

## ABO discrepancy #7

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



**History:** This patient was a 69 year old woman admitted for anterior and posterior repair for vaginal prolapse. Problems include chronic urinary tract infection and urinary incontinence, obesity, type II diabetes, psoriasis and psoriatic arthritis, cholelithiasis, and venous insufficiency. A type-and-screen was ordered.

### ABO and Rh Typing

<A	<B	A1 cells	B cells	6% alb	<D	<D/AHG	CCC	Interp
4+	1+ <sup>mf</sup>	0	4+		4+			

### Antibody Screen

	IS	30°/37°	AHG
SCI	0	0	0 <sup>v</sup>
SCII	0	0	0 <sup>v</sup>
SCIII	0	0	0 <sup>v</sup>
AC	0	0	0 <sup>v</sup>

### Direct Antiglobulin Test (tube method)

	Poly	IgG	<C3
AHG		0	
CCC		2+	

### Antigen Phenotype

	Rh system				Kell		Duffy		Kidd		Lewis		MNSs				A <sub>1</sub>				
	C	E	c	e	K	k	Fy <sup>a</sup>	Fy <sup>b</sup>	Jk <sup>a</sup>	Jk <sup>b</sup>	Le <sup>a</sup>	Le <sup>b</sup>	S	s	M	N		PI	I	H	
Patient	3+	0	3+																		4+
Pos control	3+	4+	4+																		4+
Neg Control	0	0	0																		0

### Additional reactions

Manufacturer	IS reactions with different monoclonal anti-B sera					IS with human anti-B	
	A	B	C	D	D	D	C
Lot #	#1	#2	#3	#4	#5	#6	#7
Patient	0	w+ <sup>mf</sup>	1+ <sup>mf</sup>	1+ <sup>mf</sup>	w+ <sup>mf</sup>	vw+ <sup>mf</sup>	vw+ <sup>mf</sup>
Acidified anti-B, monoclonal						Acidified human anti-B	
Patient		0	w+	0	0	0	0
Pos control (B cells)		4+	4+	4+	4+	4+	4+
Neg control (A cells)		0	0	0	0	0	0
Group A donor sera (antibody screen neg)							
Donor #	#1	#2	#3	#4	#5	#6	
IS	0	vw <sup>mf</sup>	0	0	0	vw <sup>mf</sup>	
RT	vw <sup>mf</sup>	w <sup>mf</sup>	vw <sup>mf</sup>	w <sup>mf</sup>	w <sup>mf</sup>	w <sup>mf</sup>	

**ABO Discrepancy #7:**

**Questions:**

1. What is the forward ABO type? If that is correct, what anomaly must one explain?
2. What is the reverse ABO type? If that is correct, what anomaly must one explain?
3. Which of these two possibilities did the technologist investigate? What information in the type-and-screen results prompted them to do so?
4. What is the serologic diagnosis?
5. What is the biochemical explanation for the discrepancy?