Irradiation of blood components for the prevention of transfusion-associated graft-versus-host disease

RIGHT COMPONENT TO RIGHT PATIENT SURVEY

Presented by
Andrea Blest
Transfusion Liaison Nurse
20th November 2007
Irradiated Blood Components
Right Blood to Right Patient

The BCSH Guidelines on gamma irradiation of blood components for the prevention of transfusion-associated graft-versus-host disease (1996) states:

• Gamma irradiation is currently the only recommended method for TA-GVHD prevention. Leucodepletion by current filtration technology is inadequate for this purpose.

• For at-risk patients, all red cell, platelet and granulocyte transfusions should be irradiated.
SHOT report 2005 - incidents / reports related to irradiated blood components

<table>
<thead>
<tr>
<th>Incident Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual incidents</td>
<td>106</td>
</tr>
<tr>
<td>Near miss reports</td>
<td>45</td>
</tr>
</tbody>
</table>

SHOT recommendations in 2004 and 2005 have emphasised that:

Mechanisms must be put in place for appropriate and timely communication for information regarding special transfusion requirements

Robust systems for noting patients’ special requirements should be developed together with a policy of empowering patients to be more aware of their own special needs
Irradiated Blood Components – Right Blood to Right Patient Survey

The survey was sent to hospitals in England, Wales, Northern Ireland and Scotland (via the blood services).

In England, the results were collated by the RTC administrators. In Wales, Northern Ireland and Scotland results were collated by the blood services.
### Country Responses received

<table>
<thead>
<tr>
<th>Country</th>
<th>Responses received</th>
</tr>
</thead>
<tbody>
<tr>
<td>England (inc North Wales)</td>
<td>136 (133 / 3) - 122 NHS 14 Private</td>
</tr>
<tr>
<td>Wales</td>
<td>8</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>4</td>
</tr>
<tr>
<td>Scotland</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
</tr>
</tbody>
</table>

2 private hospitals responded that they did not use irradiated blood products. Therefore the results given are for **161** responses.
Who receives irradiated blood components?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th></th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=161</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allograft</td>
<td>151</td>
<td>(93.8%)</td>
<td>125 / 151</td>
</tr>
<tr>
<td>Autograft</td>
<td>153</td>
<td>(95.0%)</td>
<td>124 / 153</td>
</tr>
<tr>
<td>Purine Analogues</td>
<td>158</td>
<td>(98.1%)</td>
<td>126 / 158</td>
</tr>
<tr>
<td>Hodgkins</td>
<td>154</td>
<td>(95.6%)</td>
<td>127 / 154</td>
</tr>
</tbody>
</table>
Variation in duration

**Purine Analogues - Duration**
- 3 months (2)
- 6 months (17)
- 1 year (4)
- 2 years (5)
- Indefinitely (90)
- Other (7)

**Allogeneic - Duration**
- 3 - 6 months
- 6 months
- 1 year
- 2 years
- Indefinitely
- Other
When is the laboratory informed?

(n=161)

- Immediately: 121 (75%)
- Wait: 23 (14%)
- Both: 9 (5.5%)
- Neither: 8 (5.5%)
How is the laboratory informed?

Methods of informing the laboratory

- Telephone
- Paper
- E-mail
- Auto download
- Speak directly
- Fax
- Other

![Bar chart showing methods of informing the laboratory with telephone, paper, email, auto download, speak directly, fax, and other methods.]
How is the requirement for irradiated blood components recorded?

- 58 (36%) not identifiable on front of notes
- 31 (19%) general entry in notes only
  no specific documentation area
- 14 (9%) No entry in medical notes
What about the nursing notes?

Only 42 / 161 (26.7%) stated that there was a specific area of the nursing documentation where the requirement for irradiated blood components is documented.
Does your hospital blood administration policy state that ‘special requirements’ must be checked as part of the final bedside check?

- Yes 120 (74.5%)
- No 34 (21.2%)
- DNA 7 (4.3%)
Does the laboratory IT system ‘flag up’ the need for irradiated blood components?

n=161

- Yes 142 (95.4%)
- No 6 (3.0%)
- DNA 3 (1.6%)
Are patients informed that they need irradiated blood components?

n=161

- Yes 138 (85.7%)
- No 18 (11.5%)
- DNA 5 (2.8%)
Who informs patients?

n=138 (patients are informed)
Are patients given any written information?
n=138 (patients are informed)
What written information is used?

![Bar chart showing usage of NBS and Own Policy]

- NBS Policy: 140
- Own Policy: 120
- Own Policy: 60
- Own Policy: 0
Are patients given an alert card to carry?

n=161

- Yes: 115 (71.4%)
- No: 38 (23.6%)
- DNA: 8 (5%)
‘Shared care’: do you have a mechanism for informing other departments / hospitals within your Trust?

Mechanism shared care within own Trust
n = 161

- Yes: 78 (48.4%)
- No: 64 (39.8%)
- DNA: 19 (11.8%)
‘Shared care’: do you have a mechanism for informing other Trusts?

Mechanism shared care with other Trusts

n = 161

- Yes: 62 (38.5%)
- No: 86 (53.4%)
- DNA: 13 (8.1%)
Failures of the mechanisms in place

**Failures within own Trust**

- **n = 161**
- **Yes**: 104 (64.6%)
- **No**: 52 (32.3%)
- **DNA**: 5 (3.1%)

**Actual incidents / near misses**

- **n = 161**
- **Yes**: 122 (75.8%)
- **No**: 26 (16.1%)
- **DNA**: 13 (8.1%)
Failures of the mechanisms in place

Failures from own Trust to other Trusts

- Yes: 32 (19.9%)
- No: 110 (68.3%)
- DNA: 19 (11.8%)

Failures from other Trusts to own Trust

- Yes: 70 (43.5%)
- No: 72 (44.7%)
- DNA: 19 (11.8%)
How many incidents have occurred?

12 months actual

12 months near miss

5 years actual

5 years near miss

Joint meeting of SHOT, UK NEQAS (BTLP) and the NBTC

National Blood Service
Additional comments

"Very poor in practice"

'Time scales vary and are dependant on clinician'

'This survey has exposed how woefully inadequate our policy is..'

'Poor documentation'

'Main system failure is failure to notify blood bank'

'No formal mechanisms……….'
National and regional reports are being produced.... available soon

andrea.blest@nhsbt.nhs.uk