

ABID CASE #20 Case Study by Jim Perkins MD (©, 2009)

History: This patient was a 53 year old woman who presented with 3 episodes of exertional chest discomfort pain associated with dyspnea and lightheadedness on the day of admission as well as on the two preceding days. She had multiple risk factors for atherosclerosis including hypertension, hyperlipidemia, and smoking and had undergone right femoral artery atherectomy. She also had a history of GERD and diverticular disease as well as iron deficiency anemia; she was currently taking iron and noted black stools. She had not previously been transfused.

Electrocardiography revealed ST depression in the antero-lateral leads. This and the pain resolved with sublingual nitroglycerine. Her hemoglobin was 7.0 gm/dL.

ABO and Rh Typing

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

Antibody Screen

	Gel
OI	0
OII	0

Direct Antiglobulin Test

	Poly	IgG	<C3
AHG	0		
CCC	2+		

Three urgent immediate spin crossmatches set up with group O, Rh negative RBCs were positive.

Initial Panel

Lot #34592		Rh system						Kell						Duffy		Kidd		Lewis		P	MNSs					Lutheran		Xg	Other	Cell	IS	17 ^o
Cell	Rh	D	C	c	E	e	V	K	k	Kp ^a	Kp ^b	Js ^a	Js ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Le ^a	Le ^b	P1	M	N	S	s	Lu ^a	Lu ^b	Xg ^a	Typings				
1	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	+	0	+	+	+	0	+	+	0	0	+	0	+	+	Lu:14	1	2+	3+	
2	R1wR1	+	+	0	0	+	0	+	+	0	+	0	+	+	+	+	+	+	0	+	+	+	0	+	0	+	0	C ^w	2	2+	3+	
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	0	+	0	+	0	+	+	+	+	0	+	0	+	+		3	2+	3+	
4	Ror	+	0	+	0	+	0	0	+	0	+	0	+	0	0	+	0	0	0	+	0	+	+	+	0	+	0		4	2+	4+	
5	r'r	0	+	+	0	+	0	0	+	0	+	0	+	0	+	0	+	0	+	+	+	0	+	+	0	+	0		5	2+	4+	
6	r''r	0	0	+	+	+	0	0	+	0	+	0	+	0	+	+	0	+	0	+	+	+	0	+	0	+	+	Co(b+)	6	1+	3+	
7	rr	0	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	0	+	+	0	+	+	+	0	+	0	Bg(a+)	7	1+	4+	
8	rr	0	0	+	0	+	0	0	+	0	+	0	+	+	0	+	0	0	+	+	+	0	+	0	0	+	0		8	2+	4+	
9	rr	0	0	+	0	+	0	0	+	0	+	0	+	0	+	0	+	0	+	+	0	+	+	+	0	+	+		9	2+	3+	
10	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	0	+	0	+	0	+	0	+	+	0	+	+		10	2+	3+	
11	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	+	+	+	+	+	0	+	+	0	+	+	0	+	+	Bg(a+)	11	3+	4+	
Patient																												AC	0	vw+		

Cold panels

	IS	RT x 30'
OI	1+	2+
OII	1+	2+
A1	0	0
A2	0	0
Auto	0	0
I neg, adult	0	w+

	IS	17 ^o
Cord 1	0	w+
Cord 2	0	w+
Cord 3	0	1+
A1	0	0
A1	0	0
A1	0	0
A2	0	1+

Antigen Phenotype

	Rh system				Kell							Duffy		Kidd		Lewis		MNSs				p		I	H	A ₁
	C	E	c	e	K	k	Kp ^a	Kp ^b	Kp ^b	Kp ^b	Js ^a	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Le ^a	Le ^b	M	N	S	s	P1				
Patient															0	1+	4+	3+					2+			4+
Pos control															4+	3+	4+	3+					2+			4+
Neg Control															0	0	0	0					0			0

1. What is the probable identity of this antibody(ies)? Is it an autoantibody or an alloantibody?
2. Why were the patient blood group phenotypes done?
3. How would you select compatible blood for this patient?