

AIHA CASE #8

Case study by Jim Perkins, M.D. (© 2009) Case study by Jim Perkins, M.D. (© 2009)



History: The patient was a debilitated 74 year old man transferred from a nursing home for dyspnea and fever due to pneumonia. His problems included hypertension, coronary artery disease, diabetes, bilateral above knee amputations, decubitus ulcers and osteomyelitis. He had previously been transfused. His total protein was 7.0gm/dL (nml 6.1-7.9) and his albumin was 2.2gm/dL (nml 3.5-5.5).

ABO and Rh Typing

<A	<B	A1 cells	B cells	6% alb	<D	<D/AHG	CCC	Interp
0	4+	4+	2+R		4+			
Saline displacement		4+	0					

Antibody Screen

	Gel	HPC ads.
SCI	0	0
SCII	w+	0

Direct Antiglobulin Test (tube method)

	Poly	IgG	<C3
AHG	w+	w+	0
CCC			2+

Initial plasma panel

Lot# 8RA188	Rh system							Kell					Duffy		Kidd	Xg	Lewis		MNSs				P	Lutheran		Other			HPC 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	+	0	+	0	+	0	+	+	0	+	C ^w	1	0	
2	R1R1	+	+	0	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	0	
4	Ror	+	0	0	+	+	0	0	+	0	+	0	+	0	0	+	0	+	0	0	0	+	+	+	+	+s	+	+		4	0	
5	r'r	0	+	0	+	+	0	+	+	0	+	0	+	0	+	+	0	+	0	+	+	+	+	+	0	+s	+	+		5	0	
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	0	+	+	0	+	+	0	0	+	0	+	0	0	+		6	0		
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	+	+	0	+	0	+	+	+	+s	0	+		7	w+	0	
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	+	0	+	0	+	0	+	+	0	+	+s	0	+		8	0		
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	0	+	0	+	0	+	0	+s	0	+		9	0		
10	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	0	+	0	0	0	+		10	0	
11	R1wR1	+	+	0	0	+	0	0	+	0	+	0	+	0	+	0	+	0	+	0	0	+	0	+	+	0	+	C ^w	11	0		
Patient																													AC			

Antigen phenotype

	Rh system				Kell				Duffy		Kidd		Lewis		MNSs								
	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	PI	I	H	A ₁	
Patient																				2+			
Pos control																				2+			
Neg Control																				0			

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Questions:

1. What is the ABO discrepancy? What is its cause? What does saline displacement do?
2. What is cause of the positive antibody screen? Why did technologist perform a P1 typing? Why was the second serum panel run?
3. Why might the DAT be positive? That is, what can cause a positive DAT with a negative eluate? Can you relate this to any other findings?