



# CASE 2

---

# Background

---

- **Patient 'Mr X' is on record at your hospital with a historical group (2 years ago) of A D positive, with no allo-antibodies detected. He is transferred to your hospital following major trauma and emergency treatment in another hospital. He requires continuing transfusion support for his injuries**

# Laboratory Results

---

- **On admission his laboratory results are as follows:**
  - **Hb**                    6.8 g/dL
  - **Plt**                    40 x 10<sup>9</sup>/l
  - **INR**                    1.6
  - **APTTR**                1.8

## Group and screen

---


<b>Anti-A</b>	<b>Anti-B</b>	<b>Anti-D</b>	<b>Anti-D</b>	<b>Control</b>	<b>A cells</b>	<b>B cells</b>	<b>SCR 1</b>	<b>SCR 2</b>	<b>SCR 3</b>
<b>2+ (MF)</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>

- 
- 
- What are the possible reasons for the current blood grouping result?

# Possible Answers

---


- Transfusion of O pos (not O neg as no MF with anti-D) red cells during treatment for original trauma – most likely
- Contaminated sample or reagent – always possible!
- Patient has also had bone marrow or stem cell transplant (group O donor)
- Weak sub group of A (e.g. A3 shows MF with anti-A) – unlikely to have been missed in original grouping and would probably be weaker than 2+.
- Chimera also unlikely as grouped as A originally
- First sign of ABO Tx reaction – unlikely but possible as patient was transfused in an emergency (high risk) situation and now has low Hb and deranged clotting.

- 
- 
- How you would approach the request for immediate transfusion of red cells, FFP and platelets?
  - i.e. what would you issue?

# Issues

---


- Group O red cells until cause of MF established (or at least until group A to O transfusion, or a BMT are ruled out) – can do ISXM, not suitable for electronic issue until blood group confirmed.
- Group A or AB FFP (contain no anti-A)
- Group A platelets (contain no anti-A)
- Group A cryoprecipitate if required

- 
- 
- What strategy i.e. who would you speak to, what level of Hb etc would be ideal?

# Possible Answers

---

- Get clinical and transfusion history
- Liaise with clinicians re nature of injuries, Tx requirements
- Clinical check for signs of intravascular haemolysis
- Check stock levels of components
- Start thawing FFP (12-15 mls /kg initially)
- Consider as 'massive blood loss'.
- BCSH guidelines-supply red cells to:
  - Hb >8,
  - Platelets >75 (to be sure that they remain > 50)
  - FFP to keep INR and APTTR below 1.5.
  - Fibrinogen >1 with cryoprecipitate if required.

- 
- 
- What further tests would you perform, and what additional information would you request regarding this patient?

# Further tests and information

---

- Check blood sample for haemolysis and do DAT
- Look at original blood grouping controls (should already have done this!)
- Repeat sample, repeat blood grouping - continue attempts to establish cause of MF with referring hospital
- Do fibrinogen level (Clauss) and D-dimers (or XDPs)
- Request regular clotting, Hb and platelets levels and maintain Tx support until patient is stable
- Seek advice from consultant haematologist if signs of DIC or bleeding doesn't come under control after first dose of FFP and platelets.