

AIHA CASE #4 Case Study by Jim Perkins MD (©, 2009)

History: The patient was a 68 year old man who presented with a 3 week history of rectal pain and constipation, alternating with watery stools. He received his meals through a PEG tube. Other problems included a history of stroke and hypertension. The patient had not been transfused in the past three months. He was anemic so a type-and-screen was ordered.

ABO and Rh Typing

<A	<B	A1 cells	B cells	6% alb	<D	<D/AHG	CCC	Interp
0	0	4+	4+		3+			O pos

Antibody Screen

Direct Antiglobulin Test

	Gel					Poly	IgG	<C3
OI	0					AHG	w+	0
OII	1+					CCC		2+

Plasma Panel

8RA187		Rh system						Kell					Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other	Plasma	Ads*			
Cell	Rh	D	C	E	c	e	V	K	k	Kp ^a	Kp ^b	Js ^a	Js ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Xg ^a	Le ^a	Le ^b	S	s	M	N	PI	Lu ^a	Lu ^b	Typings	Cell	Gel	Gel	
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	+	+	0	+	0	+	0	+	+	+	+	+	+	C ^w	1	0	
2	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	0	+	+	0	+	+	0	+	+	+	0	+	0	+		2	0		
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	0	+		3	vw+	0	
4	Ror	+	0	0	+	+	+	0	+	0	+	0	+	0	0	+	+	+	0	0	+	0	+	+	+	+	+	4	0			
5	r'r	0	+	0	+	+	0	0	+	0	+	0	+	+	+	+	0	+	0	+	0	+	+	+	+	0	+		5	0		
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	+	0	0	+	+	0	0	0	+	+	+	0	0	+		6	w+	0	
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	+	+	0	+	0	+	0	+	0	+		7	0			
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	+	+	+	+	0	0	+		8	0		
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	+	+	0	+	+	+	0	+	+	0	+		9	0		
10	rr	0	0	0	+	+	0	+	+	0	+	0	+	+	+	+	+	+	0	+	0	+	+	+	+	+	+		10	0		
11	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	+	0	+		11	0		
Patient																												AC				

* Patient plasma autoadsorbed x1 with WARM-treated patient cells.

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Eluate

Lot #32555		Rh system						Kell						Duffy		Kidd		Lewis		P	MNSs					Lutheran		Xg	Other Typings	Cell	Eluate	Last wash	
Cell	Rh	D	C	c	E	e	V	K	k	Kp ^a	Kp ^b	Js ^a	Js ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Le ^a	Le ^b	P1	M	N	S	s	Lu ^a	Lu ^b	Xg ^a						
1	R1R1	+	+	0	0	+	0	+	+	+	+	0	+	0	+	+	0	0	+	+	0	+	0	+	0	+	+	+	Rg-	1	0		
2	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	0	+	0	+	+	+	+	0	+	0	+	+	C ^w	2	0			
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	0	+	+	+	+	+	+	0	+	0		3	w+	0		
4	Ror	+	0	+	0	+	+	0	+	0	+	0	+	0	0	0	+	0	+	+	0	+	+	+	0	+	+		4	vw+			
5	r'r	0	+	+	0	+	0	0	+	0	+	0	+	+	0	+	0	0	0	+	+	+	0	+	0	+	+		5	0			
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	0	+	+	0	0	+	+	+	0	+	+	+	+	+	Ch-	6	vw+			
7	rr	0	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	+	Bg(a+)	7	0			
8	rr	0	0	+	0	+	0	0	+	0	+	0	+	+	0	+	0	0	0	+	+	+	0	+	0	+	0		8	0			
9	rr	0	0	+	0	+	0	0	+	0	+	+	+	0	0	+	+	+	0	+	0	+	0	+	0	+	+		9	0			
10	rr	0	0	+	0	+	+	0	+	0	+	0	+	+	+	+	+	0	+	+	+	0	+	0	0	+	+		10	0			
11	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	+	+	+	0	0	+	+	0	+	0	+	+	Yt ^b +, I-	11	0			
	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	0	+	+	+	+	0	+	0	+	+			1+			
Patient																												AC					

Alloadsorbed serum panel

8RA187		Rh system						Kell						Duffy		Kidd	Xg	Lewis	MNSs					P	Lutheran		Other Typings	Alloadsorbing cell; gel testing							
Cell	Rh	D	C	E	c	e	V	K	k	Kp ^a	Kp ^b	Js ^a	Js ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Xg ^a	Le ^a	Le ^b	S	s	M	N	P1	Lu ^a	Lu ^b		Cell	R1rx1	R2R2x1	rrx1	R1rx2		
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	+	+	+	0	+	0	+	0	+	+	+	+	+	C ^w	1					
2	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	0	+	+	0	+	+	0	+	+	+	0	+	0	+		2						
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	0	+		3	vw+	0	0	0		
4	Ror	+	0	0	+	+	+	0	+	0	+	0	+	0	0	+	+	+	0	0	+	0	+	+	+	+	0	+	4						
5	r'r	0	+	0	+	+	0	0	+	0	+	0	+	+	+	+	0	+	0	+	0	+	+	+	+	+	0	+	5						
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	+	0	0	+	+	0	0	0	+	+	+	0	0	+	6	vw+	0	vw+	0			
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	0	+	+	+	0	+	0	+	0	+	0	+	7							
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	+	+	+	+	0	0	+	8							
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	+	+	+	+	0	+	+	+	0	+	+	0	+	9							
10	rr	0	0	0	+	+	0	+	+	0	+	0	+	+	+	+	+	+	0	+	0	+	+	0	=s	0	+	10							
11	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	+	0	+	11							
Patient																												AC							

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Antigen Phenotype

	Rh system				Kell				Duffy			Kidd		Lewis		MNSs				P1	I	H	A ₁												
	C	E	c	e	K	k	Kp ^a	Js ^a	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Le ^a	Le ^b	S	s	M	N																	
Patient	0	0	4+																																
Pos control	3+	4+	4+																																
Neg Control	0	0	0																																

QUESTIONS: AIHA CASE #4

1. What is the specificity of this antibody? Is this allo- or auto-antibody?

2. Why were the auto and allo-adsorptions done? What do they demonstrate?