

Case Studies

Derek Norfolk

Clare Milkins



Case 1



Case 1(a)

- Pack 1 of split apheresis platelets were transfused to teenager with ALL on combination chemotherapy
- During transfusion he developed urticarial rash, periorbital swelling and 1.5°C rise in temperature, no change in BP



Case 1(a) - Q

What is most likely diagnosis?
(select 1 option)

1. Allergic reaction
2. Non-haemolytic febrile transfusion reaction (NHFTTR)
3. Bacterial transmission (TTI)
4. Other acute transfusion reaction
5. Not related to transfusion



Case 1(a) - A

What is most likely diagnosis?
(select 1 option)

1. Allergic reaction



2. Non-haemolytic febrile transfusion reaction (NHFTTR)



3. Bacterial transmission (TTI)



4. Other acute transfusion reaction



5. Not related to transfusion



Case 1(a)

- Clinical team diagnosis was *probable Allergic Reaction*
- Transfusion stopped, antihistamine + steroids Rx (but HTT or lab not notified), however blood cultures taken and antibiotics started,
- Symptoms and signs quickly resolved



Case 1(b)

- Same hospital, 24 hours after Case 1 incident, Pack 2 of the same split apheresis pack transfused to neutropenic adult with AML on the BMTU
- Rapidly developed rigors, nausea, *feeling of impending doom*, hypotension and temp of 39.5°C



Case 1(b) - Q

What is most likely diagnosis?
(Select 1 option)

1. Allergic reaction
2. Non-haemolytic febrile transfusion reaction (NHFTTR)
3. Bacterial transmission (TTI)
4. Other acute transfusion reaction
5. Not related to transfusion



Case 1(b) - A

What is most likely diagnosis?
(Select 1 option)

1. Allergic reaction



6

2. Non-haemolytic febrile transfusion reaction (NHFTTR)



23

3. Bacterial transmission (TTI)



137

4. Other acute transfusion reaction



17

5. Not related to transfusion



2

Case 1(b)

- Clinical diagnosis *acute transfusion reaction - possible TTI*
- Transfusion stopped, blood cultures taken and antibiotics commenced with good clinical response
- Reported to HTT and NHSBT who established that Pack 1 had also caused an acute reaction



Case 1 – outcome

- Blood cultures from both patients and both packs grew same strain of Lancefield Group G streptococci
- Investigation of (healthy) donor showed identical organism in stool sample
- **Conclusion** – transfusion-transmitted bacterial infection, probably derived from donor gut (? via donor fingers to venepuncture site)



Case 1 – what are the lessons?

- Symptoms and signs of acute transfusion reactions overlap or are non-specific – several cases reported where strep infected units give “allergic” reactions (?anti-streptococcal antibodies)



Case 1 – what are the lessons?

- If the first patient had been notified to Lab and/or HTT, the second case *might* have been prevented – but would you have considered a bacterial TTI and contacted the Blood Service?
- ***What should trigger this?***
? If stop transfusion and take blood cultures, this should trigger an alert?

