



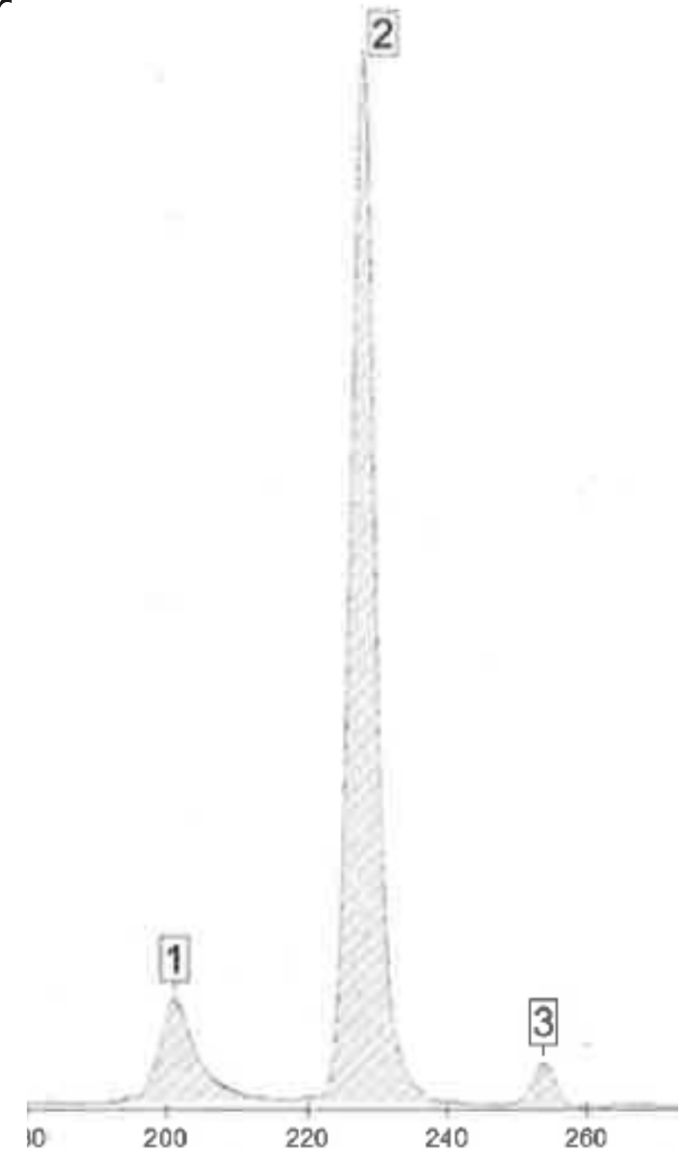
Rode Kruis
Vlaanderen

Casuïstiek:
Allo-immunisatie bij sikkelcelanemie

Casus



- + Jonge vrouw, ° 13/04/2000, 17 jaar
- + Negroïde afkomst
- + Homozygote sikkelcelanemie
 - Hemoglobine-electroforese:
 - 11,8% HgF (1)
 - 85,2% HbS (2)
 - 3% HbA2 (3)



Casus



+ Immunologische gegevens voor 2017:

- B pos, ccee, K-

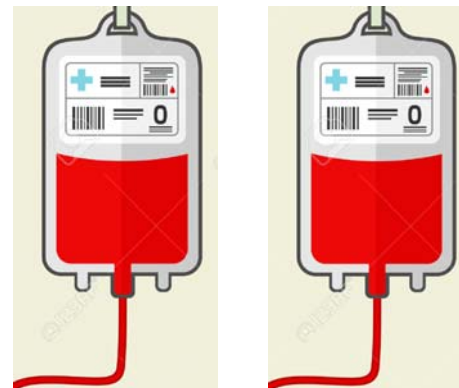
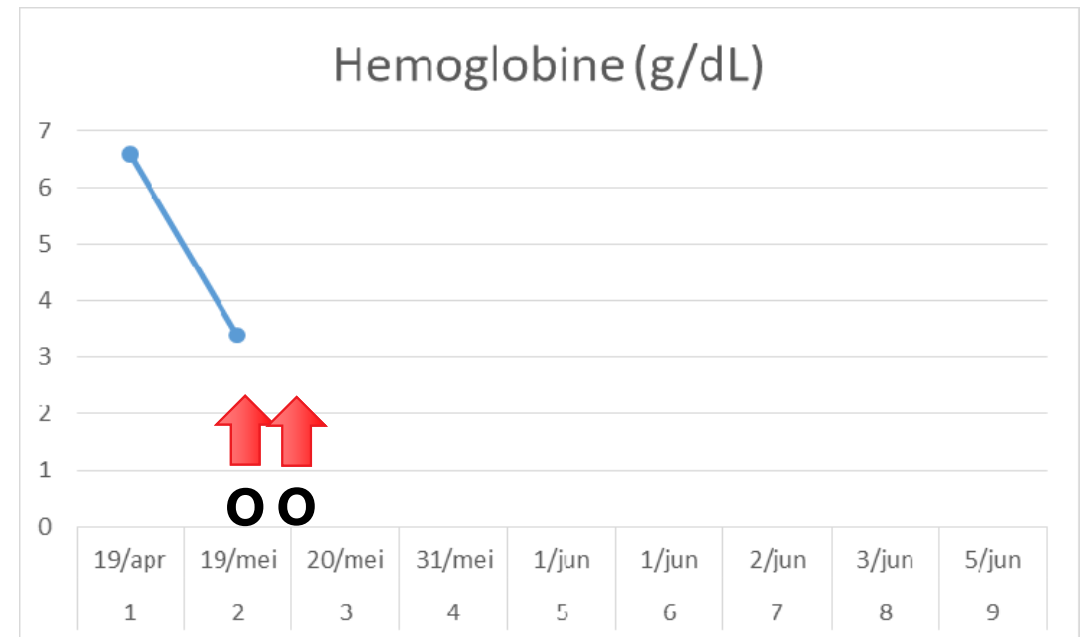
2003	2009	2013
IAT: neg	IAT: anti-C, anti-E, anti-Jkb, auto-AS	IAT: anti-C, anti-E, anti-Jkb
DAT: neg	DAT: positief, auto-AS	DAT: neg
Geen ECL	Selectie van 2 O neg ECL (Fya+, S-) (Hgb: niet gekend)	Selectie van 1 O neg ECL (Feno) (Hgb: 4,7->6,6)
	Moleculaire typering: ccee, K- Jka+, Jkb- Fya-, Fyb+ (GATA) M+, N- S-, s+	

Casus



+ 2017

- 19/4: Hgb 6,6 g/dL
- 19/5: Hgb 3,4 g/dL
- Selectie van 2 ECL
 - O RhD neg
 - Fenocompatibel
 - KP compatibel
 - Tranfusie verloopt goed

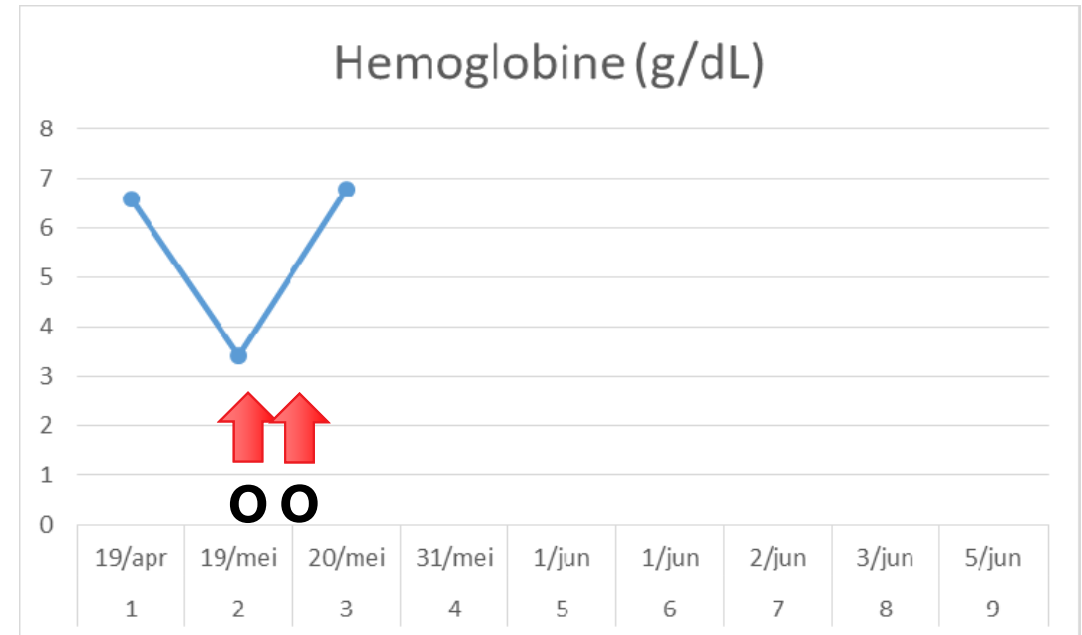


Casus



+ 2017

- 19/4: Hgb 6,6 g/dL
- 19/5: Hgb 3,4 g/dL
- 20/5: Hgb 6,8 g/dL
- Mag terug naar huis

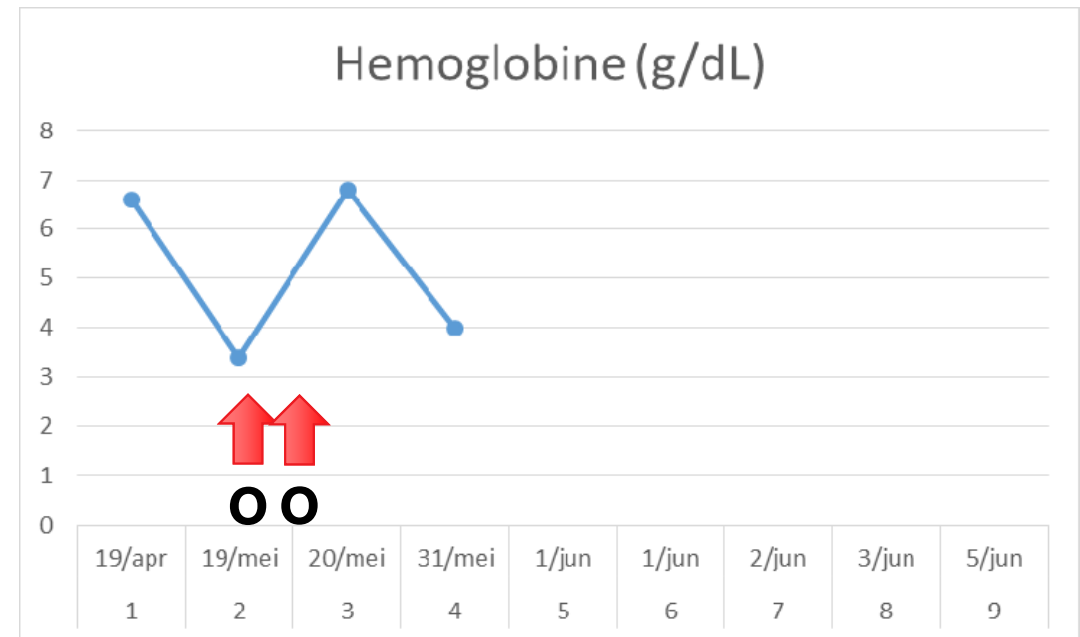


Casus

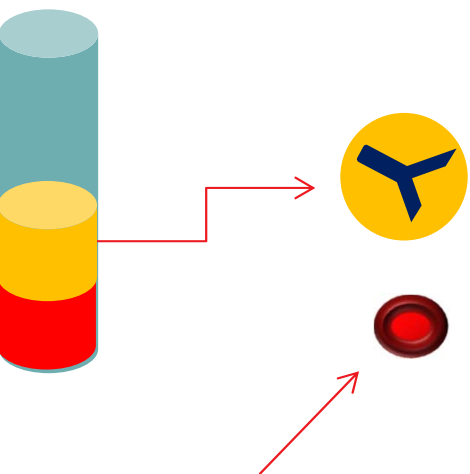


+ 2017

- 19/4: Hgb 6,6 g/dL
- 19/5: Hgb 3,4 g/dL
- 20/5: Hgb 6,8 g/dL
- 31/5: Hgb 4,6 g/dL
- DAT: neg
- IAT: positief
- Beeld van HFA



IAT: identificatie



BIO-RAD

Set ID-DiaPanel: 45161.69.x (Japan: 4516.69.xx)
Set ID-DiaPanel P: 45171.69.x (Japan: 4517.69.xx)

LOT 06171.69.x - 06271.69.x
(Japan: 0617.69.xx - 0627.69.xx)
05361.69.x - 05461.69.x
(Japan: 0536.69.xx - 0546.69.xx)

2012.03.26
(Japan: 26.03.12)

V.I.P. Software: P29

**ID-DiaPanel
ID-DiaPanel-P**

Antigen-Tabelle / Antigen-Table / Table d'antigènes / Tabela antigenica / Tabela de antigenos / Tabela de antígenos / Antikörper-Identifizierung / Antibody identification / Identification d'anticorps / Identificazione anticorpale / Identificación del anticuerpo / Identificação do anticorpos

Rh-hr	Spender Donor Donneur Donatore Donante Dador	Rh-hr	Kell										Duffy		Kidd		Lewis		MNS			Luth.		Xg	Spec. Antigene Special types Antigènes part. Antígenos particulares Otros Antígenos Tipos especiais	Resultat / Result / Résultat / Resultado / Resultado / Resultado			Bemerkungen / Remarks / Note Observaciones / Observações		
			D	C	E	c	e	C ⁺	K	Kp ^a	Kp ^b	Js ^a	Js ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Le ^a	Le ^b	P ⁱ	M	N	S	s		Lu ^a	Lu ^b	Xg		LISS / Coombs	Enzyme
1	C ^W CD.ee R ₁ ^W R ₁	255435	+	+	0	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+	0	+	0		1			
2	CCD.ee R ₁ R ₁	047977	+	+	0	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+		2			
3	ccD.EE R ₂ R ₂	448140	+	0	+	+	0	0	0	+	+	0	+	+	0	0	0	0	+	+	0	+	+	0	+	+	Bg ²⁺	3			
4	Ccddee r'r	312347	0	+	0	+	+	0	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+		4			
5	ccdEe r'r	224514	0	0	+	+	0	0	+	+	0	+	+	0	+	+	+	0	+	+	0	+	+	0	+	+		5			
6	ccddee rr	348699	0	0	0	+	+	0	+	+	0	+	+	0	+	+	+	0	+	+	0	+	+	0	+	+	Vel ^W	6			
7	ccddee rr	336831	0	0	0	+	+	0	0	+	+	0	+	+	0	0	0	0	+	+	0	+	+	0	+	+		7			
8	ccD.ee R ₀ r	511139	+	0	0	+	+	0	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+	0	+	+		8			
9	ccddee rr	134243	0	0	0	+	+	0	0	+	+	0	+	+	0	0	0	0	+	+	0	+	+	0	+	+		9			
10	ccddee rr	208618	0	0	0	+	+	0	0	+	+	0	+	+	0	0	0	0	+	+	0	+	+	0	+	nt		10			
11	ccddee rr	009098	0	0	0	+	+	0	0	+	+	0	+	+	0	0	0	0	+	+	0	+	+	0	+	+		11			

Anmerkungen siehe rückseitig / Remarks see overleaf / Voir les remarques au verso / Per le note consultare il retro / Ver observaciones en el reverso / Ver observações no verso

Name / Name / Nom / Nome / Nombre / Nome	Blutgruppe + Antigene / Blood group + antigens / Groupe sanguin + antigènes / Grupo sanguíneo + antígenos / Grupo sanguíneo + antígenos	Interpretation / Interpretation / Interprétation / Interpretazione / Interpretación / Interpretação	Datum / Date / Date / Data / Fecha / Data

IAT

Rh-hr						Kell						Duffy		Kidd		Lewis		P	MNS				Luth.		Xg		Spez. Antigene Special types Antigènes pert. Antigeni particulars Otros Antígenos Tipos especials	Resultat / Result / R Risultato / Result Resultado			
D	C	E	c	e	C ⁺	K	k	Kp ^a	Kp ^b	Js ^a	Js ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Le ^a	Le ^b	P ₁	M	N	S	s	Lu ^a	Lu ^b	Xg ^a	Xg ^b		LISS / Coombs	Enzyme		
+	+	0	0	+	+	0	+	0	+	nt	+	+	0	0	+	0	+	+	+	0	+	+	0	+	0	+			1	1	4
+	+	0	0	+	0	+	+	0	+	nt	+	0	+	+	+	0	+	+	0	+	+	+	0	+	+	+			2	2	4
+	0	+	+	0	0	0	+	0	+	nt	+	+	0	+	0	0	0	+	+	0	+	+	0	+	+	+	Bg ^{a+}		3	2	4
0	+	0	+	+	0	0	+	0	+	nt	+	+	+	+	0	+	0	+	+	0	+	0	0	+	+	+			4	3	4
0	0	+	+	+	0	0	+	0	+	nt	+	0	+	0	+	0	+	+	+	+	+	+	0	+	+	+			5	3	4
0	0	0	+	+	0	+	+	0	+	nt	+	+	0	0	+	0	+	+	+	0	+	0	0	+	+	+	Vel ^w +		6	2	4
0	0	0	+	+	0	0	+	0	+	nt	+	0	+	+	0	0	+	0	+	0	+	0	0	+	+	+			7	2	4
+	0	0	+	+	0	0	+	0	+	0	+	0	0	+	+	0	+	+	+	0	+	0	0	+	+	+			8	2	4
0	0	0	+	+	0	0	+	0	+	nt	+	0	+	0	+	0	+	0	+	0	+	0	+	+	+	+			9	3	4
0	0	0	+	+	0	0	+	0	+	nt	+	+	0	+	0	+	0	0	+	+	0	+	0	+	nt				10	2	4
0	0	0	+	+	0	0	+	+	+	nt	+	0	+	+	+	0	0	+	0	+	+	0	0	+	+				11	2	4
																													AC	-	-

Immunoematologie: bijkomende testen

+ HFA

- Vel: 3+
- P: 3+
- Lan: 2+
- Ata: 2+
- Jra: 2+



+ Gezien klinische situatie patiënt en complexe casus

- Staal naar Sanquin

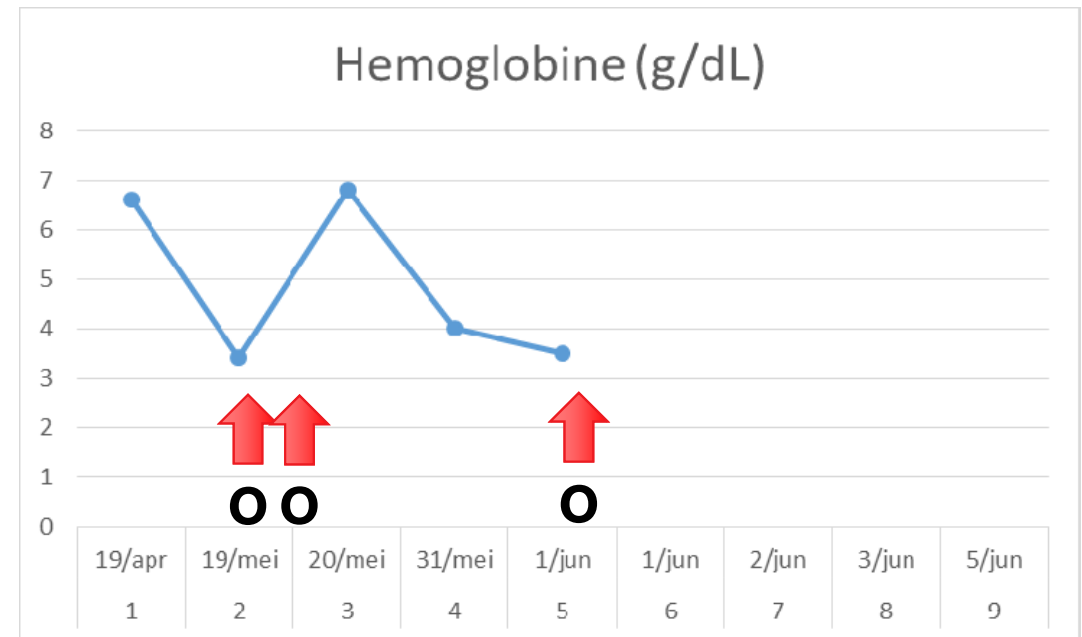


Casus



+ 2017

- 19/4: Hgb 6,6 g/dL
- 19/5: Hgb 3,4 g/dL
- 20/5: Hgb 6,8 g/dL
- 31/5: Hgb 4,6 g/dL
- 01/6: Hgb 3,5 g/dL
- Selectie van 1 ECL
 - O RhD neg
 - Fenocompatibel
 - KP ongunstig
 - Tranfusie verloopt goed

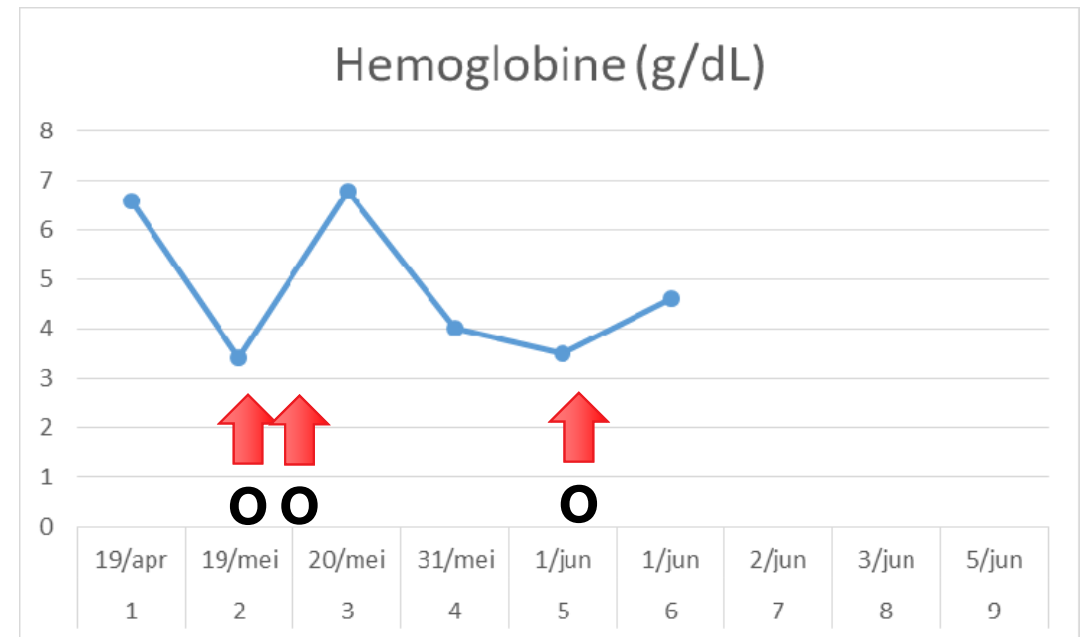


Casus



+ 2017

- 19/4: Hgb 6,6 g/dL
 - 19/5: Hgb 3,4 g/dL
 - 20/5: Hgb 6,8 g/dL
 - 31/5: Hgb 4,6 g/dL
 - 01/6: Hgb 3,5 g/dL
 - 01/6: Hgb 4,6 g/dL
- DAT: pos, anti-N op de RBC
 - IAT: pos, Beeld van HFA

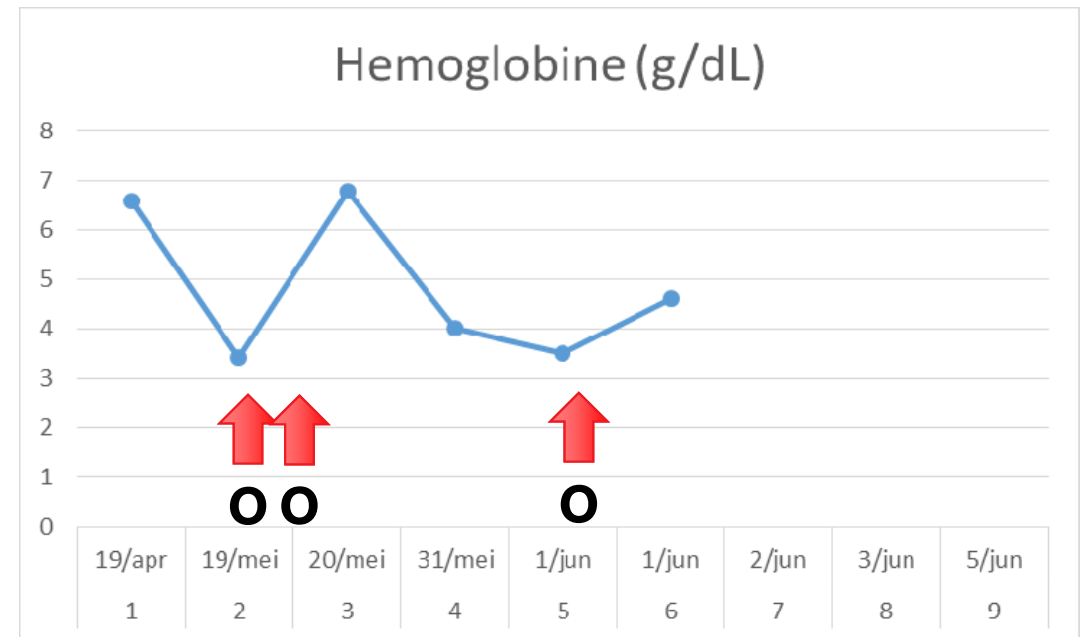


Casus



+ 2017

- 19/4: Hgb 6,6 g/dL
- 19/5: Hgb 3,4 g/dL
- 20/5: Hgb 6,8 g/dL
- 31/5: Hgb 4,6 g/dL
- 01/6: Hgb 3,5 g/dL
- 01/6: Hgb 4,6 g/dL
- Selectie van 1 ECL
 - O RhD neg
 - Fenocompatibel, N-

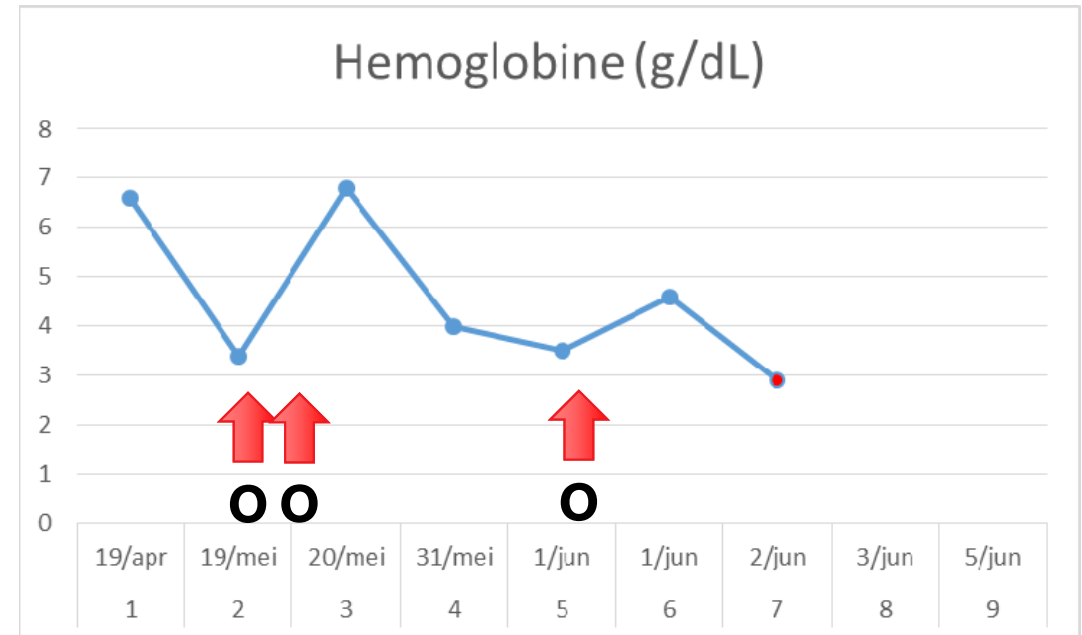


Casus



+ 2017

- 19/4: Hgb 6,6 g/dL
- 19/5: Hgb 3,4 g/dL
- 20/5: Hgb 6,8 g/dL
- 31/5: Hgb 4,6 g/dL
- 01/6: Hgb 3,5 g/dL
- 01/6: Hgb 4,6 g/dL
- 02/6: Hgb 2,9 g/dL



Overleg met Sanquin

- + Plasma reageert met O cellen maar zwakker met B cellen
- + Aanwezigheid van anti-C, E, Jkb en anti-Fya in plasma, anti-N op RBC
- + Vermoeden koud reagerende antistof
- + Na enkele uren....
- + Verlossende antwoord anti-H

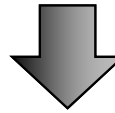


ABO-antigensynthese

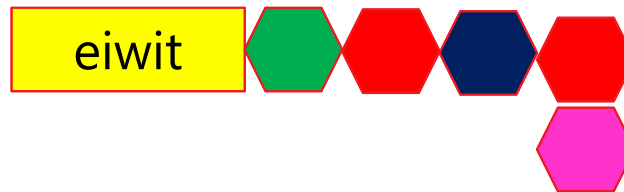
Precursor aminoglycoside



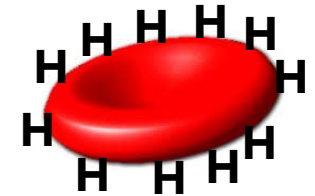
'H' transferase



H aminoglycoside



O

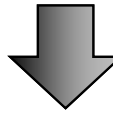


ABO-antigensynthese

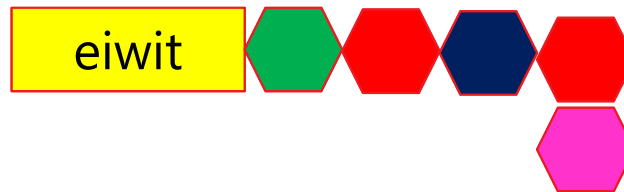
Precursor aminoglycoside



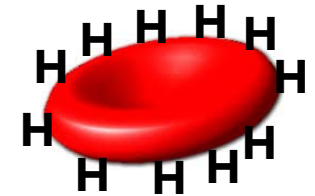
'H' transferase



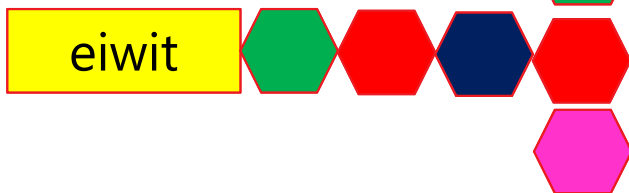
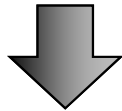
H aminoglycoside



O



'A1' transferase



A1

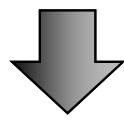


ABO-antigensynthese

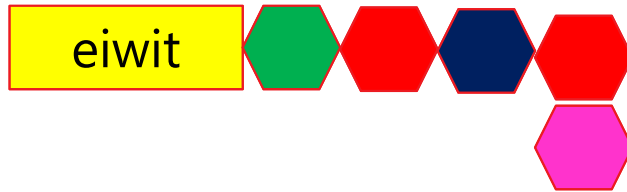
Precursor aminoglycoside



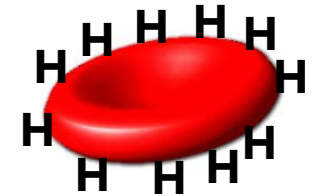
'H' transferase



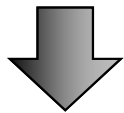
H aminoglycoside



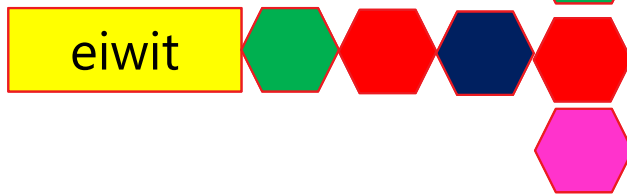
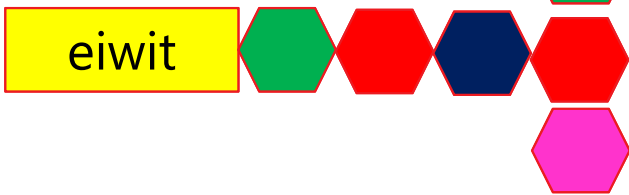
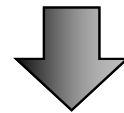
O



'A1' transferase



'A2' transferase



A1



A2

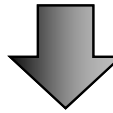


ABO-antigensynthese

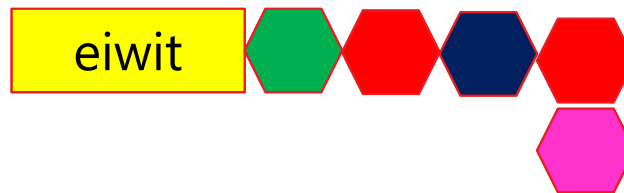
Precursor aminoglycoside



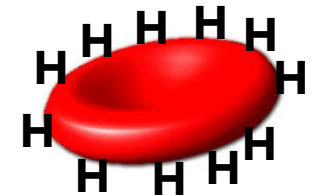
'H' transferase



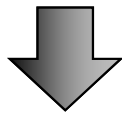
H aminoglycoside



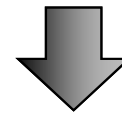
O



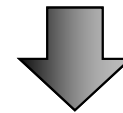
'A1' transferase



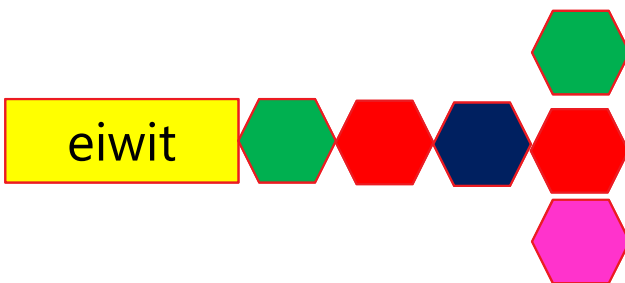
'A2' transferase



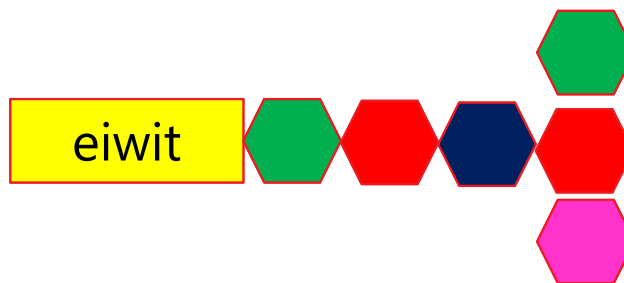
'B' transferase



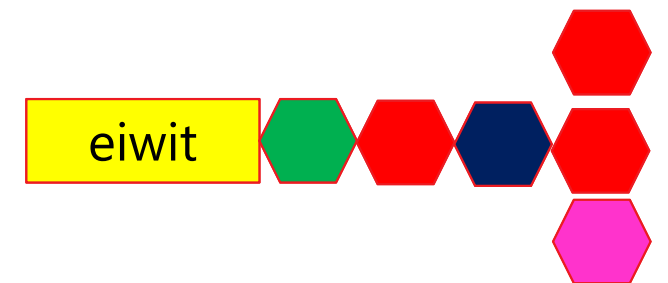
eiwit



eiwit



eiwit



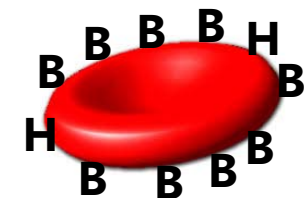
A1



A2



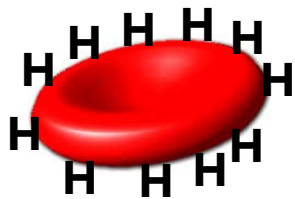
B



Anti-H



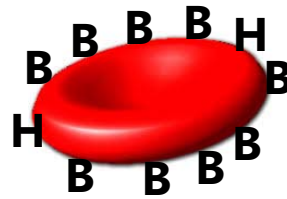
+ Aantal H antigen op de RBC



O



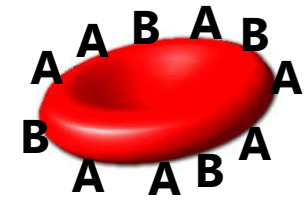
A2



B



A1



AB

+ Allo- of auto-antistof?

- Allo-antistof bij Bombay fenotype
- Auto-antistof die zich als allo-antistof gedraagt
 - bij A1, A1B, A2B en B bloedgroep
 - Klinisch niet belangrijk bij lage titer en thermische amplitude <37°C
 - Klinisch wel belangrijk bij hoge titer en thermische amplitude op 37°C

Anti-H bij sikkelcelanemie



- + Anti-H can cause a severe delayed hemolytic transfusion reaction with hyperhemolysis in sickle cell disease patients

Ibanez et al. Transfusion 2016

5 casussen, SCD, 1 fataal, bloedgroep: 2 A, 3 B

- + An acute hemolytic transfusion reaction due to anti-H in a patient with sickle cell disease

Campbell et al. Transfusion 2000

1 casus, 18 jaar, SCD, bloedgroep: B

Zoektocht naar geschikte B ECL



- + Alle B ECL worden getypeerd in Brussel, Gent en Leuven, maar geen beschikbaar
 - B RhD+/-, ccee, K-, Jka-, Fya-, N-, S-



Casus



- + Sanquin heeft 2 ECL beschikbaar met bloedgroep
B RhD neg, ccee, K-, Jkb-, Fya-, N-, (S+ en S-)
KP compatibel op strikt 37°C
- Transport vanuit NL

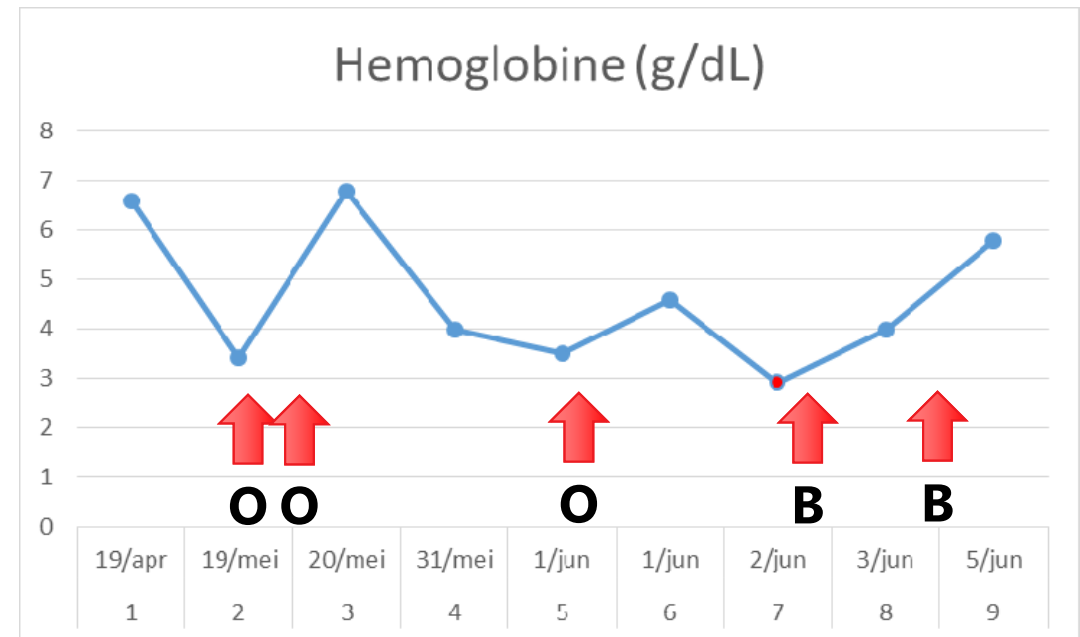


Casus



+ 2017

- 19/4: Hgb 6,6 g/dL
- 19/5: Hgb 3,4 g/dL
- 20/5: Hgb 6,8 g/dL
- 31/5: Hgb 4,6 g/dL
- 01/6: Hgb 3,5 g/dL
- 01/6: Hgb 4,6 g/dL
- 02/6: Hgb 2,9 g/dL
- 03/6: Hgb 4,0 g/dL
- 05/6: Hgb 5,8 g/dL





Casus



- + Hgb momenteel stabiel
- + Laatste controle 27/09: 5,7 g/dL
- + Patiënt staat op transplantlijst
- + Momenteel 2 cryo ECL beschikbaar voor deze patiënt

