LoPAG (London Platelet Action Group)

What to do when platelets aren't working?

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Platelet Refractoriness

"…the repeated failure to obtain a satisfactory response to platelet transfusion…."

"Control of bleeding is the most relevant marker…"

Key Things

- Identifying refractoriness – in a timely manner
- Timely testing – increments and typing
- Keep an eye on patient counts

What will the Patient Experience?

- Platelet count rises by less than $10x10^9/L$ – **repeatedly** (at least two occasions*)
- Continued bleeding events
- Increase in platelet transfusions

What are the Causes?

Immunological – Patient immune mediated

- Antibodies to antigens on platelets (HLA,HPA,ABO)
- Platelet autoantibodies
- Drug – dependent antibodies
- Immune Complexes

What are the Causes?

Non-immunological causes

- Infection
- Antibiotics/antifungals – (amphotericin B and fluoroquinolones)
- Splenomegaly/hypersplenism
- Disseminated Intravascular Coagulation
- Platelet loss due to bleeding

Things to Try…

- ABO matched – same group as the patient
- Platelets at the time of the procedure
- HLA
- HPA

What do I need to check for?

Platelet count rises by less than $10x10^9/L$ – **repeatedly** (at least two occasions*)

- Check platelet counts between 10 minutes to 1 hour post infusion
- What kind of platelets did the patient receive?

Testing

- HLA - Human Leucocyte Antigens
  - Where possible – exclude immunological causes
  - Use the purple 3A form

- HPA – Human Platelet Antigens
  - Quite rare
  - Use the orange 3D form

HLA/HPA Not Working?

- Re-test patients for HLA and HPA at least monthly – frequency of platelet tx and response
- Start from the top – non-immunological, immunological
- Consider treating symptoms of bleeding instead of numbers
- Use platelets intraoperatively

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Questions