AIHA – Balancing Clinical Risk

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**Balance of Clinical Risks in AIHA**

- **How urgently need blood?**
  - Haemoglobin (Hb) may be very low → patient risk of complications:
    - e.g. cause angina, MI.
    - More risk if patient has underlying cardiac, respiratory, vascular disease, etc.
  - Hb may be dropping **quickly** – so cannot compensate fast enough.
  - Need urgent procedure, which needs higher Hb, e.g. surgery for bleeding/fractured hip/acute abdomen, etc.

**Summary:**
- Underlying condition or AIHA itself may kill them or cause severe harm (e.g. organ failure) if there is a delay in getting blood.
Balance of Clinical Risks in AIHA

• How much concern over incompatible blood?

• Mostly risk of delayed haemolytic transfusion reactions [DHTR]
  – less often, acute haemolytic transfusion reaction [AHTR].

• Ab causes haemolysis (as “extravascular”) in 5-10 days after transfusion.
  – ↓ Hb, ↑ LDH, ↑ bili, spherocytes on film, ↓ haptoglobin, haemoglobinuria (if intravascular haemolysis).

• Free Hb toxic to renal tubules → renal failure (acute kidney injury).
  – Monitor U&E, Creatinine.
  – Worse if renal function already compromised, e.g. diabetic, ischaemic heart disease, sickle cell disease, etc.
  – Worse if patient already sick, e.g. ITU, septic, etc.

  – But often same patients at risk of harm from ↓ Hb: balance!
DHTR (AHTR) – can mitigate/monitor/treat

• If cannot wait for all investigations and provision of fully compatible blood.
  – O-pos / O-neg / Group specific.
  – No underlying alloabs / urgent and if full ABO, Rh & K known – Match ABO, full Rh & K.
  – Planned / known pt / additional alloantibodies - Match ABO, full Rh & K and Additional antigens.
• ABO, full Rh + K matched … and if time, serologically least incompatible.
• With 1g IV methyl prednisolone and/or IVIg cover at 1g/kg (or 0.4g/kg, if existing renal failure).
  – Monitor for haemolysis and renal failure
  – IV fluids if haemolysis occurs, to ↓ renal failure
  – Treat renal failure if occurs; dialysis, etc.
• Better than death from lack of blood …

Remember: To get a DHTR … first you have to live long enough.
Evidence for steroids/IVIg

- Evidence for minimising/preventing DHTR:
  - Win et al, *Transfusion*, April 2018; 00:1-5.