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Review of Reports of Unexpected Clinical Problems with ‘non clinically significant’ antibodies.

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Introduction

- 2015 SHOT report
- Review of list of ‘benign’ antibodies
- Definitions
- Review of cases
- Assessment of cases / concerns
- **“Is it in the eluate?”**

‘Benign’ Antibodies and HTR

Anti-Lu^{a}	NO
Anti-Le^{a}	NO (rare cases of hemolytic reactions)
Anti-Le^{b}	NO
Anti-Sd^{a}	2 cases
Anti-Bg^{a}	??

The Blood Group Antigen Facts Book 3rd Edition (Marion E. Reid, Christine Lomas-Francis, Martin L Olsson)

Definitions

Haemolytic Transfusion Reaction (HTR)

Imputability –

'to attribute or ascribe (something discreditable), to a person or thing'

Imputability when referring to a HTR?

Imputability - HTR

‘Probable imputability is where the evidence is clearly in favour of attributing the adverse event to the transfusion, but other potential causes are present’

That’s before you start talking about antibodies.

Case 1

- 2015 Anti-Bg Case –
- Already symptomatic anaemia
- Nausea, vomiting, rigors, fever, tachycardia, hypotension
- Anti-Bg$^{a/b/c}$
- DAT positive pre and post
- Serological picture ‘is not clear’
- Serological incompatibility not confirmed by IBGRL
- Eluate unreactive

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Case 2

- 2015 Anti-Le^{b} case, *Irani et al, Transfusion October 2015*
- Metastatic Renal Cell Carcinoma, Chemotherapy
- Hb72g/L, antibody screen negative (solid phase),
- DAT IgG 1+, C3 2+
- 2 unselected units (Leb+), no issues, Hb 110+g/L after
- Hb79g/L, a further unit requested
- Reverse grouping anomaly – ignored. EI again

Case 2

- Chills, Nausea, Hypertension, red-brown urine
- Post transfusion plasma haemolysed,
- DAT IgG 1+, C3 3+
- Anti-Leb in plasma ‘gel’ – presumably IAT pre and post
- Eluates ‘negative’ pre and post
- No mention of serological re-crossmatching
- Reverse grouping reactions not investigated

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Assessment of Cases - Concerns

Was the DAT already positive, and why

Is it in the eluate?

Was the eluate tested by enzyme IAT?

Excluded Low incidence?

Re-crossmatched units by IAT

Full investigations (eg reverse grouping anomalies)

Is the serological evidence of a reaction due to a DHTR caused by the previous transfusion?

Balance of Probability

5 cases, 4 patients, 3 of ‘low imputability’ (2015 SHOT report)

In the absence of any other significant evidence to the contrary, it was **probably** due to that.

In the absence of a decent Chelsea team, we’d probably expect Man Utd, Man City, or Arsenal to win the Premier League

Conclusions

- Do a full transfusion reaction investigation
- Re-crossmatch the units by IAT
- Test the eluate appropriately
- More detail in the communication
- Find the antibody in the eluate
- Test for Low incidence
- Never presume anything