# MALNUTRITION/REFEEDING SYNDROME

## MODULE: CORE MEDICINE: CARE OF THE ELDERLY

## TARGET: FY1/2 & CT1/2

## BACKGROUND:

Re-feeding syndrome is a preventable, under-recognised, and potentially fatal condition. It affects patients who have had a prolonged period of malnutrition, and are then given nutritional support. Refeeding syndrome can cause a precipitous drop in serum electrolyte concentrations, leaving patients susceptible to a host of electro-chemical and metabolic disturbances.

## RELEVANT AREAS OF THE CMT CURRICULUM

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INFORMATION FOR FACULTY

LEARNING OBJECTIVES

Recognition of refeeding syndrome
Management of hypomagnesaemia
Management of ventricular tachyarrhythmia

SCENE SETTING

Location: Hospital ward
Expected duration of scenario: 20 mins
Expected duration of debriefing: 40 mins

EQUIPMENT AND CONSUMABLES

SimMan 3G
Hospital gown
Cardiac monitor
Crash trolley
100ml bag of fluid with 5g MgSO4
Nasogastric tube and Jevity
Ensure food supplement
Drug chart with Pabrinex infusion & chlordiazepoxide
12 lead ECG – Torsades de Pointes

PERSONNEL-IN-SCENARIO

F1
CT1
Nurse (faculty)
(Medical Registrar on phone)

PARTICIPANT BRIEFING

Mr John Smith, 74, has been admitted with reduced oral intake and malnutrition secondary to depression and self neglect. He has been on the ward for two days receiving nasogastric feeding. The nurses have been unable to take blood over the weekend. You have been asked to see him because he is complaining of feeling unwell. The ward sister managed to send a set of bloods earlier today.
FACULTY BRIEFING

‘VOICE OF THE MANIKIN’ BRIEFING

You are John Smith, 74, who has been admitted into hospital with malnutrition due to reduced oral intake, depression and self neglect. You have been receiving special nutritional supplementation through a nasogastric tube. You are also receiving vitamin supplements and medicine to control your withdrawal from alcohol. You have started to feel unwell, shaky and with funny feelings in your chest. After a few minutes you develop palpitations and these scare you.

IN-SCENARIO PERSONNEL BRIEFING

Nurse (faculty) –
You are busy but will help if asked.

ADDITIONAL INFORMATION

Admission clerking
Admitted due to with self-neglect, depression, malnutrition (BMI 17)
NG feeding started after assessing capacity (lacking decision-specific capacity).

Refeeding bloods back after torsades de pointes rhythm started
- If asked for earlier, then say that lab will ring with results as soon as they are ready).

If participant asks for magnesium when patient develops torsades patient should degenerate into VF before magnesium is given.
CONDUCT OF SCENARIO

INITIAL SETTINGS
Initial Setting, monitoring not attached
A: Patent
B: RR 22, Sats 97%
C: HR110, BP 134/66mmHg
D: Alert, BM 4
E: NG in situ, BS absent, abdomen diffusely tender

DEVELOPS TORSADES
Develops Torsades de Pointes (VT)
A: Patent
B: RR30 Sats 88%
C: HR180 (Torsades VT), BP 92/47
D: Alert, panicked, BM 9

EXPECTED ACTIONS
Recognise torsades
Recognise refeeding syndrome
Check bloods
Call for help

EXPECTED ACTIONS
• Initiate ALS algorithm
• Crash call
• Defibrillate
• Give magnesium sulphate IV

RESULTS/OFFER INFORMATION:
Hb 9.8
MCV 110
WCC 5
Na 136
K 2.8
Mg2+ 0.2
PO4 - 0.4
Ur 8.7
Creat 62

TORSADES → VF
Torsades de Pointes degenerates to Ventricular Fibrillation
A: Patent
B: RR 0, Sats 62%
C: HR VF, BP 0/0
D: Unresponsive

LOW DIFFICULTY
• Back to perfusing sinus rhythm after one defibrillating shock

NORMAL DIFFICULTY
• Can be shocked back into sinus rhythm after IV magnesium is given

HIGH DIFFICULTY
• Can be shocked back into a perfusing rhythm after magnesium. Perfusing rhythm is complete heart block and requires pacing.

RESOLUTION:
Patient alert
Liaise with CCU for post arrest care
Liaison with dietician
DEBRIEFING

POINTS FOR FURTHER DISCUSSION

Recognition of refeeding syndrome
Management of hypomagnesaemia
Management of ventricular tachyarrhythmia

DEBRIEFING RESOURCES

http://www.bmj.com/content/336/7659/1495
http://www.nice.org.uk/CG032NICEguideline
KEY POINTS

Recognition of refeeding syndrome
Management of hypomagnesaemia
Management of ventricular tachyarrhythmia

RELEVANCE TO THE CURRICULUM

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FURTHER RESOURCES

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PARTICIPANT REFLECTION

What have you learned from this experience? (Please try and list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?
**PARTICIPANT FEEDBACK**

**Date of training session:**

**Profession and grade:**

What role(s) did you play in the scenario? (Please tick)

- Primary/Initial Participant
- Secondary Participant (e.g. ‘Call for Help’ responder)
- Other health care professional (e.g. nurse/ODP)
- Other role (please specify):
  
  .....................................................................................
- Observer

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<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
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<td>I found this scenario useful</td>
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<tr>
<td>I understand more about the scenario subject</td>
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**Please write down one thing you have learned today, and that you will use in your clinical practice.**

**How could this scenario be improved for future participants? This is especially important if you have ticked anything in the disagree/strongly disagree box.**
FACULTY DEBRIEF – TO BE COMPLETED BY FACULTY TEAM

What went particularly well during this scenario?

What did not go well, or as well as planned?

Why didn’t it go well?

How could the scenario be improved for future participants?