Children’s factual and delusional memories of Paediatric Intensive Care

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Great Ormond St Hospital, London

Sample (n=102/132)
• Survivors over 7 years of age interviewed 3 months after discharge
  – 60 male, 42 female
  – Median child age 11.3yrs (7-17)
  – Median length of stay 2 days (0-38)

Exclusions
• Learning difficulties; readmitted to PICU; professional refusal (eg palliative care)

Psychological measures
Child
• ICU Memory Tool (factual v delusional memories)
• Child Revised Impact of Event Scale (post traumatic stress)

Parent
• SPAN brief screen for post traumatic stress
Reason for admission

Memories

63% remembered some factual information about PICU

Factual memories

• Family members 47%
• Staff 31%
• Alarms 23%
• Breathing tube (23/87) 26%
• Suction (13/87) 15%

Feelings on PICU

• Pain 17%
• Confused 33%
• Frightened 28%

Delusional Memories

• 1 in 3 children experienced hallucinations or unusually vivid dreams
Correlations with delusions

<table>
<thead>
<tr>
<th></th>
<th>r</th>
<th>p</th>
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<tbody>
<tr>
<td>Days on PICU</td>
<td>0.20</td>
<td>(0.05)*</td>
</tr>
<tr>
<td>Emergency admission</td>
<td>-0.01</td>
<td>(0.92)</td>
</tr>
<tr>
<td>Presence of head injury</td>
<td>0.07</td>
<td>(0.46)</td>
</tr>
<tr>
<td>PIM-2 score (n=100)</td>
<td>-0.06</td>
<td>(0.54)</td>
</tr>
<tr>
<td>Sepsis</td>
<td>-0.03</td>
<td>(0.75)</td>
</tr>
<tr>
<td>Midazolam &gt;2 days</td>
<td>-0.19</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Morphine &gt;2 days</td>
<td><strong>0.328 (0.001)</strong></td>
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Content of Hallucinations

- Giant talking flower (+)
- Butterflies and clouds (+)
- Family members (inc deceased)

- “This isn’t my head!” “Where are my fingers?”
- Rats in cups moving across the wall
- Convinced ceiling was falling in
- Hell
- Terrorist attack

- All my friends jumping out of the window
- Massive beehive
- Loads of massive spiders – we had to throw stones at them
- Scorpions everywhere
- Men in a wooded running after me – I had to run into the sunlight
- A man who looked like my dad… a woman who looked like my mum
- Loads of patterns – scary squiggly lines, orange on a black background
- Scary People walking on the ceiling
- Bad people took me away and were going to hurt my baby sister and throw her down a hole in the pub
### Proportions of parents and children scoring above PTSD cut offs

r=0.25*

<table>
<thead>
<tr>
<th></th>
<th>Parents</th>
<th>Children</th>
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<tbody>
<tr>
<td>0%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>20%</td>
<td>30%</td>
<td>40%</td>
</tr>
<tr>
<td>40%</td>
<td>50%</td>
<td>60%</td>
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### Correlations with child PTSD score

<table>
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<tr>
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<tbody>
<tr>
<td>Age</td>
<td>-0.12</td>
<td>0.26</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.12</td>
<td>0.27</td>
</tr>
<tr>
<td>Length of stay</td>
<td>0.03</td>
<td>0.75</td>
</tr>
<tr>
<td>Emergency status</td>
<td>0.32</td>
<td>0.002**</td>
</tr>
<tr>
<td>Factual memories</td>
<td>-0.05</td>
<td>0.63</td>
</tr>
<tr>
<td>Delusional memories</td>
<td>0.21</td>
<td>0.04*</td>
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### Implications of findings

- Ask children and families about withdrawal
- Weaning protocols
- Role of anti anxiolytic medication
- Alternative drug regimens
- Education
- Support

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Funded by The Health Foundation