

FEATURED CASE #19-05

Questions:

1. What do you think might be going on here? Based on your hypothesis(ies) how might we proceed?

The technologist elected to run a PEG/tube panel in the hope of finding additional reactive cells as well as to rule out gel-dependent reactivity. In addition, in order to investigate the possibility of an HLA antibody they adsorbed the patient's plasma with human platelet concentrate™ (HPC) and re-tested it against the previously-reactive RBC samples. The results are shown below.

Second panel; PEG tube technique

Cell	Rh	Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other Typings	Cell	PEG AHG
		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			
1	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	+	+	+	+s	0	+		1	0 ^v	
2	R1R1	+	+	0	0	+	0	+	+	0	+	/	+	+	+	+	0	+	0	+	+	+	0	+s	0	+		2	1+	
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	+	0	+	+	+	+	+	0	0	+	HLA+	3	0 ^v		
4	Ror	+	0	0	+	+	+	+	+	0	+	/	+	0	+	+	0	+	0	0	0	+	+	+	0	+	HLA+	4	0 ^v	
5	r'r	0	+	0	+	+	0	0	+	0	+	/	+	+	0	+	+	+	0	+	0	+	+	+s	0	+		5	0 ^v	
6	r ^{rr} r	0	0	+	+	+	0	0	+	0	+	0	+	0	+	+	0	+	+	+	+	0	+s	0	+		6	0 ^v		
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	0	+	0	+	0	+	+s	0	+		7	0 ^v		
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	0	+	+	+	0	+	0	+		8	1+		
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	0	+	0	0	+	0	+	+	0	+	HLA+	9	0 ^v		
10	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	+	0	+	0	+	0	0	+	0	0	+		10	0 ^v		
11	R1R1	+	+	0	0	+	0	0	0	+	0	+	0	+	0	+	+	0	+	+	0	+	+	0	+		11	0 ^v		

Selected cells tested with HPC treated plasma; gel method

	Rh	Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other Typings	Cell	HPC Gel
		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			
SC I	R1R1	+	+	0	0	+	0	+	0	+	0	+	0	+	+	0	+	+	0	0	+	0	+	+s	0	+		SC I	0	
8	rr	0	0	0	+	+	0	+	0	+	/	+	+	0	0	+	+	+	0	0	+	+	0	+	0	+		8	0	

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2. What is your impression now? Is any additional work-up required?

On the request of the supervisor reviewing the investigation and conclusions, additional selected cells were tested as follows:

Selected cell panel; manual gel technique

		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	R1R1	+	+	0	0	+	0	0	+	0	+	/	+	+	+	0	+	+	0	0	+	+	0	0	0	0	+		1	1+		
2	R2R2	+	0	+	+	0	0	0	+	0	+	/	+	0	+	+	+	+	0	+	+	+	+	+	0	0	+		2	1+		
3	rr	0	0	0	+	+	0	0	+	0	+	/	+	+	+	0	+	+	0	0	+	0	+	+	0	+		3	2+			
4	R2R2	+	0	+	+	0	0	0	+	0	+	/	+	+	+	0	+	0	+	0	+	+	+	+	0	0	+		4	1+		
5	rr	0	0	0	+	+	0	+	+	0	+	/	+	0	+	+	+	+	0	0	+	+	+	+	+	0	+		5	1+		
6	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	0	0	+	0	+	+	+	0	+s	0	+		6	1+		

Questions/discussion

3. What is your interpretation now? What was the problem with the initial workup as presented above? What other approaches can be used to identify these antibodies?