ABO Incompatible Transfusion

West Midlands Regional Transfusion Committee

‘An Inspector Calls’

Thursday 3rd July 2014

University Hospital Birmingham
Post-Graduate Centre
Mike Herbert
**Pre-Transfusion**

08:19 - 2 units of group A Rh (D) positive red cells collected from main Issue fridge.

08:31 – both units entered in clinical haematology satellite fridge

09:44 - First unit collected from satellite fridge for transfusion & pre transfusion observations recorded:

  - Temp 36.4°C, Resps 17, Pulse 90, BP 94/58, SaO₂ 100% on air

09:50 – Discrepancy noticed during bedside check between blood group of pack (A) and patient’s blood group (O)

Transfusion started.
During Transfusion

15 minute observations:
    Temp 37.0°C (0.6°C↑), Resps 16, Pulse 65↓, BP 100/65, \( \text{SaO}_2 \) 100% on air.

11:30 - 1 hour 40 minutes from commencement:
    Patient complained of feeling cold - observations checked:

    Temp 38.2°C (1.8°C↑), Resps 17, Pulse 72, BP 155/79, \( \text{SaO}_2 \) 99% on air

    No other clinical symptoms identified, FY2 informed (patient not seen) and paracetemol prescribed
Post Transfusion

12:10 - 2 hours 20 minutes from commencement transfusion completed:
   Patient complained of chest pain and moved from chair to bed whilst observations checked & FY2 informed:
   Temp 38.5°C (2.1°C↑), Resps 17, Pulse 72, BP 158/80, SaO₂ 99% on air

12:30 - 2 hours 40 minutes from commencement:
   FY2 reviewed patient. Nil acute found on clinical examination and vital signs stable. Unit checked against documentation issued by blood bank and ABO incompatibility identified.

12:52 - 3 hours 02 minutes from commencement:
   observations checked:
   Temp 39.1°C (2.7°C↑), Resps 16, Pulse 80, BP 158/88, SaO₂ 96% on air
13/11/2013 14:13 - Blood Transfusion request form and sample for 2 units of red cells received for transfusion on 18/11/2013—routinely tested as Group O Rh (D) positive with No Irregular Antibodies Detected which matched historic data.

15/11/2013 08:42 - ABO incompatible red cells issued for an elective transfusion (G0956131341868 & G052513599280C) – Both units Group A Rh (D) positive.
Issuing Red Cells Algorithms

Request and Sample Received in Laboratory and entered onto the LIMS system

Sample tested on fully automated analyser and results transferred electronically into the LIMS system where the result is checked by the software against any previous results.

Red cells requested but due to clinical need testing of sample not possible or referred to NHSBT

STAT ISSUE – Computer check for ABO & Rh(D) compatibility as well screening requirements

No previous results or screening requirements are not met

Previous results but patient has antibodies or screening requirements are not met

Previous results which match current results & the absence of antibodies & screening requirements are met

Warnings issue but ability to override in emergency situations

serological crossmatch between patient and donor

Computer check that donor pack does not have manual edits upon stock entry

Manual Edits

No Manual Edits

Electronic Issue
Types of Red Cell Issues

Definitions of Types of Issue

**STAT** – The Issue of red cells without any form of testing in local laboratory but with a computer ABO Rh(D) type and screening requirements check.

**Electronic Issue** – The Issue of red cells with a full ABO Rh (D) typing and negative antibody screen on a minimum of 2 occasions and no manual interventions in the process and with a computer ABO Rh (D) type and screening requirements check.

**Serological Issue** - The Issue of red cells with a full ABO Rh(D) typing and negative antibody screen on only 1 occasion or manual interventions in the process or a positive antibody screen and with a computer ABO Rh(D) type and screening requirements check.
Laboratory Results

ABO not interpretable, Rh D positive, ABO negative

- ABO:
  - ABO not interpretable
- Phenotype:
- Rh D:
  - Rh D positive
- Kell:
  -

ABS:
- ABS negative
- DAT:
- Auto titr:
- Antibodies:

Known Antibodies (cross):

Antibodies / other antigens:

Details...

Accept all

Save

Cancel
Laboratory Results

Pre TransfusionDAT Negative
Post TransfusionDAT Negative
Pre Transfusion Bilirubin 18 (0-20 umol/l)
Post Transfusion Bilirubin 68 (6 hours)
Post Transfusion Bilirubin 44 (12 hours)
Post Transfusion Bilirubin 19 (48 hours)
Post Transfusion Haptoglobin 0.14 (0.45-2.42 g/l)
Pre Transfusion Hb 91 g/l
Post Transfusion Hb 83 g/l (6 hours)