LEARNING OBJECTIVES

- Recognise Transfusion Associated Fluid Overload (TACO)
- Initiate immediate management
- Differentiate from (transfusion related Lung Injury TRALI)
- Request Appropriate investigations

SCENARIO

Transfusion Reaction

EQUIPMENT LIST

- Vital Signs Monitor
- Drugs (antihistamine/frusemide)
- Giving set/blood
- Mannequin/Actor
- Blood bottles/BC bottles
- O2/facemask
- Phone
- Obs Chart

PERSONNEL

MINIMUM: 3

ROLES:
- Trainee
- Midwife
- Anaesthetist

FACULTY

MINIMUM: 1

ROLES:
- Facilitator
- Observer
- Debrief Lead

TIME REQUIREMENTS

TOTAL 45 minutes

- Set up: 10 mins
- Pre Brief: 5 mins
- Simulation: 15mins
- Debrief: 15mins
INFORMATION TO CANDIDATE

PATIENT DETAILS

Name: Mrs Ford  Phx: Pre Eclampsia
Age: 41  Allergies: Nil
Weight/BMI: 19

SCENARIO BACKGROUND

Location: Recovery

Situation:

Mrs Ford is 41 years old and has had an emergency caesarean section for severe PET at 37 weeks. Cell salvage was in use and she had an intra operative blood loss of 2.5 L and a further 2L post op. She received the following components:

2L Crystalloid, 2units O neg blood, 500mls of salvaged blood, 10units group specific blood, 2 units grouped plasma, 1 unit platelets.

In recovery during her platelet transfusion she becomes very short of breath.

Task:

Can you please review Mrs Ford?

RCOG CURRICULUM MAPPING

Module 12 Management of Post Partum Problems

Acute Maternal Collapse
INFORMATION FOR ROLEPLAYERS

BACKGROUND
Your name is Mrs Ford. You have just had an emergency caesarean section after being diagnosed with Pre Eclampsia at 37 weeks. You had a large amount of bleeding and have required a blood transfusion. Whilst in recovery you begin to feel unwell and find it difficult to breath. You are unable to talk in sentences and are very frightened and anxious.

RESPONSES TO QUESTIONS
You can only answer in single words as very short of breath.
You are not itchy and your throat doesn’t feel swollen.
You have never had a blood transfusion before
You don’t have any allergies or Asthma
You have no medical problems other than the Pre Eclampsia
Mrs Ford is only able to talk in short sentences and is visibly tachypnoeic. She has no angiooedema or urticarial rash. She is not cyanosed. She is not actively bleeding and her abdomen is not distended.
ABCD assessment including high flow O2 through facemask
Examine chest, JVP
Request Bloods FBC, U&E, LFTS, and Urine for haemoglobinuria
Request CXR
Initiate management for fluid overload, IV Frusemide 20-40mg IV
15 mins obs HDU
Hourly urine output fluid

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<tr>
<th>SCENARIO OBSERVATIONS/ RESULTS</th>
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| **BASELINE** | **STAGE 1** | **Af**
| RR | 29 | 22 |
| chest sound | Creps ↓AE | Creps |
| SpO2 | 89% | 96% |
| HR | 112 | 103 |
| Heart sound | tachy | normal |
| BP | 155/103 | 140/90 |
| Temp | 37.5C | 37.3C |
| Central CRT | 2 secs | 2 secs |
| GCS/AVPU | Alert | Alert |

JVP elevated
CXR- Pulmonary Oedema
Urine – haemoglobinuria negative
LFTs normal

| Na | 132 | 133-146 mmol/L |
| K | 4.2 | 3.5-5.3 mmol/L |
| Urea | 2.5 | 2.5-7.8 mmol/L |
| Creat | 90 | 62-106 umol/L |
| Hb | 76 | 131-166 g/L |
| White cells | 7.6 | 3.5-9.5 x10⁹/L |
| Platelets | 55 | 150-400 x10⁹/L |
| Haematocrit | 0.35 | 0.38-0.48L/L |
| RBC | 4.1 | 4.4-5.65 x10¹²/L |
SCENARIO DEBRIEF

TOPICS TO DISCUSS

Discuss types of transfusion reactions:
ABO Incompatibility, Haemolytic, Bacterial, Mild/Severe Allergic, TRALI (transfusion associated lung injury), TACO (transfusion associated circulatory overload)
TRALI>TACO if hypotension and associated with PLTs/plasma

Follow trust policy
Inform blood bank and return units, complete required paperwork
Datix/Incident report
Involve haematology/HDU if severe
Discuss what alternative investigations trainee would request if clinical signs included:

Fever (>2C from baseline) rigors chills vomiting and pain

Check patient identification and details on transfusion label
FBC, U&E, LFTS, Urine haemoglobinuria, Blood cultures, Coagulation, Direct Coombs
Haptoglobin, Haemopexin
LDH
Retain blood for culture at blood bank
Compatibility test repeat Group and Antibodies

Angioedema/signs of allergy

Above plus Mast cell tryptase
Serial IgA- Immediately, 4 hours and 24 hours

REFERENCES

Handbook of Transfusion Medicine, DBL McClelland 2007