but never experienced similar incident, so anxious about the patient's prognosis	Unaware of patient concern until declared Joint decision making to pause surgery or rapid closure
Actions Can point out ECG morphology looks different to beginning of surgery	
Guidance for Role e.g. ITU/Anaesthetic Senior	Guidance for cardiology (by phone)
Expectations/actions Support depending on level of participant	Would be a candidate for PCI, stabilise and transfer to cath lab – would you be able to anaesthetise if they are unstable? (prompting discussion about support for non-theatre activity)
	Additional challenges
	Increasing cardiovascular instability/arrest
Session Objectives	
Clinical	Management of a patient with intra-operative cardiac ischaemia
Non-technical skills	
Teamworking	Coordinating activity of the team, exchanging information with different teams, assessing capabilities and utilising the team to complete tasks/manage patient, support junior staff
Task management	Planning and preparing for next steps such as transfer, management in angio. Following guidelines for managing IHD, identifying and utilising resources such as team members to complete various tasks, ensuring good communication such as closed loop communication techniques
Situational awareness	Gathering information – during patient assessment, recognising deteriorating patient, anticipating next steps
Decision making	Identifying options, supporting MDT decision making, continuous re-evaluation

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