Cardiac Ischaemia (Awake)

Critical Incidents

Name:	J Lowe	**Observations at start**		**CRT:**	2s
D.O.B.	31/01 (70 Y)	**RR:**	16	**Temp:**	36.8
Address:	(Insert local address)	**ETCO2:**	Present	**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 elective inguinal hernia repair under a spinal anaesthetic, suffers a STEMI during the operation.	Mannequin/simulated patient on operating table Cannulated, fluids attached, BP cuff on left Draped for surgery Anaesthetic chart and emergency medication (O2 and sedation running as per local protocols) ECGs showing cardiac ischaemia
Required embedded faculty/actors	**Required participants**
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
Lonstanding inguinal hernia, multiple recent admissions with strangulation/obstruction that resolved
No airway concerns

Drugs Home	Drugs Hospital
Ramipril, Bisoprolol, Atorvastatin, Aspirin, Metformin, Lansoprazole, Paracetamol, Naproxen, Tramadol PRN	Spinal anaesthetic Antibiotics – as per local protocol

Brief to participants

You are covering an elective general surgical list, the consultant has just stepped out for a break
Patient history as above. The patient received a spinal anaesthetic and antibiotics as per local protocol and they are comfortable. The surgery has just begun.

Scenario Direction

Stage 1	
A	Own (drowsy if sedation used)
B	RR 16, sats 97% (on choice of oxygen). Patient starts feeling shortness of breath, growing into inability to lie flat
C	HR 110, BP 105/65, patient starts complaining of chest discomfort, initially ache growing into cardiac chest pain ECG morphology changes
DE	Draped for surgery, surgery has just begun. Surgeon unaware of anaesthetic/patient concerns until specifically told so. Surgeon can ask anaesthetist to 'stop patient moving' Patient starts developing dizziness/nausea and vomiting
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 loca protocol/QRH handbook 12 lead ECG, consider cardiac arrest trolley Ensure oxygenation, analgesia, treat haemodynamic instability, Consider GTN
Stage 2	
A	Own
B	RR 25, sats 92% (unless O2 given), patient SOB and unable to lie flat
C	HR 148, BP 85/32. ECG ST elevation (on 12 lead) – ventricular arrhythmia if untreated Cardiac chest pain, radiating to left arm. If ECHO performed – new regional wall motion abnormalities
DE	Drowsy, dizzy, N&V
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	Relevant HPC / PMH
Can I sit up a little (initially vague symptoms, building up to full blown shortness of breath, chest pain) Blood pressure cuff (on left) is quite tight, can it be released?	Chest pain in latter stages – similar to last MI that needed PCI
Concerns	**Actions**
Am I going to die?	As chest pain starts to build, can get increasingly agitated and then drowsy

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 awake 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, stabalise and transfer to cath lab – would you be able to anaesthetise/provide sedation if they are unstable? (prompting discussion about support for non-theatre activity)
	Additional challenges
	Patient increasingly agitated

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

Tell us how you found this simulation scenario resource.
Give us feedback (5 mins) here: https://forms.office.com/e/etz7yZf0aa
Or scan the QR code below: