

# Case Studies

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# Case 4



# Case 4 Background

- Elderly patient with Ca required 2 unit red cell transfusion as part of palliative care plan

Group A D positive  
Known anti-E

Screen cell	Rh phenotype	Reaction
1	R1R1	-
2	R2R2	+

2 units E- crossmatch  
compatible red cells supplied

# 4 weeks later...

- 2 further units red cells required
- 2 units E- crossmatch compatible red cells supplied

Group A D positive  
Known anti-E

Screen cell	Rh phenotype	Reaction
1	R1R1	-
2	R2R2	+

After 150 mL:  
Hypotension, sweating, shaking,  
loin pain, breathlessness



# What would you recommend? - Q

1. **Discontinue the transfusion completely**
2. **Continue transfusing but slow down**
3. **Stop this unit but try 2nd unit**



# What would you recommend? - A

**1. Discontinue the transfusion completely**



**2. Continue transfusing but slow down**

**3. Stop this unit but try 2nd unit**



# Action taken

Transfusion was  
discontinued completely



# Q - Reaction most likely to be:

(Hypotension, sweating, shaking, loin pain, breathless)

1. **Non-haemolytic febrile**
2. **Anaphylactic**
3. **Haemolytic**
4. **TRALI**
5. **TACO**



# A - Reaction most likely to be:

(Hypotension, sweating, shaking, loin pain, breathless)

1. Non-haemolytic febrile



2. Anaphylactic



3. Haemolytic



4. TRALI



5. TACO



# Initial diagnosis

- Initially thought to be anaphylactic
- Serological investigation also undertaken



# Laboratory investigations

- Pre and post transfusion samples

Post transfusion  
bilirubin:  
slightly increased at  
35 $\mu$ mol/L

Anti-Jk<sup>a</sup> in addition  
to the anti-E

DAT positive 1+  
Eluate non-reactive

# Q - Reaction most likely to be:

(Hypotension, sweating, shaking, loin pain, breathless)

**1. Non-haemolytic febrile**

**2. Anaphylactic**

**3. Haemolytic**

**4. TRALI**

**5. TACO**



# A - Reaction most likely to be:

(Hypotension, sweating, shaking, loin pain, breathless)

1. Non-haemolytic febrile



2. Anaphylactic



3. Haemolytic



4. TRALI

5. TACO



# Reaction type?

- Probably acute haemolytic
- Could also have been an element of acute non-haemolytic
- Could have included a mild delayed HTR



# Why did this happen?

The antibody screen was positive but a full antibody panel was not undertaken – it was assumed that the antibody was the same because the same results were obtained in the screen



# Why did this happen?

Guidelines are clear that an antibody identification panel should be undertaken every time a sample with a positive antibody screen is tested



# How should this be reported? - Q

1. HTR (acute)
2. ATR
3. IBCT
4. Depends on laboratory policy



# How should this be reported? - A

1. HTR (acute)



2. ATR



3. IBCT



4. Depends on laboratory policy



This was reported as an acute HTR

Laboratory policy was in line with guidelines and this should therefore have been reported as an IBCT



# Lessons

- An ID panel should always be undertaken each time a sample is tested
- If an HTR is the result of failure to follow policy this should be reported as an IBCCT
- If reported in the correct category, the most appropriate questions are asked
  - Root cause more likely to be identified
  - SHOT report will be better informed

