

August 2019: TTISS-ON Case study online educational series

CASE TWO: Transfusion-associated dyspnea

Submitted by Matthew Yan....THANK YOU!



55-year-old female

Admission: GI Bleeding

Past medical history:

1. Diverticulosis

Allergies: NKDA

Medications:

1. Pantoprazole infusion

Transfusion history:

- No prior history of transfusion
- Group – B positive
- Screen – negative

Transfusion reaction details:

- Patient was transfused 1-unit of B-positive RBC for a hemoglobin of 65 g/L.
- During the transfusion the patient experienced laboured breathing requiring supplemental oxygenation.
- The patient was premedicated with Lasix 20 mg PO.

Time	Pretransfusion (8:00)	Reaction (9:30, 150 mL infused)
BP	118/74	108/88
HR	103	103
RR	18	24
O2 saturation	99%	89% on RA
Temperature	36.2C	36.4C

Investigation and Management:

- The transfusion was stopped, and the patient was placed on supplemental oxygen (6L face mask).
- Initial investigations included:
 - o Chest x-ray: normal, no infiltrates or effusions seen
 - o Troponin: negative
 - o BNP: 49 ng/L (normal)
 - o Creatinine: 62 umol/L
- Intravenous Lasix, as well as salbutamol inhaler was trialed without response.
- Internal Medicine was consulted for evaluation. Additional workup included:
 - o Volume assessment: noted to be difficult due to BMI.

- Echocardiogram: Normal systolic and diastolic function noted. No valvular abnormalities.
- CT PE and leg dopplers: no evidence of venous thromboembolism.
- After 24 hours, the patient was eventually weaned off of supplemental oxygen and discharged from hospital following a colonoscopy for her GI bleeding.

What type of adverse transfusion event?

Transfusion-associated dyspnea

What is the relationship of the adverse event to transfusion?

Possible

What is the severity of the adverse event?

Grade 2 (severe)

What is the outcome of the adverse event?

Minor or No Sequelae

Is this reaction reportable to CBS?

No

Is this reaction reportable to Health Canada?

No

Is this reaction reportable to TTISS?

Yes

Take home message:

- Transfusion-associated dyspnea (TAD) is a respiratory reaction that does not meet the clinical definitions for TACO, TRALI or allergic reactions.
- It is thought that majority of TAD reactions can likely be re-classified as TACO if additional information was made available during reaction adjudication.
- In the remaining cases where re-classification is not possible, it is not known if TAD represents its own unique entity and whether there is a unifying pathophysiology to explain the presentation.
- In the case presented, extensive workup seemed to exclude TACO and TRALI. There were also no clinical symptoms suggestive of an allergic reaction. However, it is noteworthy in

this case that the clinical team felt the patient was “at-risk” of TACO and provided pre-transfusion diuresis.