

15. Paediatric Cases

Definition

Paediatric cases comprise all those occurring in patients under 16 years of age.

This chapter summarises the data on numbers of paediatric cases from the other chapters in this Annual Report. All cases are included in the data in their respective chapters.

Table 30
Paediatric cases 2007

Category of case	Number between 1 and 16 years	Number between 4 weeks and 1 year	Number under 4 weeks	Total cases
IBCT	22	11	12	45
<i>Wrong blood administered</i>	0	1	0	1
<i>WBIT</i>	0	0	0	0
<i>Inappropriate or unnecessary</i>	4	1	3	8
<i>Handling and storage</i>	4	3	0	7
<i>Irrad/CMV not met</i>	9	1	6	16
<i>Other special requirements not met</i>	3	0	0	3
<i>Wrong group for stem cell transplant</i>	2	1	0	3
<i>Wrong blood from lab</i>	0	1	0	1
<i>Pre Tx testing error</i>	0	3	0	3
<i>Procedural error</i>	0	0	3	3
Anti-D related	2	0	0	2
ATR	5	2	0	7
HTR	1	0	0	1
TRALI	0	0	0	0
PTP	0	0	0	0
TA-GVHD	0	0	0	0
TTI	0	0	0	0
TOTAL	30	13	12	55

These cases can be divided into 2 groups – those in which the risk of the adverse incident was increased because of the age group of the patient, and those in which the event occurred by chance in a young patient.

IBCT cases related to the age group of the patient n = 27

- Three cases of inappropriate transfusion in children between 1 and 16 resulted in significant over-transfusion because their small size was not taken into account when prescribing red cells. All of these transfusions resulted in a Hb above the normal range. One resulted in life threatening TACO (see page 108).
- Two cases related to excessive time taken to transfuse red cells, one because of a small cannula in a 3-year-old, the other because the red cells were erroneously written up over 8 hours per unit for a 15-year-old child.
- Failure to meet special requirements for irradiation and CMV negative components was common in the paediatric age groups. In 10 cases in children over 4 weeks old suffering from malignancies (all but 1 were haematological) the clinicians did not inform the laboratory of the need for irradiated components (9 cases) or CMV negative components (1 case) (see page 46).
- Six neonates under 4 weeks old had special requirements for irradiation which were not met – 2 with DiGeorge syndrome, 3 following IUT and 1 for neonatal cardiac surgery.

- In 3 cases children post SCT received blood of the incorrect group – 2 cases owing to a lab oversight, and 1 case in which the clinicians did not communicate the history to the lab.
- In 3 cases the laboratory failed to issue appropriate MB treated FFP for a child under 16.

Cases not related to age of patient n = 28

- Anti-D errors in 2 girls of 14 years old, post-partum/post-TOP.
- Seven allergic/anaphylactic cases in the ATR chapter (see page 71).
- Haemolysis in a 10-year-old child who was given group O D positive platelets when her own group was group A D positive (Case A2, page 82). There have been previous reports of significant haemolysis following administration of group O platelets to A and B recipients, with more than half the reports having occurred in children.
- A further 18 IBCT errors (see Table 30).

COMMENTARY

A total of 55 cases (of 561) reported in 2007 related to children under 16 years of age. In a significant number of these adverse incidents the risk of occurrence was higher because of the age of the patient, as previously highlighted by SHOT²¹. Prescribing for paediatric patients should only be carried out by those with appropriate knowledge and expertise in calculating dosage and administration rates in this group. Special requirements are more common in paediatric patients, because of the range of congenital and malignant conditions for which they may be hospitalised, and special care is needed to ensure that documentation, handover and communication is effective and comprehensive. Laboratory BMSs must be aware of special component requirements in patients under 16, and routine checking for additional flags should be carried out based on date of birth.

RECOMMENDATIONS

New recommendations from this year

- Prescribing for paediatric patients should be carried out only by those with appropriate knowledge and expertise in calculating dosage and administration rates for this group.

Action: HTT and clinical users of blood

- Special requirements are more common in paediatric patients, because of the range of congenital and malignant conditions for which they may be hospitalised, and particular care is needed to ensure that documentation, handover and communication is effective and comprehensive.

Action: HTT and clinical users of blood

- Laboratory BMSs must be aware of special component requirements in patients under 16, and routine checking for additional flags should be carried out based on the date of birth.

Action: HTT, hospital transfusion laboratories and consultant haematologists with responsibility for transfusion

Recommendations still active from previous years

Year first made	Recommendation	Target	Progress
2003	BCSH guidelines on transfusion of neonates and children should be implemented	RCPCH, RCN, staff in paediatric units and transfusion laboratories	SHOT 'Lessons for paediatric staff' produced 2006; SHOT in Obstetrics (2007); NBS paediatric conference February, 2007