

AIHA CASE #2 Case Study by Jim Perkins MD (©, 2009)

History: The patient was a 63 year old man who came to the emergency room complaining of dark urine beginning 3 days earlier associated with fatigue. His past history was remarkable for adult onset diabetes, hypertension, kidney stones, and glaucoma, and he was on multiple medications including simvastatin (Lipitor), paroxetine (Paxil), enalapril (Vasotec), glyburide, pioglitazone (Actos), and aspirin.

Review of systems and physical examination were unremarkable.

Notable laboratory findings included:

Hgb/hct = 11.6/33.6

Reticulocytes = 2.8%

Absolute reticulocytes = 94,000/mm³ (nml 15,000 - 127,000)

Total/direct bilirubin = 6.7/0.6 mg/dL (nml 0.1 - 1.4/0 - 0.4)

LDH = 461 IU/L (nml = 0 - 200)

Haptoglobin = <5.8 mg/dL (nml = 36 - 195)

A direct antiglobulin test was ordered.

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	2+	2+	0
CCC			2+

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Eluate

Lot #44543		Rh system						Kell						Duffy		Kidd		Lewis		P	MNSs				Lutheran		Xg	Other Typings	Cell	Eluate AHG	CCC
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				
1	RzR1	+	+	0	+	+	0	0	+	0	+	0	+	+	0	0	+	0	+	+	+	0	+	+	0	+	+		1	4+	
2	R1wR1	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	+	0	+	+	0	+	0	+	0	+	+	C ^w	2	4+	
3	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	0	+	0	0	+	0	+	+	+	+	0	+	+	Yt ^{b+}	3	4+	
4	Ror	+	0	+	0	+	+	0	+	0	+	0	+	+	0	+	0	0	+	+	0	+	+	+	0	+	+	He+	4	3+	
5	r'wr	0	+	+	0	+	0	0	+	0	+	0	+	+	+	+	0	0	+	0	+	0	0	+	0	+	+	C ^w	5	4+	
6	r'r	0	0	+	+	+	0	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	0	+	+		6	4+	
7	rr	0	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	0	+	+	0	+	+	+	0	+	0	Bg(a+)	7	4+	
8	rr	0	0	+	0	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	+	+	+	+	0	+	+		8	4+	
9	rr	0	0	+	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	+	0		10	3+	
11	R2r	+	0	+	+	+	0	0	+	0	+	0	+	+	0	0	+	0	+	+	0	+	0	+	0	+	+	I-	11		
Patient																													AC	4+	
																												last wash	OI	0	2+
																											OII		0	2+	

QUESTIONS: AIHA CASE #2

1. What antibody(ies) is present? Is this an allo- or auto-antibody? Could it be due to one of the patient's medicines?

2. How would you select blood for this patient?

3. What does the "last wash" test demonstrate?

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Subsequent disease course:

Additional testing was performed the following day, and the patient was started on prednisone, 60 mg/day.

The following are some of the lab tests done subsequently.

	Day 1 (above)	Day 2	Day 6	Day 7	Day 8	Day 9	Day 10	Day 13	Day 20
Hgb/hct	11.6/33.6	10.8/29.4	6.3/18.0	8.0/23.0	8.7/25.4	9.6/28.9	9.7/28.6	10.8/32.3	11.6/35.2
Absolute reticulocyte count	94,000			129,000					52,000
LDH		461							
Total/direct bilirubin	6.7/0.6	8.0		3.4/0.5	2.0/			1.6/0.3	0.8/0.2

On day 6 the patient was transfused a unit of RBCs. One hour after the transfusion he developed a temperature of 101°F, having not been febrile previously during this illness. There was no hemoglobinemia or change in the serologic findings, and bacterial contamination of the unit was ruled out.