ABID CASE #1
Case study by Jim Perkins, M.D. (© 2006)

Indian Immunohematology Initiative

History: This patient was a 55 year old woman admitted to have a loop ileostomy taken down. She had a 9 year history of colon cancer, originally treated by partial colectomy. Eleven weeks earlier she underwent proctocolectomy for recurrent disease. She also had a history of uterine cancer S/P hysterectomy, as well as peptic ulcer disease. At the time of her recent proctocolectomy her antibody screen was negative, and she received 2 units of RBCs.

ABO and Rh Typing

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

Antibody Screen

	Gel
SCI	2+
SCII	0

Direct Antiglobulin Test (tube method)

	Poly	IgG	<C3
AHG	0		
CCC	3+		

Screening cell phenotype

		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Gel
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	P1	Lu^a	Lu^b	
SCI	R1R1	+	+	0	0	+	0	+	+	0	+	0	+	+	+	+	+	+	0	+	+	+	+	+	+	0	+	2+
SCII	R2R2	+	0	+	+	0	0	0	+	0	+	0	+	+	0	+	0	0	+	0	+	+	+	+	+	0	+	0

Initial Panel

8RA178		Rh system						Kell						Duffy		Kidd		Xg	Lewis		MNSs				P	Lutheran		Other Typings		
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	P1	Lu^a	Lu^b		Cell	Gel
1	R1wR1	+	+	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	+	+		2	2+
3	R2R2	+	0	+	+	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	+		4	0
5	r'r	0	+	0	+	+	0	0	+	0	+	0	+	0	+	+	0	+	0	+	+	+	+	+	+	0	+		5	0
6	r"r	0	0	+	+	+	0	0	+	0	+	0	+	+	+	+	+	+	0	+	+	0	+	+	0	0	+		6	0
7	rr	0	0	0	+	+	0	+	+	0	+	0	+	0	+	+	+	+	0	+	+	+	+	+	+	0	+		7	2+
8	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	0	+	0	0	+	+	0	+	0	+		8	0
9	rr	0	0	0	+	+	0	0	+	0	+	0	+	0	+	0	+	0	0	+	+	0	+	0	+	0	+		9	0
10	rr	0	0	0	+	+	0	0	+	0	+	0	+	+	0	+	0	+	0	+	+	+	0	+	0	0	+		10	0
11	R1R1	+	+	0	0	+	0	0	+	0	+	0	+	0	+	0	+	+	+	0	0	+	0	+	+	0	+		11	0
Patient																													AC	0

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Questions:

1. What is the probable identity of this antibody?

2. Is any further workup needed to prove it? Articulate the standards for identification of a blood group allo-antibody (see SOP, Investigation of a Positive Antibody Detection Test).

3. What is the probable source of the immunizing stimulus in this case?

4. Does this antibody cause hemolytic transfusion reactions?

5. Does this antibody cause hemolytic disease of the fetus and newborn?

6. How would we select compatible blood for this patient? What percentage of donors are expected to be compatible with this recipient?

7. What is the biochemical nature of the antigen? (Review the outline of the features of the relevant blood group system.)