SIMulatED RDH Emergency Department – Mark Ross

# Scenario Run Sheet: Cardiac Tamponade

## Learning Objectives

**Target Group: ED Registrars and Nurses**

**General:**

* **Crisis Resource Management**

**Scenario Specific**

* **Assessment of undifferentiated shock**
* **Utility of Ultrasound in the undifferentiated shock patient**
* **Management of the unstable tamponade patient**
* **Indications for urgent percardiocentesis**
* **How to perform pericardiocentesis**

## Scenario Overview

**Brief Summary:**

**Cat 1 resus – Careflight transfer from Maningrida**

**A 68 year old male presents with several day Hx of intermittent chest pain, worsening SOB, lethargy.**

**Symptoms acutely worsened on arrival. O/E: distressed, sitting up. HR140, BP80/50, temp37.3, RR36, SaO2 94 15L. Examination findings and investigations consistent with right sided heart failure/obstructive shock. Consideration of DDx: tamponade/PE/AMI/dissection. US demonstrates large pericardial effusion. Gradual worsening of cardiorespiratory function during scenaro, too unstable for imaging -> needs definitive treatment (pericardiocentesis) by end of scenario.**

|  |  |  |  |
| --- | --- | --- | --- |
| Intro Time | Scenario Time | Debrief Time | Soundbite |
| 5 mins | **20mins** | **25mins** | **10mins** |

## Observers’ Engagement Task

## Equipment Checklist

|  |  |
| --- | --- |
| **Mannikin:** | Mannequin |
| **Monitoring:** | iSimulate |
| **Docs and Forms** | EDNA, Green sheet |
| **Equipment** | IV Pumps, Syringe Driver, |
| **Consumables** | Fluids, pericardiocentesis kit |
| **Medications** | Vasopressors, antiplts, anticoags, thrombolytics, abs |

|  |  |
| --- | --- |
| **Sim Prompts** | CXR, 12 Lead, VBGs, Other: US images |
| **Sim Equipment** |  |
|  |  |

## Participants

**Staff**

2 resus nurses, 2 doctors

## Additional Information/Medical History

**PMHx**

Lung Ca – vague Hx

Smoker

T2DM

## Proposed Scenario Progression

* 2-3mins of preparation – receive ambo call late.
* Patient presents looking unwell, pale, dyspnoeic, talking in short sentences
* Hx and PMHx as above
* Examination findings if asked for: peripherally cool, bibasal crackles, elevated JVP, mild peripheral oedema. Otherwise NAD
* ECG – sinus tachycardia; CXR cardiomegaly; VBG: mixed acidosis
* USE ULTRASOUND (if able) – large pericardial effusion with diastolic collapse, normal aortic root, normal RV, hypercontractility
* If unable -> surg registrar credentialed in US (but never done a pericardiocentesis)
* Consideration DDx: SOB/shocked -> tamponade, PE, AMI/APO, dissection, sepsis
* Initial Rx: dependent on Dx –
  + Tamponade: early fluids +-inotropes, early US
  + PE: early fluids, consider thrombolysis
  + AMI/APO: antiplts/anticoags/thrombolsysis -> BIPAP
  + Dissection: control BP, CT(too unstable), surg review
  + Resp sepsis: early fluids/abs
* If receives dilators, thrombolysis or BIPAP -> deterioration in cardioresp status (periarrest)
* Transient improvement in BP with fluid bolus 500ml
* May consider intubation – very difficult in view of instability and will not address cause of problem
* Gradual worsening of dyspnoea over first 10-15mins – periarrest - too unstable for imaging
  + Needs definitive treatment
  + pericardiocentesis

## Scenario Preparation/Baseline Parameters

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Stage 1 (arrival – 5mins)** | Progression Trigger - | **Stage 2 (next 5-10 mins: Ix/DDx)** | Progression Trigger – 10min remaining | **Stage 3 (next 5-10 mins)** |
| **RR** | 36 | 40 | 50 |
| **SpO2** | 94 15L | 95% 15L | 93 on 15L |
| **HR/Rhythm** | 140 | 150 | 150 |
| **BP** | 80/50 | 85/50 | 70/40 |
| **T** | 37.3 |  |  |
| **Other** | GCS14 | GCS13 | GCS10 |
|  |  |  |  |

## The Soundbite

Coming soon

General Feedback Prompts/Examples:

Opening Gambit:

* What did you feel were your specific challenges there?
* Let’s talk.
* Can you describe to me what was happening to the patient during that scenario?
* Can you describe to me what was going on?
* What was important to you in choosing to manage that situation?
* Can you tell me what your plan was and to what extent that went according to plan?
* That seemed to me to go smoothly, what was your impression?
* That looked pretty tough. Shall we see if we can work out together what was going on there so that you can find a way to avoid that situation in the future?

Exploration with key players

* Questions to deepen thinking
* Questions to widen conversation
* Introduce new concepts; challenge perceptions; listen and build
* So what you’re saying is…
* Can you expand on…
* Can you explain what you meant by…
* When you said…
* I noticed that you…

Engaging the general group

* Let’s check with the rest of the group how they reacted to you saying that.
* Did you [scenario participants/observers] feel the same?
* What did you [scenario participants/observers] want from [scenario participant] at that point?
* What ideas or suggestions has anyone else got for how to deal with that situation?

Sharing facilitator’s thoughts

* Use advocacy with inquiry to share your observations and explore their perception
* What does the protocol say on…..
* What do you think was happening ….?
* How do you think … would respond to…. ?
* What about next time…..?
* Do you think there’s anything to be gained from…?

Any other questions or issues to discuss?

Summary