

ABO discrepancy #7 Case Study by Jim Perkins MD (©, 2009)

History: This patient is 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+ ^{mf}	0	4+		4+			?, pos

Antibody Screen (4 drops serum, 30' incubation)

Direct Antiglobulin Test

	IS	30'37°	AHG	CC		Poly	IgG	<C3
OI	0	0	0	2+	AHG		0	
OII	0	0	0	2+	CCC		2+	
OIII	0	0	0	2+				
Auto	0	0	0	2+				

Antigen Phenotype

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

Additional reactions

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

ABO Discrepancy #7

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 hypotheses did the technologist investigate? What information in the type-and-screen results prompted him to do so?
4. What is the serologic diagnosis?
5. What is the biochemical explanation for the discrepancy?