

Great Ormond Street
Hospital for Children

Patient Transfer

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Patient Transfer - intro

Great Ormond Street Hospital was founded in 1852 by Charles West as the first hospital dedicated to the treatment of children.

The original 10 bed hospital has today grown into an internationally renowned Foundation Trust, with 355 in-patient beds, including 36 ICU beds, and patients are admitted on a referral basis only.

Patient Transfer - intro

History of

- Treatment
- Transfusion
- Patient Safety

Laboratory compliance with BCSH guidelines
and MHRA regulations

Patient Transfer – Case 1

A 3 month old neonate was referred to GOSH as an emergency

The grouping results are as follows:

Forward group : Reverse group

α	β	D	ctl	A ₁	B
-	-	4+	-	-	-

Forward group O with no reverse group.

Results accepted: O Rh Positive

Patient Transfer – Case 1

- Fibrinogen 1.2g/dl
- Cryo request of 30ml

What group of cryo would you select?

4% 1. A

0% 2. B

41% 3. AB

56% 4. O

Patient Transfer – Case 1

Further history

Information from referring hospital:

- Patient was A RhD Positive
- Transfused 6 paediatric units of group O RhD Positive 2 weeks ago.
- Cryo Group A (single MB) was issued
- Flag entered onto the LIMS of historical group A Rh Positive.

Patient Transfer – Case 1

ABO mismatched components can cause a reaction.

Large volume of plasma may also affect patients despite HT-

Patient Transfer – Case 2

An 8 month old child through the pre-op assessment clinic with a diagnosis of 'beta thal'. There is no indication on the form what type of surgery is planned.

Request for: 3 units of red cells are requested,
1 unit of platelets.

Patient Transfer – Case 2

Historical group on record

A RhD Positive with no atypical antibodies.

Current sample

A RhD Positive with no atypical antibodies.

Patient Transfer – Case 2

Group A RhD Positive NAD – what would you do next?

- 3% 1. Electronically issue 3 units of red cells and order the platelets
- 19% 2. Contact the clinical team to discuss the surgery
- 64% 3. Contact the referring hospital to discuss any transfusion history
- 14% 4. Check the sample will be valid at the time of the surgery

Patient Transfer – Case 2

The BMS contacts the nurse looking after the patient to ask about the diagnosis of 'beta thal' and enquires whether it is trait or major.

Patient Transfer – Case 2

- Patient is beta thal trait
- No transfusion history for 3 months

However...

- Treatment at another Trust for Di Georges syndrome

Patient Transfer – Case 2

Further history

Contact with the BT Laboratory of the other trust revealed that irradiated components were required.

Clinical History: Di-Georges syndrome confirmed.

This case was further complicated by a change in surname when the child was 4 months old.

Patient Transfer – Case 3

- 10 year old male, pre-op in 4 days time
- Historical group – O RhD Negative with no antibodies
- BCSH guidelines - sample is valid for 7 days as there have been no transfusions in the last 3 months

Patient Transfer – Case 3

- The current sample groups as O RhD Negative with a positive antibody screen.
- Investigations reveal the patient plasma contains anti-C + D.
- Genotyping is C-c+E-e+K-

Patient Transfer – Case 3

Group: O Neg with an Anti-C and Anti-D

Pheno: C- c+ E- e+ K-

What blood would you select for crossmatching?

3%

1. O Negative C-

2%

2. O Negative

16%

3. O Negative C-K- CMV-

79%

4. O Negative C- E- K-

Patient Transfer – Case 3

- Contact pre-op admissions
- Referring lab confirms group and antibodies
- Confirm transfusion history – 2 units of red cells received four weeks prior admission
- Sample validity – 3 days

Patient Transfer – Case 4

A 17 year old patient transferred to a DGH from a tertiary centre in order to undergo dialysis closer to home.

Patient blood group results as follows:

Forward group: Reverse group

α	β	D	ctl	A ₁	B
-	DP	4+	-	2+	-

Results: probable B Positive with dual population with Anti-B

Patient Transfer – Case 4

The renal team ring to inform the lab that the platelet count is 18 and they are having a line insertion.

A pool of platelets is requested. What group do you give?

Patient Transfer –Case 4

- 11% 1. A RhD Positive
- 55% 2. B RhD Positive
- 14% 3. O RhD Positive HT-
- 20% 4. AB RhD Positive HT-

Group B platelets were issued with no reaction.

Patient Transfer –Case 4

- Red cell request
- No Transfusion history

24% 1. B Positive

58% 2. O Positive

11% 3. O negative

6% 4. B negative

Patient Transfer – Case 4

Further History

- Contact made with tertiary centre
- BMT 6 months ago

The recipient was O RhD Positive

The donor was B RhD Positive

Patient Transfer –Case 4


What blood and components should be given, now that this information is known?


(O Pos recipient B Pos donor)


- 75% 1. Group O red cells, B platelets and B plasma
- 10% 2. Group B red cells, B platelets and AB plasma
- 10% 3. Group O red cells, O platelets and O plasma
- 5% 4. Group B red cells, B platelets and B plasma


Patient Transfer –Case 4

		RECIPIENT BLOOD GROUP							
		A +	A –	B +	B –	AB +	AB –	O +	O –
DONOR BLOOD GROUP	A +	A + Red cells A + FFP/platelets	A + Red cells A + FFP/platelets	O + Red cells A + platelets AB + FFP	O + Red cells A + platelets AB + FFP	A + Red cells A + platelets AB + FFP	A + Red cells A + platelets AB + FFP	O + Red cells A + FFP/platelets	O + Red cells A + FFP/platelets
	A –	A – Red cells A – FFP/platelets	A – Red cells A – FFP/platelets	O – Red cells A – platelets AB – FFP	O – Red cells A – platelets AB – FFP	A – Red cells A – platelets AB – FFP	A – Red cells A – platelets AB – FFP	O – Red cells A – FFP/platelets	O – Red cells A – FFP/platelets
	B +	O + Red cells B + or A + platelets AB + FFP	O + Red cells B + or A + platelets AB + FFP	B + Red cells B + FFP/platelets	B + Red cells B + FFP/platelets	B + Red cells B + or A + platelets AB + FFP	B + Red cells B + or A + platelets AB + FFP	O + Red cells B + FFP/platelets	O + Red cells B + FFP/platelets
	B –	O – Red cells B – or A – platelets AB – FFP	O – Red cells B – or A – platelets AB – FFP	B – Red cells B – FFP/platelets	B – Red cells B – FFP/platelets	B – Red cells B – platelets AB – FFP	B – Red cells B – platelets AB – FFP	O – Red cells B – FFP/platelets	O – Red cells B – FFP/platelets
	AB +	A + Red cells A + platelets AB + FFP	A + Red cells A + platelets AB + FFP	B + Red cells B + platelets AB + FFP	B + Red cells B + platelets AB + FFP	AB + Red cells A + platelets AB + FFP	AB + Red cells A + platelets AB + FFP	O + Red cells A + platelets AB + FFP	O + Red cells A + platelets AB + FFP
	AB –	A – Red cells A – platelets AB – FFP	A – Red cells A – platelets AB – FFP	B – Red cells B – or A – platelets AB – FFP	B – Red cells B – or A – platelets AB – FFP	AB – Red cells A – platelets AB – FFP	AB – Red cells A – platelets AB – FFP	O – Red cells A – platelets AB – FFP	O – Red cells A – platelets AB – FFP
	O +	O + Red cells A + FFP/platelets	O + Red cells A + FFP/platelets	O + Red cells B + FFP/platelets	O + Red cells B + FFP/platelets	O + Red cells A + platelets AB + FFP	O + Red cells A + platelets AB + FFP	O + Red cells O + FFP/platelets	O + Red cells O + FFP/platelets
	O –	O – Red cells A – FFP/platelets	O – Red cells A – FFP/platelets	O – Red cells B – FFP/platelets	O – Red cells B – FFP/platelets	O – Red cells A – platelets AB – FFP	O – Red cells A – platelets AB – FFP	O – Red cells O – FFP/platelets	O – Red cells O – FFP/platelets

 Major ABO mismatch (novel antigen)

 Minor ABO mismatch (novel antibody)

 Combined ABO mismatch (novel antigen & antibody)

 ALL platelets to be HT neg

TRANSFUSION SUPPORT IN ALLOGENEIC STEM CELL TRANSPLANT PATIENTS

Patient Transfer – Case 4

Consequences

In this instance the shared care information had not reached either the clinical team or the laboratory and could have resulted in serious harm to the patient.

Patient Transfer

Other Scenarios

- Neonates for exchange with maternal alloantibodies – no record of maternal details
- Overseas patients – obtaining transfusion history
- Communication – a vital tool for ensuring patient safety

Patient Transfer

Thank you for participating

Any questions?