Case Studies

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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 (NHFTR)

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 (NHFTR)
3. Bacterial transmission (TTI)
4. Other acute transfusion reaction
5. Not related to transfusion

- Allergic reaction: 125
- Non-haemolytic febrile transfusion reaction (NHFTR): 43
- Bacterial transmission (TTI): 16
- Other acute transfusion reaction: 5
- Not related to transfusion: 8
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 (NHFTR)

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 (NHFTR)
   - 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?