

ABID CASE #15 Case Study by Jim Perkins MD (©, 2009)

History: This 27 year old man with end stage renal disease has received multiple transfusions but none in the past 3 months. He recently moved here from another state.

ABO and Rh Typing

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

Antibody Screen

	Gel
OI	3+
OII	4+

Direct Antiglobulin Test

	Poly	IgG	<C3
AHG	0		
5' incub.	0		
CCC	2+		

Initial Panel

Lot #VRA112	Rh system	Kell											Duffy		Kidd		Xg	Lewis		MNSs					P	Lutheran		Other					
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	Typings	Cell	Gell			
1	R1wR1	+	+	0	0	+	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	+s	0	+		2	0			
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	+	0	+	+	+	+	0	+	0	+		3	4+			
4	Ror	+	0	0	+	+	+	0	+	0	+	0	+	0	0	+	+	+	0	+	0	+	0	+	+	0	+		4	2+			
5	r'r	0	+	0	+	+	0	0	+	0	+	0	+	+	0	+	0	0	0	+	0	+	0	+	0	0	+		5	2+			
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	+	0	+	0	+	+	0	0	+	+	0	+	0	+		6	3+			
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	0	0	0	0	+	+	+	+	0	0	+		7	3+			
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	+	+	0	+	0	+	0	0	0	0	+		8	3+			
9	rr	0	0	0	+	+	0	+	+	0	+	0	+	+	0	0	+	+	0	0	+	+	+	0	+	0	+		9	3+			
10	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	0	+	+	0	0	+	0	+	+	+	+	+		10	3+			
11	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	0	0	+	0	0	+	+	0	+	0	+		11	3+			
Patient																													AC				

Antibody screening cells phenotype

Lot #VS169	Rh system	Kell											Duffy		Kidd		Xg	Lewis		MNSs					P	Lutheran		Other				
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	Typings	Gel			
OI	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	+	0	+	+	+	0	+	+	+	+	+	+s	0	+		3+			
OII	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	+	+	0	0	+	0	0	+	0	+	+	0	+		4+			

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1. What antibody/ies do you think is/are present?

2. List the phenotypes of panel RBCs needed to prove your hypothesis including any required “rule out” and “rule in” cells and list the purpose of testing the cell (e.g. “rule in anti-c”, “rule out anti-Jk^a”) and its Rh phenotype in modified Weiner notation (i.e. “R1R1”, “R1Rz”, etc.)

Rh phenotype							Purpose of testing this cell

3. What percentage of donors is expected to be compatible with this recipient given your hypothesis as to the combination of antibodies present? Perform the calculation for European-American donors.