

Case Studies

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Case 3



Case 3

- An 86-year-old female with chronic myeloid leukaemia (CML) and Hb 8.5g/dl admitted for transfusion in haematology day unit
- Longstanding congestive heart failure. Pitting oedema up to buttocks despite oral diuretics
- Given 2 units of red cells over approximately 5 hours.



Case 3

- On getting up to go home she became breathless, tachycardic (pulse 140 bpm) and hypertensive (BP 192/80), with a reduced O₂ saturation of 78%. The jugular venous pressure (JVP) was 5cm raised and she had bilateral basal crepitations.
- The CXR showed bilateral fluffy upper zone shadowing and an enlarged heart

Case 3 - Q

What is the most likely diagnosis? (Select 1 option)

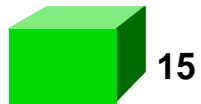
1. TRALI (transfusion-associated lung injury)
2. TACO (transfusion-associated circulatory overload)
3. Chest infection from transfusion
4. CMV pneumonitis



Case 3 - A

What is the most likely diagnosis? (Select 1 option)

1. TRALI (transfusion-associated lung injury)



2. TACO (transfusion-associated circulatory overload)



3. Chest infection from transfusion



4. CMV pneumonitis



Case 3

- Clinical diagnosis was **TACO**
- *She was admitted and treated with IV diuretics and oxygen support with continuous positive airway pressure (CPAP), but she continued to deteriorate and died.*



Learning Points

- TACO is probably much under-diagnosed and under-reported
- Now 2nd most common cause of transfusion-related death reported to FDA
- Older patients with cardiac and/or renal impairment are at particular risk, but can occur in younger patients (may be more than just fluid overload)



Learning Points

	TRALI	TACO	
BP	Low or normal	Normal or high	*
Temp	Normal or high	Normal	*
PA pressure	Low or normal	high	
Echo	Normal	Abnormal	
BNP**	Low	High	
Diuretics	Worsen	Improve	*
Fluid Load	Improves	Worsens	*

** pre:post-transfusion ratio >1.5 – 80% sens, 90% spec

Learning Points

- Not necessarily large transfusions
 - of 18 cases of TACO in non-bleeding patients in 2010 SHOT Report, two had 1 or less unit of red cells and fifteen had 2 or less
- This fits with international reports of TACO



Learning Points

- Risk factors include: age > 70, small body size, pre-existing heart failure, chronic renal impairment and hypoalbuminaemia
- Crucial to monitor these patients carefully during transfusion (including rate of Tx)
- Consider: slower transfusion, smaller transfusion (especially in small patients) and diuretic cover

