

Process of Obtaining Blood from NHSBT

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NHSBT

- Red cell Immunohaematology (RCI)
- Patient testing laboratory
- Referral service
- 18 hospitals

Hospital Transfusion Lab (HTL)

- 200/300 samples per day
- High pressure
- High throughput
- Short Notice
- Stressful
- So what do we do in RCI?

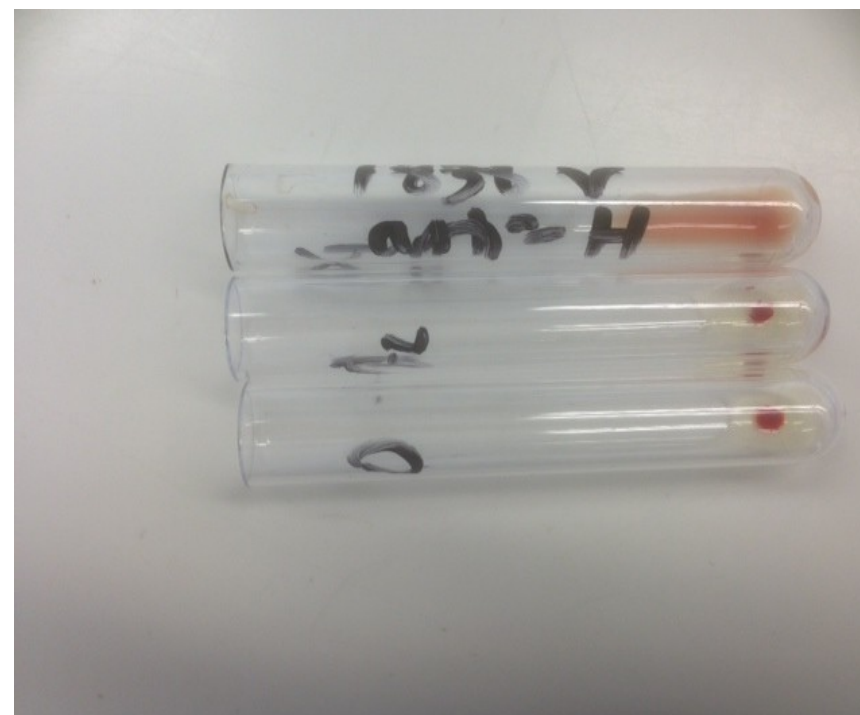
RCI

- ABO / RhD anomalies
- Red cell alloantibody identification
- Red cell autoantibody cases
- Crossmatching of blood
- Investigation of Transfusion reactions
- Help and advise HTL

RCI

- Mix of technologies
- Fully automated (grouping)
- Semi automated (antibody titre)
- Largely manual testing (ID and XM)
- 10-20 samples per day

Technology



Obtaining Blood

- Sample from patient
- Sent to HTL
- Referred onto RCI
- Tested in RCI
- Blood issued to HTL (if required)
- Nothing ever goes wrong

Pre-op Assessment

- Sample from patient
- Sent to HTL
- Referred onto RCI
- Tested in RCI
- Recommendations for blood selection given to HTL (or refer 2nd sample closer op date).
- Nothing ever goes wrong

Timescales

- Pre-op assessment – referred routinely
- RCI has 5 working days TRT
- Day of op – referred urgently
- Can take 2+ hours
- Not including travel

RCI Request Form

Please complete all sections fully. Urgent requests MUST be telephoned.

PATIENT DETAILS		NHS No.
NHSBT No.		
Surname		
First name		
DOB	Gender (M/F)	Ethnic origin code (see reverse)
First line of address		
Post code	EDD (if pregnant)	
Hospital number	Hospital sample ID number	
HOSPITAL & REQUESTER DETAILS		
Full Hospital name		
Hospital (NHS code)	Consultant	
Contact name		
Phone	Bleep	
Paternal or cord samples: Please give details of linked antenatal patient:		NHSBT/ NHS number
Name:		Date of birth:
CROSSMATCH REQUEST		INVESTIGATIONS REQUESTED
No. units required <input type="checkbox"/> Date & time required		
Special requirements: (e.g. CMV neg, irradiated)		
REFERRING LABORATORY'S FINDINGS		YOUR RESULTS (state technique(s) & date tested)
Blood group: DAT:		Antibody screen:
Sample date & time		Ab ID:
		Other results:
DIAGNOSIS & CLINICAL HISTORY		
Diagnosis:		Hb & date:
Previous transfusion? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, date of most recent:		
Anti-D Ig (Dose & date given):		
Signature		Date
NHSBT USE		
Type of sample if not EDTA:	NHSBT sample number	Date / time sample received

Request form

- Name, DOB, unique number
- **Transfusion history**
- Esp from other trust / area
- Info to HTL, then to RCI

Blood Samples for RCI

- 2
- 1 full one
- EDTA (pink top)
- Hand-written at bedside
- SHOT
- Serious Hazards of Transfusion

Blood Samples

- Zero tolerance
- Essentials;
- Name
- DOB
- Hospital / NHS number
- Date taken

When it does go wrong

- Communication
- After the RCI report going in the post / on Sp-ICE
- Chase

Chasing Samples - No

Chasing Samples - Yes

Case study

- Pre-op assessment sample sent to HTL
- Antibody screen positive
- How far does the HTL go?

Case Study

- Unable to identify
- Sample referred on to RCI
- Autoantibody present
- But I/S to complete tests
- RCI report to HTL

Case Study

- Day of op
- Sample lands in HTR at 09:30
- 3 units requested to cover op.
- Sample leaves HTR to go to RCI at 09:45
- Sample arrives in RCI at 10:55
- RCI complete testing at 13:15
- Crossmatched blood leaves NHSBT at 13:40
- Blood arrives at HTR at 14:50
- Op 'gone commando' / postponed

Rare blood

- Combinations of antibodies
- Antibody to high prevalence antigens
- Autoantibodies
- Awkward group (O-)
- All take time

Red Cell Antibody Results		
Type	Specificity	Technique
Auto	Pan-reactive antibody	IAT and enzyme techniques
Allo	Anti-K	IAT and enzyme techniques
Not specified	Anti-Kpa	IAT and enzyme techniques
Auto	Anti-D	Enzyme technique
Auto	Anti-E	IAT and enzyme techniques
Allo	Anti-f [ce]	Previously reported
Not specified	Anti-Fyb	Previously reported
Allo	Anti-Jka	Previously reported

- 1 in 1000 units compatible

	2+	0	0	0	1+	0
Red Cell Antibody Results						
Type	Specificity			Technique		
Allo	Anti-Fya			IAT		
Allo	Anti-Fy3			IAT		
Auto	Pan-reactive antibody			Saline room temperature, and IAT		
Allo	Anti-E			Previously reported; not detected on this occasion		
Allo	Anti-M			Previously reported; not detected on this occasion		

We confirmed alloanti-Fya + Fy3 and a pan-reactive autoantibody on the
Previous anti-E + M were not present in adsorbed plasma

- Caucasians – No units available
- Blacks – 1 in 15 units compatible

Imports

- From elsewhere in England
- Regularly for these 2 patients (and others)
- 24 hours+ notice required
- Annoy Transport and Hospital Services

Points to Consider

- Rejects (labelling, volume)
- Repeats (volume, complexity)
- Communication

Thank You

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