

INDIAN IMMUNOHEMATOLOGY INITIATIVE

CASE OF THE MONTH: August, 2009

Case Study by Jim Perkins, MD (©2009)

History: A request for pre-transfusion testing was received for a 69 year old man prior to operation for esophageal cancer. The patient had a history of GERD, a 30 pack/year history of smoking having quit 20 years earlier, and was a recovered alcoholic. There were multiple other medical problems. At age 13 in 1952 the patient suffered multiple depressed skull fractures in a bicycle and was in the hospital for over a month.

ABO and Rh Typing

Anti-A	Anti-B	A1 cells	B cells	6% alb	Anti-D	Anti-D/AHG	CCC	Interp
0	0	3+	4+		0	0	2+	

Antibody Detection Test (“Screen”) by gel column agglutination

	Gel
OI	0
OII	1+

Direct Antiglobulin Test

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

Initial Panel

Lot #VRA130	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	Gel			
1	R1wR1	+	+	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	+	0	+		2	1+			
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	+	0	+	+	0	+	+	+	+	0	+s	0	+		3	1+			
4	Ror	+	0	0	+	+	+	+	+	0	+	0	+	0	0	+	0	0	0	0	0	+	+	+	+	+	0	+		4	1+		
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	+	+		6	0			
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	+	+	+	0	+	0	+	0	0	0	+	Bg ^{a+}	7	w+			
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	+	+	+	0	+	+	o	+	+	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	+	+	0	+	+	0	0	+	+	+	+s	0	+		10	0			
11	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	0	+	+	+	0	+	0	+	0	+	0	+	0	+		11	0			
Patient																													AC				

Antibody screening cells (same as above)

Lot #VS280	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	0	+	+	+	0	0	+		0				
OII	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	+	0	+	0	0	0	+	+	+	+	0	+	0	+		1+			

Question:

1. What alloantibody(ies) or autoantibody appears to be present? Is this identification proven? If not, what hypotheses might you make regarding the cause of the observed reactivity? What steps might be taken to prove or disprove these hypotheses?

The technologist chose to repeat testing with certain nonreactive panel and antibody detection cells using a longer (30 min) incubation time (the original incubation time was the manufacturer's recommended 15 min).

Lot #VRA130		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other	Gel test			
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	Original rxns	Repeat	
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	+	+	+	0	+	0	+	+	+	+	+	0	+	C ^w	1	0	vw+
2	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	0	+	0	0	+	+	+	0	+	0	+		2	1+		
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	+	0	+	+	0	+	+	+	+	0	+s	0	+		3	1+		
4	Ror	+	0	0	+	+	+	+	+	0	+	0	+	0	0	+	0	0	0	0	0	+	+	+	+	0	+		4	1+		
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	+		6	0	0	
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	+	+	+	0	+	0	+	0	0	0	+	Bg ^{a+}	7	w+		
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	+	+	+	0	+	+	o	+	+	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	+	+	0	+	+	0	0	+	+	+	+s	0	+		10	0		
11	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	0	+	+	+	0	+	0	+	0	+	0	+	0	+		11	0	vw+	
Patient																												AC				

Antibody screening cells (same as above)

Lot #VS280		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other	Gel test	
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	Original rxns	Repeat
OI	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	+	+	+	0	+	+	0	0	+	+	+	0	0	+		0	1+
OII	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	+	0	+	0	0	+	+	+	+	0	+	0	+		1+	2+

Then he ran another panel knowing that 30' incubation brought up additional reactivity.

