

Cardiac Module – C6 Submodule Tachyarrhythmias – Scenario 1 [Last updated August 3 2012]

Scenario C6 Scenario 1 Richie Rich				
Scenario:	Patient:	Simulator		
C6	Richie Rich	SIMMAN 3G preferred		
Case Summary: Richie Rich 70-year-old man with a history of AMI, CCF, and CABGx3 presents with mild SOB and palpitations. He is in AF, rate 130bpm. He then complains of chest pain and develops conscious VT. Post cardioversionx2, he reverts to sinus rhythm with some ST depression (NSTEMI).		Participant Briefing: 70-year-old man presents with SOB and palpitations after a session of lawn bowls this evening. He has a significant cardiac history. He has been triaged and placed into the resuscitation bay.		
Clinical Issues		Human factors / Non technical issues		
AF Conscious VT with chest pain Prompt assessment and treatment of a patient with a deteriorating arrhythmia Syncronised cardioversion Procedural Sedation		Communication with patient - history and reassurance Communication with team – role allocation and plan Aware of the urgent need to treat a haemodynamically unstable arrhythmia		

Learning Objectives assessment and initial treatment of a patient with arrhythmia.

Communicate with patient and within the team,

Conduct a rapid assessment and initiate treatment of a patient with arrhythmia

Demonstrate knowledge of the different types of arrhythmias and potential deteriorations. Knowledge of initial management and assessment of a patient with arrhythmia.

Interpret clinical findings to identify deterioration

Faculty Actors: Staff nurse in ED resus. Helpful when asked to do something. May need to prompt if team misses some clues

If there are enough faculty members one could be a radiographer for when the CXR is ordered. Junior team may require staff senior back up – pre-brief when this will arrive if anticipated.

Patient Moulage:

No specific moulage needed. Mannequin should be sat up on a trolley. Cannula will already be in situ.









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Equipment & Props:	Monitor to display observations
Projector screen & computer	White board if needed
Video conference unit	IV cannulae – 16+18G
SIMMAN 3G mannequin	Blood test tubes and ABG syringe
Oxygen – piped or cylinder	Pretend or actual X-Ray plate
Oxygen masks – Nasal prongs, Hudson mask and Non re-breath masks should	Syringes with drugs pre-drawn (the faculty nurse can give these to the
be available	participants once they have been asked for and "drawn up". Morphine 1mg in
Stethoscope x 2	10ml. 10ml saline flush.
ECG machine and leads	Aspirin in a tablet cup
Stickers for 12 lead ECG	Clopidogrel in a tablet cup
Defibrillator and pads specific for mannequin	GTN spray for below the tongue
NIBP cuff	Crystalloid (0.9% NaCl or Hartmanns 1000ml)
Saturation probe	Giving set for the above fluid

Monitor:	Investigations:	
ED setting – 3 wave forms	3xLaminated ECGs showing AF, VT and ST	
3-lead ECG	depression (NSTEMI)	
Saturations	CXR plate but X-ray not available during	
NIBP	scenario	
	ABG	
	Other lab tests will not be back in time	
Patient presentation	Expected response by participants	Faculty /Actors Notes

Syringe pump



Gloves and appropriate PPE







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Initial Presentation Mildly anxious. Talking in sentences. RR – 20/min Sats – 95% on air NIBP – 140/80 HR – 130 irregularly irregular No added sounds in chest Progression Patient remains with similar observations. Patient becomes more comfortable if oxygen and other treatment given – metoprolol/ Digoxin/ Amiodarone. Patient still in AF but heart rate improves to 105	Rapid assessment of a patient with arrhythmia Assign roles to team Place monitoring and (oxygen) IV access Take concise history – Characterise arrhythmia, risk factors from PMHx, FHx. A-E assessment Continuation of assessment and treatment of arrhythmia ECG CXR Blood tests (including troponin) Ask for old notes Communication with patient and team about thoughts and plans. Reassessment of patient after any intervention	Patient has AF – on monitor and ECG. You can prompt the participants if they are struggling at times. Patient improves if appropriate management is instituted. Nurse faculty can prompt any missing investigations/therapy. When ECG ordered ask the participants to put the ECG stickers on the appropriate places and once this has been done give them the laminated ECG print out
Deterioration Richie complaints of a heaviness in his chest and monitor shows VT RR - 30/min Sats - 93% on air BP - 90/50 HR - 180 regular	Participants should realise that the patient has become unstable and in conscious VT. They should reassess and institute appropriate therapy – cardioversion with low dose sedation and analgesia Successful cardioversion after 1x attempts to sinus rhythm with mild ST depression.	Faculty nurse to prompt the deterioration and to prompt any missing therapy/assessment/investigation points that have been missed. Prompt if they have not considered cardioversion. Set up cardioversion when participants ask for it. Guide to appropriate doses of sedation and analgesia if required. May need senior assistance for sedation if team not able.









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Recovery

Richie stabilises but remains unwell, with appropriate therapy.

RR - 24/min

Sats - 98% on oxygen

Breath sounds clear

NIBP - 120/75

HR - 100 regular

Call for help, if not already, or refer to cardiology for further management of his condition – NSTEMI.

The Nurse faculty can suggest a review or referral to a senior or to cardiology if this has not been asked for already. Nurse can prompt for a repeat ECG.

Debrief Guide

Key clinical issues

Rapid assessment and management of a patient with arrhythmia Recognition of deterioration from stable to unstable arrhythmia Reassessment

Management differences in stable vs unstable arrhythmias

Key non technical issues

Communication with patient and staff/team

Situational awareness – deteriorating patient – need for cardiology/senior review

Management of their team, role allocation









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Initial State

Stable AF with mild palpitations

Progress

Settles with appropriate therapy

Deterioration

New onset chest pain, becomes unstable and develops conscious

recovery

Reverts to SR with ischemic changes.
Symptoms resolved











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