

ABID CASE #23 Case Study by Jim Perkins MD (©, 2009)

History: This patient was a 29 year old, G?P???? woman at her first pre-natal visit. She denied transfusion.

ABO and Rh Typing

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

Antibody Screen

	Gel
OI	0
OII	w+

Direct Antiglobulin Test

	Poly	IgG	<C3
AHG	0		
CCC	2+		

Initial Panel

Lot# VRA118	Rh system	Kell											Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other Typings	Cell	Gel		
Cell	Rh	D	C	E	c	e	f	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				
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	+	0	+	0	0	+	+	Bg-, Co(b+)	1	0
2	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	+	+	0	0	0	+	0	+	0	+	0	+	Bg-	2	0	
Bg	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	+	+	+	0	0	+	+	+	+	+	0	+	Bg-	3	0	
Bg	Ror	+	0	0	+	+	+	0	+	0	+	0	+	0	0	+	0	+	+	0	0	+	0	+	+	0	+	Bg-	4	1+	
5	r'r	0	+	0	+	+	+	0	+	0	+	0	+	+	0	0	+	+	0	+	0	+	+	+	+	0	+	Bg-, Co(b-)	5	1+	
6	r''r	0	0	+	+	+	+	0	+	0	+	0	+	+	0	0	+	+	0	+	+	+	+	+	+	0	+	Bg-, Co(b-)	6	1+	
7	rr	0	0	0	+	+	+	+	+	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	0	+	Bg-, Co(b-)	7	2+		
8	rr	0	0	0	+	+	+	0	+	0	+	0	+	+	0	+	0	+	+	0	+	+	+	+	+	0	+	Bg+, Co(b+)	8	2+	
9	rr	0	0	0	+	+	+	0	+	0	+	0	+	0	+	0	+	0	0	+	0	+	0	+	+	0	+	Bg+	9	3+	
10	rr	0	0	0	+	+	+	0	+	0	+	0	+	0	+	+	+	+	0	+	+	0	+	0	+	0	+	Bg+	10	3+	
11	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	+	0	0	+	0	+	0	+	+	0	+	Bg-	11	0	
Patient																													AC		

Antibody screening cells phenotype

Lot #VS205	Rh system	Kell											Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other Typings	Gel	
Cell	Rh	D	C	E	c	e	f	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		
OI	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	+	0	0	+	+	+	0	+	+	+	+	+	0	+	Bg-	0
OII	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	+	+	0	+	0	+	0	+	+	+	+	0	+	Bg-, Co(b+)	w+

ABID CASE #23: QUESTIONS

1. What is the probable identity of this antibody? Which reaction is anomalous? How might you explain this reaction?
2. What is the titer in this case? (Hint: what would the titer be if we used the LISS IAT as our titrating system?) How would you follow this pregnancy?
3. Does this antibody cause hemolytic transfusion reactions? Hemolytic disease of the newborn?
4. Show the reactions you would expect for the antibodies anti-Ce and anti-cE in the following panel.

Lot#		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other Typings	>cE	>Ce	
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	AHG	AHG
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	+	0	+	0	0	+		1		
2	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	+	+	0	0	0	+	0	+	0	+	0	+		2		
Bg	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	+	+	+	0	0	+	+	+	+	+	0	+		3		
Bg	Ror	+	0	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	+	+	+	+	0	+		5		
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	+	0	0	+	+	0	+	+	+	+	+	+	0	+		6		
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	0	+	+		7		
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	+	+	0	+	+	+	+	+	0	+		8		
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	0	0	+	0	+	0	+	+s	0	+		9		
10	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	+	+	0	+	+	0	+	0	+	0	+		10		
11	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	+	0	0	+	0	+	0	+	+	0	+		11		
Patient																												AC			

ABID CASE #23

1. What is the probable identity of this antibody? (Hint: it may not be listed across the top of the antigen matrix.) Which reaction is anomalous? How might you explain this reaction?
2. What is the titer in this case? (Hint: what would the titer be if the LISS IAT were used to determine the titer of antibodies.) How would you follow this pregnancy?
3. Does this antibody cause hemolytic transfusion reactions? Hemolytic disease of the newborn?
4. Show the reactions you would expect for the antibodies anti-Ce and anti-cE in the following panel.

Lot#		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other Typings	>cE	>Ce	
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	AHG	AHG
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	+	+	+	0	+	+	+	0	+	0	0	+		1		
2	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	+	+	0	0	0	+	0	+	0	+	0	+		2		
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	+	+	+	0	0	+	+	+	+	+	0	+		3		
4	Ror	+	0	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	+	+	+	+	0	+		5		
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	+	0	0	+	+	0	+	+	+	+	+	+	0	+		6		
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	0	+	+		7		
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	+	+	0	+	+	+	+	+	0	+		8		
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	0	0	+	0	+	0	+	+	0	+		9		
10	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	+	+	0	+	0	+	0	+	+	0	+		10		
11	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	+	0	0	+	0	+	0	+	+	0	+		11		
Patient																												AC			