

Name:	Taylor Davies	Observation at start	CRT:	4s	
D.O.B.:	05/07 (55Y)	RR:	Ventilated	Temp:	36.8
Address:	(Insert local address)	ETCO2:	4.3->1.5	BM:	5.6
		Sats:	Poor trace	Weight:	80
Hospital ID:	456 146 1576	Heart Rate:	50	Allergy	NKDA
Ward:	Neurosurgery/Spinal	BP:	85/56		
Background to scenario		Specific set up			
A patient is undergoing a tumour debulking (spinal or posterior fossa) in the prone position. They suddenly become cardiovascularly unstable and arrest		Mannequin in theatre, head in appropriate device In prone position, follow local proning procedures Ventilated, cannulated – IV fluids + arterial line Appropriate mode of anaesthesia & drugs Anaesthetic chart Draped, surgical tray open, surgery ongoing			
Required embedded faculty/actors		Required participants			
Anaesthetic senior + operating surgeon Second surgeon/ODP/Scrub		Anaesthetic on call team Surgeons/ODP/Scrub can also be participants			
Past Medical History					
HTN and childhood asthma but otherwise well till recently. Working as school teacher Recent back pain (spinal surgery) or seizures (neurosurgery) leading to diagnosis of tumour No previous anaesthetics, no airway concerns Anaesthetised lines inserted according to local protocol					
Drugs Home			Drugs Hospital		
Amlodipine Dexamethasone (neurosurgery)			Anaesthetic drugs, antibiotics		
Brief to participants					
You are the on call team. You hear the anaesthetic assistance/cardiac arrest buzzer/bleep go off in theatre					
Scenario Direction					
Stage 1, 0– 5 minutes – Team arrival					
A	Ventilated, ETCO2 reducing slowly to 1.5				
B	Ventilator settings set appropriately, Sats – poor trace ↓ 50				
C	HR dropping gradually as participants enter 50→25, BP dropping gradually				
DE	Anaesthetised (with your choice of agent) Head in appropriate device, draped, surgeons operating on spine/head				
Rx	Arrival and handover as appropriate, work with anaesthetist on the case, recognition of deteriorating patient Activate emergency protocols, consider early resuscitation as per cardiac arrest in neurosurgery protocol				
Stage 2, 5–10 minutes – Cardiac arrest					
A	ETCO2 low, improves with chest compressions				
B	No Sats trace				
C	HR ↓ to asystole, BP trace flattens, these may reflect compressions when they are started				
Rx	The cause can be bleeding/venous air embolism/retraction Cardiac arrest management as per ALS/Neurosurgical guidance Supine positioning if necessary/wound closure/consideration of head position/device Identification/treatment of the cause MDT approach to management				
Stage 3, 10– 15 minutes - ROSC					
A	ETCO2 recovered				
B	Sats 92%				
C	ROSC after a few cycles of CPR/identification and treatment of cause → HR 120, BP 90/65				
DE					
Rx	Team discussion regarding surgical options/imaging/post op destination Follow protocols - Cardiac arrest during Neurosurgery, Neuroprotection following cardiac arrest Consideration of team support				
Guidelines					

Management of cardiac arrest during neurosurgery in adults https://www.resus.org.uk/sites/default/files/2020-05/CPR_in_neurosurgical_patients.pdf
AoA QRH Handbook – Neuroprotection following cardiac arrest
https://anaesthetists.org/Portals/0/PDFs/QRH/QRH_3-13_Neuroprotection_cardiac_arrest_v1.pdf?ver=2018-07-25-112714-707

Guidance for Starting anaesthetist Role	
Opening lines/questions/cues/key responses I don't know what happened, one second they were fine, the next everything is alarming. Decent amount of bleeding up till now (750ml)	Relevant HPC / PMH Handover patient history as above
Concerns	Actions Shaken by incident, handover leadership to on call team
Guidance for ODP/Scrub/Surgical roles	
Actions Competent at their roles Support in team management and local protocols	Additional challenges Junior team member is upset requiring debrief
Session Objectives	
Clinical	Management of cardiac arrest in a neurosurgical/spinal patient Management of cardiac arrest in a prone patient
Non-technical skills	
Teamworking	Coordinating a team, exchanging information with MDT
Task management	Planning, anticipating next steps, Following guidance
Situational awareness	Recognising deteriorating patient, information gathering
Decision making	Identifying/balancing risks and options, continuous 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:

