

CASE STUDIES

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ACKNOWLEDGEMENTS AND DISCLAIMERS

There are no conflicts of interest to declare.

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CASE 1

CASE 1

63 year old lady with h/o bleeding varices attends ED with acute blood loss.

Transfused on 3 occasions with 2, 3 and 3 A RhD neg red cells over an 8 week period.

A RhD neg, NAD.

Transfused with 2 emergency O RhD neg + 5 A RhD neg and 5 A RhD pos red cells + FFP, platelets and cryoprecipitate.

CASE 1

Self discharges after 5 days following band ligation.

Returns to ED 4 weeks later with further bleeding and ecteric (no more than usual).

Transfused with 2 emergency O RhD neg red cells.

Grouping as A RhD mixed field, AST 3+.

Declines admission and leaves the hospital.

Rh	C	D	E	c	e	C ^w	M	N	S	s	P1	Lu ^a	K	k	Kp ^a	Le ^a	Le ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Other	INT		END INT
R ₁ ^w R ₁	+	+	0	0	+	+	0	+	0	+	0	0	0	+	+	0	+	+	0	0	+		3+		4+
R ₁ R ₁	+	+	0	0	+	0	+	0	+	0	2	0	+	+	0	0	+	0	+	+	0		3+		4+
R ₂ R ₂	0	+	+	+	0	0	0	+	0	+	1	0	0	+	0	0	0	+	0	+	0		3+		4+
r'r	+	0	0	+	+	0	+	0	+	0	1	0	0	+	0	0	+	0	+	+	0		0		0
r''r	0	0	+	+	+	0	+	0	+	0	4	0	0	+	0	+	0	0	+	0	+		0		0
rr	0	0	0	+	+	0	+	+	0	+	3	0	+	0	0	0	0	+	0	0	+		0		0
rr	0	0	0	+	+	0	0	+	0	+	3	0	+	+	0	+	0	+	0	0	+		0		0
rr	0	0	0	+	+	0	+	0	0	+	0	0	0	+	+	0	+	+	0	0	+		0		0
rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	0	+	0	+	+	0		0		0
rr	0	0	0	+	+	0	0	+	+	0	3	0	0	+	0	+	0	+	0	0	+	Cob+	0		0
																						AUTO	1+		
																						DAT	1+		

CASE 1

Admitted to general medical ward 2 weeks later as bleeding has increased and +++ jaundice.

Grouping as A RhD neg, AST 3+.

WHAT ARE YOU THINKING?

Rh	C	D	E	c	e	C ^w	M	N	S	s	P1	Lu ^a	K	k	Kp ^a	Le ^a	Le ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Other	✓		6x2 4x2
R ₁ ^w R ₁	+	+	0	0	+	+	0	+	0	+	0	0	0	+	+	0	+	+	0	0	+		3+		4+
R ₁ R ₁	+	+	0	0	+	0	+	0	+	0	2	0	+	+	0	0	+	0	+	+	0		3+		4+
R ₂ R ₂	0	+	+	+	0	0	0	+	0	+	1	0	0	+	0	0	0	+	0	+	0		3+		4+
r'r	+	0	0	+	+	0	+	0	+	0	1	0	0	+	0	0	+	0	+	+	0		2+		4+
r''r	0	0	+	+	+	0	+	0	+	0	4	0	0	+	0	+	0	0	+	0	+		2+		4+
rr	0	0	0	+	+	0	+	+	0	+	3	0	+	0	0	0	0	+	0	0	+		2+		4+
rr	0	0	0	+	+	0	0	+	0	+	3	0	+	+	0	+	0	+	0	+	0		2+		4+
rr	0	0	0	+	+	0	+	0	0	+	0	0	0	+	+	0	+	+	0	0	+		2+		4+
rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	0	+	0	+	+	0		2+		4+
rr	0	0	0	+	+	0	0	+	+	0	3	0	0	+	0	+	0	+	0	0	+	Cob+	2+		4+
																						Auto	2+		
																						DAT	2+		

CASE 1

Samples referred to NHSBT.

Next day the patient has sudden catastrophic blood loss.

Given 4 O RhD neg + 5 A RhD pos red cells + 1 platelet but unfortunately dies.

What would NHSBT do?

ALLOABSORPTIONS

Rh	C	D	E	c	e	C ^w	M	N	S	s	P1	Lu ^a	K	k	Kp ^a	Le ^a	Le ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Other	<i>R/R</i>	<i>m</i>	<i>22</i>
R ₁ ^w R ₁	+	+	0	0	+	+	0	+	0	+	0	0	0	+	+	0	+	+	0	0	+		0	2+	3+
R ₁ R ₁	+	+	0	0	+	0	+	0	+	0	2	0	+	+	0	0	+	0	+	+	0		0	2+	3+
R ₂ R ₂	0	+	+	+	0	0	0	+	0	+	1	0	0	+	0	0	0	+	0	+	0		0	2+	0
r'r	+	0	0	+	+	0	+	0	+	0	1	0	0	+	0	0	+	0	+	+	0		0	0	3+
r''r	0	0	+	+	+	0	+	0	+	0	4	0	0	+	0	+	0	0	+	0	+		0	0	2+
rr	0	0	0	+	+	0	+	+	0	+	3	0	+	0	0	0	0	+	0	0	+		0	0	3+
rr	0	0	0	+	+	0	0	+	0	+	3	0	+	+	0	+	0	+	0	+	0		0	0	3+
rr	0	0	0	+	+	0	+	0	0	+	0	0	0	+	+	0	+	+	0	0	+		0	0	3+
rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	0	+	0	+	+	0		0	0	3+
rr	0	0	0	+	+	0	0	+	+	0	3	0	0	+	0	+	0	+	0	0	+	Cob+	0	0	3+

CONCLUSION

Allo anti-D

Arguably auto anti-e, probably allo anti-e

Could not derive a phenotype due to multiple transfusions but probably r''r''

CASE 2

A 56-year-old lady, pre-TAH, gives the following results with the panel.

She is DAT and auto negative.

[illegible]

Here we have an alloantibody

Reactive by IAT at 37°C

Which is papain-sensitive.

THE FIRST THING TO DO IS
FULLY GROUP THE PATIENT.

She was found to be

A₁, R₁R₂, M+, N-, S-, s+,

P1+, Lu(a-b+), K-, k+, Kp(a-b+),

Le(a-b+), Fy(a+b+), Jk(a+b+).

[illegible]

THE SECOND THING TO DO IS SEE IF
THE ANTIBODY REACTS AS WELL, OR
BETTER AT ROOM TEMPERATURE

IN THIS CASE, WE FIND IT
DOES NOT.

Test against a range of rare cells

Negative for high frequency antigens

Sensitive to papain treatment ?

(e.g. JMH, In^b, Ge2, Ge4, etc)

THIS, HOWEVER, WOULD BE

**Like looking for a needle in a
hay stack.**

**A waste of very valuable rare
cells.**

The reactions are “scruffy” 1+ and 2+

It appears to be an “HTLA” in nature

Test with a range of cells that are negative for antigens such as:

Kn^a, Yk^a, Cs^a, McC^a ?

THIS, TOO, WOULD BE:

Like looking for a needle in a hay stack.

A waste of very valuable rare cells.

WE NEED TO:

**“PROVE” THAT IT IS “HTLA” IN
NATURE,**

**SEE IF IT CAN BE INHIBITED BY
POOLED INERT PLASMA.**

	Neat	1:2	1:4	1:8	1:16	1:32	1:64	1:128	1:256
Any Panel Cell 1	1+	1+	1+	1+	1+	1+	1+	1+	1+
Any Panel Cell 1	0	0	0	0	0	0	0	0	0
Any Panel Cell 2	2+	2+	1+	1+	1+	1+	1+	1+	1+
Any Panel Cell 2	0	0	0	0	0	0	0	0	0



Plasma diluted in saline



Plasma diluted in pooled inert plasma

We have now shown the antibody to be HTLA

Note that you do not need to find an end point

And it can be inhibited by pooled inert plasma

THE ANTIBODY IS, THEREFORE,
LIKELY TO BE EITHER ANTI-CH OR
ANTI-RG.

HOW DO WE TELL THE
DIFFERENCE?

Plasma from a Ch- individual will inhibit anti-Rg but not anti-Ch.

Plasma from an Rg- individual will inhibit anti Ch but not anti-Rg.

	Neat	1:2	1:4	1:8	1:16	1:32	1:64	1:128	1:256
Any Panel Cell 1	1+	1+	1+	1+	1+	1+	1+	1+	1+
Any Panel Cell 1	0	0	0	0	0	0	0	0	0

 Plasma diluted in Rg- plasma

 Plasma diluted in Ch- plasma

THE ANTIBODY IS, THEREFORE,
ANTI-RG!

CASE 3

CASE 3

72 year old man with MDS.

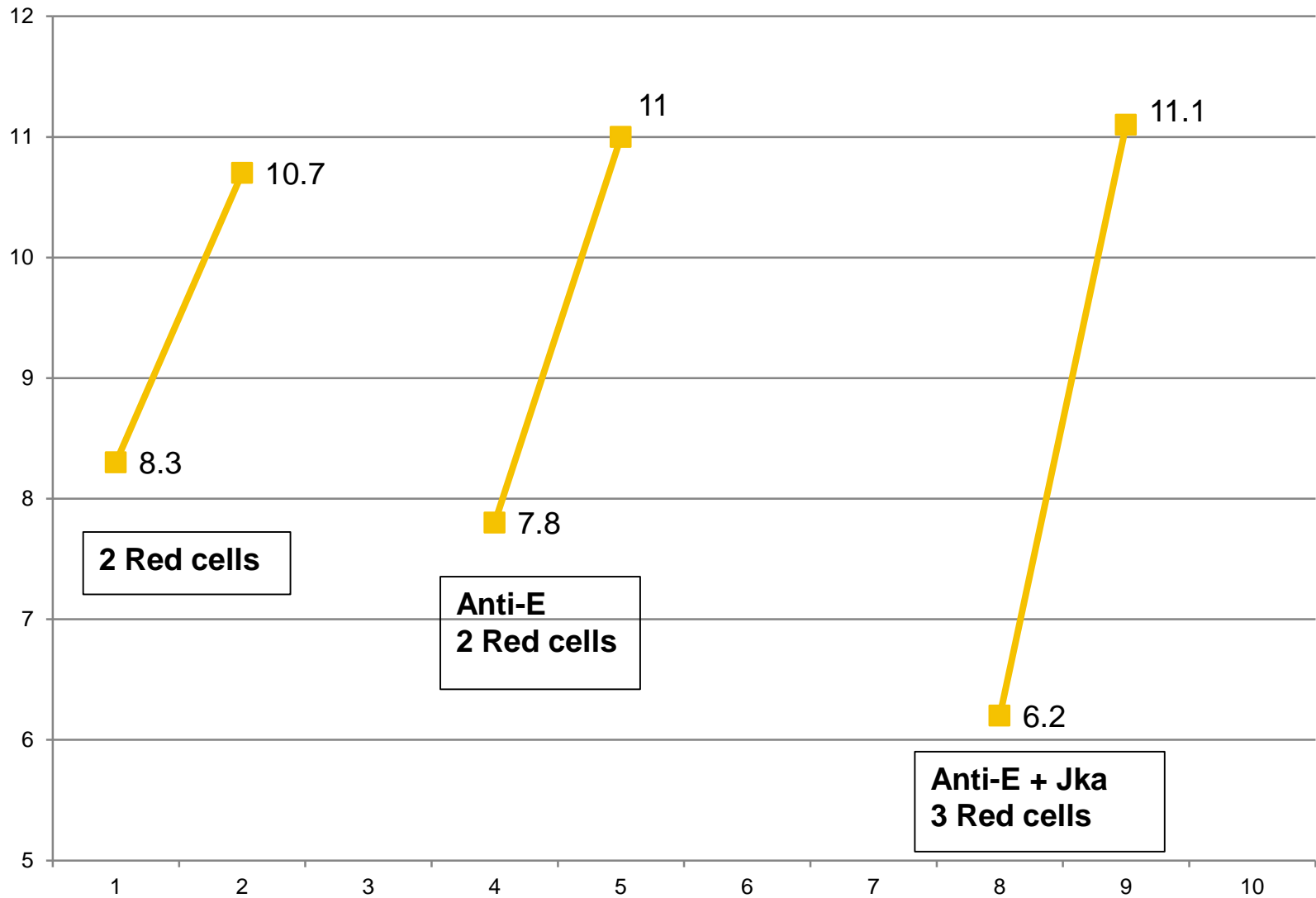
Mobility issues and a desire to stay at home.

Declined transfusion support, treated conservatively.

Hb sat at around 80g/l.

Required Gastroscopy ? reason

Hb



OUTCOME

Surgery was deemed unnecessary as patient got better.

He decided he liked having a higher Hb.

Good increments – it was in the days when red cells were bigger.

Would this happen today?