

Investigation of anti-D/C/G

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Facts about anti-G

- Complex Issue
- Complex Investigation
- Voted most likely RCI subject to lead to a car park brawl
- ‘Unmentionable’

Anti-G

- Mimics anti-D+C
- +/- anti-C, can lead to falsely high anti-D quantification results
- Can lead to missed prophylaxis in cases where anti-D is absent

Why do we need to do it?

- Its all about the anti-D (in A/N cases)
- Has the patient got anti-D?
- If so, how much
- Can the patient have prophylaxis
- C/G come second

When do we do it

- When it looks like anti-D+C?
- Every time?

Antibody ID Panel

Cell	Rh	Rh						MNSs				P1	Lu		Kell			Le		Fy		Jk		Gel card results		
		D	C	E	c	e	C ^w	M	N	S	s		a	b	K	k	Kp ^a	a	b	a	b	a	b	IAT	Enz/IAT	
1	R ₁ ^w R ₁	+	+	0	0	+	+	+	0	+	0	0	0	+	0	+	0	+	0	+	0	+	0	5	5	
2	R ₁ R ₁	+	+	0	0	+	0	+	0	0	+	2	0	+	+	0	0	0	+	+	0	0	+	5	5	
3	R ₂ R ₂	+	0	+	+	0	0	0	+	0	+	3	0	+	0	+	0	0	+	0	0	+	0	5	5	
4	r'r	0	+	0	+	+	0	0	+	+	0	0	+	+	0	+	0	+	0	0	0	0	0	0	1	
5	r"r	0	0	+	+	+	0	0	+	+	+	3	0	+	0	+	0	0	+	+	0	0	+	0	0	
6	rr	0	0	0	+	+	0	+	0	+	0	1	0	+	0	+	0	+	0	0	+	+	+	0	0	
7	rr	0	0	0	+	+	0	0	+	0	+	0	0	+	+	0	0	+	0	0	+	+	0	0	0	
8	rr	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	+	0	+	0	0	+	0	0	
9	rr	0	0	0	+	+	0	+	0	+	+	1	0	+	0	+	+	0	+	+	0	+	+	0	0	
10	rr	0	0	0	+	+	0	+	0	+	0	4	0	+	+	+	0	0	+	0	+	0	+	0	0	
Auto																								0	0	

No

Antibody ID Panel

Cell	Rh	Rh						MNSs				P1	Lu			Kell			Le		Fy		Jk	
		D	C	E	c	e	C ^w	M	N	S	s		a	b	K	k	Kp ^a	a	b	a	b	a	b	
1	R ₁ ^w R ₁	+	+	0	0	+	+	+	0	+	0	0	0	+	0	+	0	+	0	+	0	+	0	
2	R ₁ R ₁	+	+	0	0	+	0	+	0	0	+	2	0	+	+	0	0	0	+	+	0	0	+	
3	R ₂ R ₂	+	0	+	+	0	0	0	+	0	+	3	0	+	0	+	0	0	+	0	+	0	+	
4	r'r	0	+	0	+	+	0	0	+	+	0	0	+	+	0	+	0	+	0	0	0	0	+	
5	r"r	0	0	+	+	+	0	0	+	+	+	3	0	+	0	+	0	0	+	+	0	+	0	
6	rr	0	0	0	+	+	0	+	0	+	0	1	0	+	0	+	0	+	0	0	+	+	+	
7	rr	0	0	0	+	+	0	0	+	0	+	0	0	+	+	+	0	0	+	0	+	+	0	
8	rr	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	+	0	+	0	0	+	
9	rr	0	0	0	+	+	0	+	0	+	+	1	0	+	0	+	+	0	+	+	0	+	0	
10	rr	0	0	0	+	+	0	+	0	+	0	4	0	+	+	+	0	0	+	0	+	0	+	
Auto																								

Gel card results			
IAT	Enz/IAT		
5	5		
5	5		
5	5		
1	5		
0	0		
0	0		
0	0		
0	0		
0	0		
0	0		
0	0		
0	0		
0	0		

No

Antibody ID Panel

Cell	Rh	Rh						MNSs				P1	Lu		Kell			Le		Fy		Jk		Gel card results		
		D	C	E	c	e	C ^w	M	N	S	s		a	b	K	k	Kp ^a	a	b	a	b	a	b	IAT	Enz/IAT	
1	R ₁ ^w R ₁	+	+	0	0	+	+	+	0	+	0	0	0	+	0	+	0	+	0	+	0	+	0	5	5	
2	R ₁ R ₁	+	+	0	0	+	0	+	0	0	+	2	0	+	+	0	0	0	+	+	0	0	+	5	5	
3	R ₂ R ₂	+	0	+	+	0	0	0	+	0	+	3	0	+	0	+	0	0	+	0	0	+	0	3	5	
4	r'r	0	+	0	+	+	0	0	+	+	0	0	+	+	0	+	0	+	0	0	0	0	+	5	5	
5	r"r	0	0	+	+	+	0	0	+	+	+	3	0	+	0	+	0	0	+	+	0	+	0	0	0	
6	rr	0	0	0	+	+	0	+	0	+	0	1	0	+	0	+	0	+	0	0	+	+	+	0	0	
7	rr	0	0	0	+	+	0	0	+	0	+	0	0	+	+	0	0	+	0	0	+	+	0	0	0	
8	rr	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	+	0	+	0	0	+	0	0	
9	rr	0	0	0	+	+	0	+	0	+	+	1	0	+	0	+	+	0	+	+	0	+	0	0	0	
10	rr	0	0	0	+	+	0	+	0	+	0	4	0	+	+	+	0	0	+	0	+	0	+	0	0	
Auto																								0	0	

Yes

Antibody ID Panel

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		D	C	E	c	e	C ^w	M	N	S	s		a	b	K	k	Kp ^a	a	b	a	b	a	b	IAT	Enz/IAT	
1	R ₁ ^w R ₁	+	+	0	0	+	+	+	0	+	0	0	0	+	0	+	0	+	0	+	0	+	0	5	5	
2	R ₁ R ₁	+	+	0	0	+	0	+	0	0	+	2	0	+	+	0	0	0	+	+	0	0	+	5	5	
3	R ₂ R ₂	+	0	+	+	0	0	0	+	0	+	3	0	+	0	+	0	0	+	0	0	+	0	5	5	
4	r'r	0	+	0	+	+	0	0	+	+	0	0	+	+	0	+	0	+	0	0	0	0	0	5	5	
5	r"r	0	0	+	+	+	0	0	+	+	+	3	0	+	0	+	0	0	+	+	0	+	0	0	0	
6	rr	0	0	0	+	+	0	+	0	+	0	1	0	+	0	+	0	+	0	0	+	+	+	0	0	
7	rr	0	0	0	+	+	0	0	+	0	+	0	0	+	+	0	0	+	0	0	+	+	0	0	0	
8	rr	0	0	0	+	+	0	+	+	0	+	0	0	+	0	+	+	+	0	+	0	0	+	0	0	
9	rr	0	0	0	+	+	0	+	0	+	+	1	0	+	0	+	+	0	+	+	0	+	0	0	0	
10	rr	0	0	0	+	+	0	+	0	+	0	4	0	+	+	+	0	0	+	0	+	0	+	0	0	
Auto																								0	0	

Yes

How do we do it?

- Adsorb patient's plasma with r'r cells
- r'r cells are D-, C+, G+.
- Incubate patient's plasma with r'r cells
- Anti-C/G bind to r'r cells
- Leaves any anti-D in plasma

How do we do it 2

- Re-test by IAT
- Is anti-D present?
- If yes, re-quantitate
- If no, report it

How continued

- Adsorb with Ro cells (D+, C-, G+)
 - Removes anti-D/G
 - Leaves only anti-C
-
- Titre neat plasma v r'r cell
 - How often during the pregnancy?

How do we report it?

- I'll get back to you on that one!
- Still under discussion
- Data being gathered
- Clear and standardised
- Report neat plasma?
- Report adsorbed plasma?

Reporting continued

- If anti-D is not present when to sample next?
- Comment on prophylaxis
- Call anti-D <1.0iu/mL ‘not specified’

Summary

- Has the patient got anti-D?
- How much?
- Can the patient have prophylaxis
- When / why do we need to differentiate between anti-C and anti-G?
- Needs doing on non-pregnant women of childbearing age who present with anti-D+C