Pennies From Hell

Martin Maley – RCI HoL
NHSBT Newcastle
Other title options;

• Old but gold
• Communication (nearly) let me down
Old but gold

• “Something that is old or classic, but is still regarded as having aged well and still being able to compare to things from today”.

Kell System Antibodies

• “Anti-K system antibodies are more likely to cause fetal anaemia than hyperbilirubinaemia. Titre levels are not a reliable indicator of the risk of anaemia and may need further investigation and management”

• Kpa???
Communication
How it all started

• Request for Kpa- IUT unit came in to HS **

• Phone call from Fetal Medicine

• “I’ve go a lady in for IUT who has anti-Kpa in her notes, but our computer system says no antibodies present”
Referring (Booked) Hospital Info

- Anti-Kpa
- No further antibodies
- Titre: 4
- Referred to FMU
- Kpa present on screening cells
FMU Hospital Info

• “Yes, we’ve only just been told that there was anti-Kpa there – we’re on with a panel now.”

• Kpa not present on screening cells
RCI results - mum

• Anti-Kpa
• No further antibodies
• Titre: 4
FMU hospital Fetal results

- 16/05/17 – Pre IUT (1) – sample clotted
- 16/05/07 – Mid IUT (1) – Hb 135 g/L
- 16/05/17 – Post IUT (1) – Hb 155 g/L
- 07/06/17 – Pre IUT – (2) Hb 114 g/L
- 07/06/17 – Mid IUT (2) – Hb 140 g/L
- 07/06/17 – Post IUT (2) – 146 g/L
RCI results – Fetal sample

• DAT IgG 2+ (BioRad card)
• Kpa+ (tube technique with relevant controls)
• Eluate: Anti-Kpa
Outcome Data

- No further IUT procedures (2 in total)
- C/S 37 weeks gestation
- At delivery - Hb 126g/L, Total Bilirubin 34umol/L
- Bilirubin 65umol/l at 12 hours and 71umol/l at 24 hours
- Baby put on intensive phototherapy
- 2 days post delivery - Hb 138g/L
- 14 days post delivery - Hb 117g/L
- 6 weeks post delivery - Hb 84g/L but blood film had no features of haemolysis
Kpα

- ISBT: KEL3
- Obsolete names; Penny, K3
- Antigen prevalence 2% (caucasian), <0.1% (blacks)
- Expressed on cord cells, papain resistant
- Antibody; IgG / IAT
- Transfusion ‘mild to moderate / delayed’
- HDN ‘Mild to severe’
Talking points

• Kpa on screening cells
• Inter-hospital communications
• Consistent messages / exceptions
• Kell system antibodies can still cause severe HDN
• Missed opportunity to add weight to the ‘suppresses erythropoiesis’ theory
• Don’t dismiss oldies when they lecture you on what’s right!
Thank you

• Contributors;

• Haley Ranton (RVI)
• Chris Elliott (JCUH)

• The Blood Group Antigen FactsBook (3rd Ed) Marion Reid, Christine Lomas-Francis, Martin L. Olsson