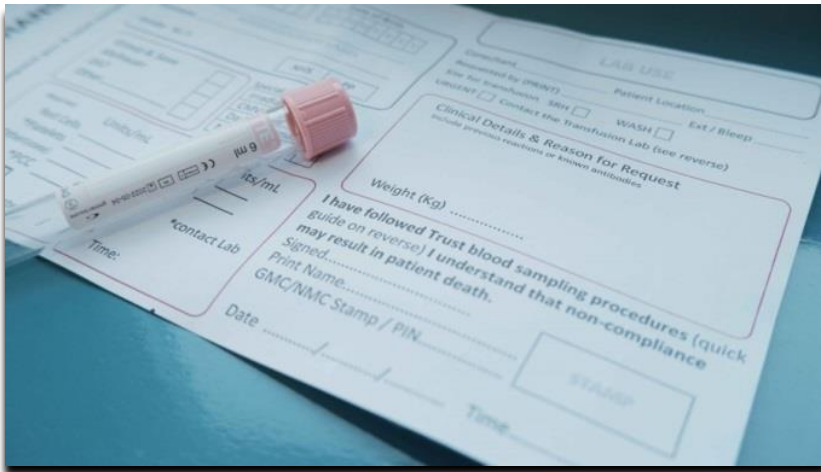


Eisenmenger Syndrome & Blood Transfusion

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Scenario at St Richard's Hospital



- 2 units RBC's requested for a patient on Emergency Floor with a **HB 166** no bleeding
- BMS informed TP, as reluctant to issue

Patient

PMH

- 45 Female
- Eisenmenger Syndrome
- Down syndrome
- Cardiac arrest 2015

Presenting Complaint

- Unwell for 4 days
- Choked on food recently
- Cyanosis – lips & limbs blue
- SATS 52% on air - hypoxic
- Temp 37.7c
- BP 81/62
- Resp 27
- CO₂ ↑
- CRP 49
- HB 166
- HCT 0.51
- MCV 82

Diagnosis

- Aspiration Pneumonia
- Iron Deficiency Anaemia – ? Clopidogrel induced

Treatment

- IV ABX, Fluids
 - High O₂ requirement
 - Aim **HB 200** - Transfuse 2 units RBC's with Furosemide
 - Iron infusion when infection improved
-
- Red cell units each transfused over 3h with iv furos 20mg in-between
 - HB after 2 units reached 180 from 166
 - HB after iron infusion 194
 - Patient recovered and discharged after 2 weeks.

Congenital septal defect between left and right chambers of the heart- creating a 'back leak' of blood

Oxygenated blood is returning back to the lungs, instead of out to the body

Reduced tissue oxygenation around the body leads to hypoxia

Hypoxia leads to overproduction in red cells.

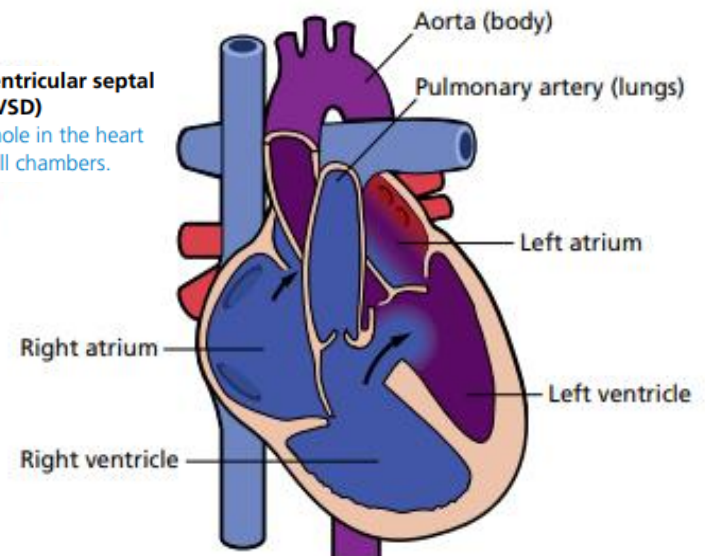
Patient's body is in a constant compensatory state.
The 'normal' HB for this patient to live is 200

The drop in HB can be due to the iron deficiency.
Iron and red cells required to maintain that HB 200

Eisenmenger Syndrome

3. Atrioventricular septal defect (AVSD)

A central hole in the heart involving all chambers.





On reflection

- Staff at St Richards hospital were presented with a rare disease
- We had to be flexible and open to change to work outside the 'norms'
- Staff involved in this case were multi professional, each with their own anxieties.
- Maintaining a positive link between lab and clinical area encouraged a quicker understanding of the condition and met the needs of the patient sooner
- Gaining that Consultant rationale behind treatment decisions justified actions and reassured all members of the team involved
- The TP should be able to de-escalate staff conflicts of opinion, respect the views of various professions, have effective communication skills, be patient and bring the team together to reach the needs of the patient
- Diagnosis and treatment plans for this case could easily have been influenced by cognitive bias. The patient had sepsis, iron deficiency anaemia and a complex medical history. Consideration of patient history and previous lab results prevented error.

Thankyou for listening

Condliffe, R. Erythrocytosis and iron status in Eisenmenger syndrome: an illustrative case study. *J Congenit Heart Dis* 4(Suppl 1), 11 (2020).
<https://doi.org/10.1186/s40949-020-00045-9>

University Hospital Southampton NHS Foundation Trust 2020. Eisenmenger syndrome: Long term care and information for patients.
Available at: [Eisenmenger syndrome-patient information \(uhs.nhs.uk\)](https://www.uhs.uk/ehs/patient-information/eisenmenger-syndrome) Last Accessed 13/10/23.