TACO or just common sense?

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History

- **91 year old female**
- **Admitted PR bleeding, haemodynamically stable**
- **O/E - bilateral hard breast lumps**
- **PMH: Independent, lived with friend, social drinker**
  - **↑BP**
  - **Arthritis**
  - **Frusemide and Aspirin**

History

- **Previous admission to hospital in August 2010 with shortness of breath, productive cough**
- **Echocardiogram and CXR**
- **Reasonable Ejection Fraction 51%, some septal wall dysfunction**
- **Calcified coronary arteries on CXR**

Clincal Scenario

- **Became increasingly SOB and admitted to ITU**
- **Combination of fast AF and ?heart failure**
- **Hb 7.8**
- **Component of heart failure**
- **Transfuse?**

a) **Yes**

b) **No**

Clincal Scenario

She was transfused.

How much blood?

a)1 unit

b) 2 units

Clincal Scenario

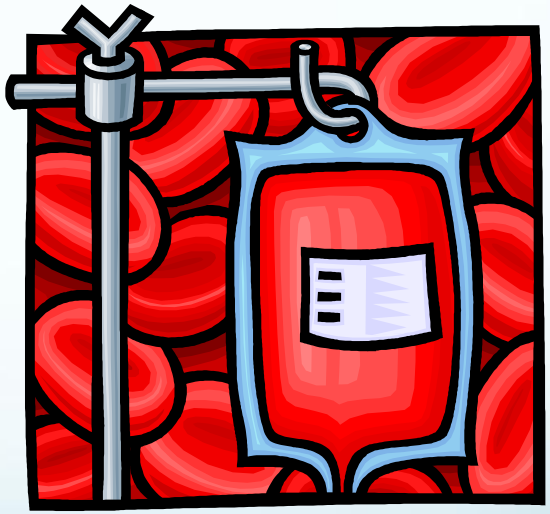
Received two units of blood with diuretic cover (over three hours each)

Post transfusion Hb 11.8

Crushing heart failure – ?TACO

a) Surprised

b) Not surprised



Clinical Scenario

- **TACO (Transfusion Associated Circulatory Overload) is confirmed *by any four* of the following which arise within six hours of transfusion:**

Acute respiratory distress.	✔	**Rapid onset of dyspnoea, tachypnoea and shortness of breath**
Tachycardia	✔	**Heart rate of 110.**
Increased blood pressure	✔	**BP 240/140**
Acute or worsening pulmonary oedema.	✔	**Cyanosed hypoxia $Sa0_2$ 60-70% Widespread crackles**
Evidence of positive fluid balance.	✖	**Negative fluid balance**

Clincal Scenario
DT's calculation

45 kg elderly woman

Estimated blood volume (EBV) : 70 x 45 = <u>3150 mls</u>

Therefore total Hb 7.8/ dl = 315 x 78 = 2457gms

2 units PRBC (with Hb 15) = 750 g Hb

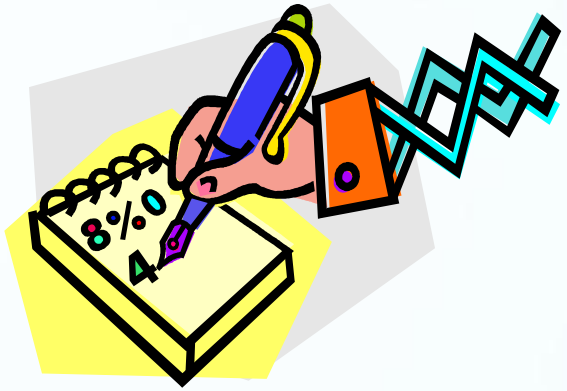
2457 +750= 3207 g Hb

2 units estimated to raise Hb to 10.1g/dl

(providing EBV remained the same) but had diuretics

One unit would have elevated Hb to 8.92 g/dl

http://www.rch.org.au/clinicalguide/



- Packed Cells (mls) =

  Weight(kg) x Hb rise required g/L x 0.4

- 45 x 12 x 0.4 = 216 mls She received 500 mls
- 45 x y x 0.4 = 500
- y= 500/45 x 0.4 = a raise of 27.7g/l
- 78 plus 27.7 = 10.57 g/dL

Clincal Scenario

Treatment

High flow oxygen (refused CPAP)

Diamorphine to offload

More diuretics and GTN

Condition improved

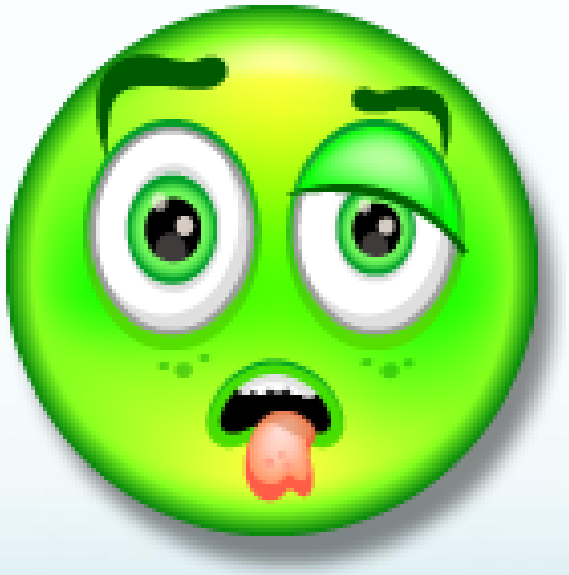
Two days later returned to ward

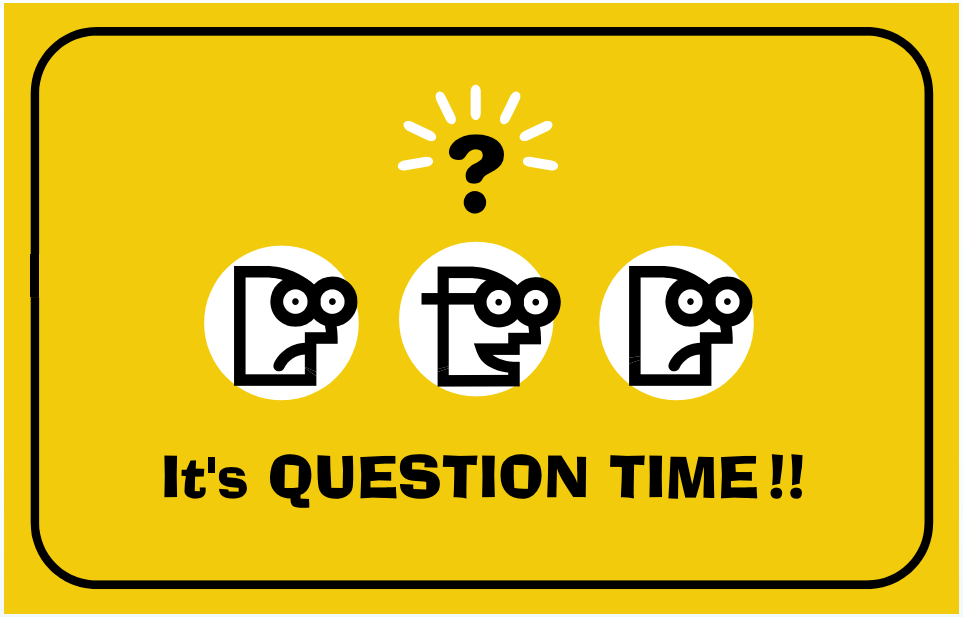
Following sigmoidoscopy and breast biopsies sent home on 20th January 2012

27th readmitted SOB, died 29th in worsening pulmonary oedema.

Lessons learnt

- Doing things ‘by the book’ isn't always the best thing for the patient!!!




It's QUESTION TIME!!