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Prehospital use of paracetamol among children attending the accident and emergency department

S Mason, S Thorp, D Burke

Methods: A prospective cohort study of carers of children attending a paediatric accident and emergency (A&E) department. Carers of children completed a questionnaire to identify domestic patterns of paracetamol use. Data were collected on temperature of the child in the A&E department, administration of antipyretics in the A&E department, diagnosis, and disposal from the A&E department.

Results: Seventy-five adults attending the A&E department consented to involvement. Sixty-five of the children were feverish on arrival in the A&E department. Twenty-one children (32.3%) had not received paracetamol before attending. There was a significant relation between knowledge of the antipyretic properties of paracetamol and administration ($\chi^2=5.0, p<0.05$). There was a significant correlation between fever and administration of paracetamol in the A&E department ($\chi^2=23.7, p<0.01$), however, 15 feverish patients (24.6%) were not treated.

Conclusions: Most carers administer paracetamol appropriately in the prehospital setting. Administration correlates significantly with knowledge of its benefits. There is scope for education of carers and A&E department staff in the appropriate use of antipyretics such as paracetamol.
Resolution of fever
Of the 65 feverish children, 21 (32.3%) had not been given prehospital paracetamol. Fifty (66.6%) children were subsequently given antipyretics in the A&E department. A further 15 (24.6%) patients were feverish, but no action was taken by A&E department staff. There was a significant correlation between fever and antipyretic administration ($\chi^2=23.7$, p<0.01). Most (n=28, 56.0%) received paracetamol, the rest from a combination of other paracetamol preparations.

Diagnoses and disposal
Table 2 shows the distribution of discharge diagnoses. Twelve (16.0%) patients were admitted. There was no correlation between administration of paracetamol at any time and disposal (Fisher’s exact test, p=0.49).

Table 1  Reason for non-administration of paracetamol prehospital

<table>
<thead>
<tr>
<th>Reason for non-administration</th>
<th>Feverish group n (%) n=19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaware of benefits/didn’t think to use it</td>
<td>4 (21.1)</td>
</tr>
<tr>
<td>None in household</td>
<td>2 (10.5)</td>
</tr>
<tr>
<td>Child vomiting/refused</td>
<td>4 (21.1)</td>
</tr>
<tr>
<td>No parents present</td>
<td>4 (21.1)</td>
</tr>
<tr>
<td>Want to check with doctor/unsure about giving</td>
<td>2 (10.5)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (15.8)</td>
</tr>
</tbody>
</table>

Table 2  Diagnosis given in the A&E department

<table>
<thead>
<tr>
<th>Discharge diagnosis from A&amp;E department</th>
<th>Frequency (%) n=75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma/wheeze</td>
<td>2 (2.7)</td>
</tr>
<tr>
<td>Wound infection</td>
<td>3 (4.0)</td>
</tr>
<tr>
<td>URTI</td>
<td>38 (50.7)</td>
</tr>
<tr>
<td>Febrile convolution/viral infection</td>
<td>11 (14.7)</td>
</tr>
<tr>
<td>Gastrointestinal infection</td>
<td>4 (5.3)</td>
</tr>
<tr>
<td>Sepsis</td>
<td>2 (2.7)</td>
</tr>
<tr>
<td>Tonsillitis</td>
<td>5 (6.7)</td>
</tr>
<tr>
<td>Other</td>
<td>10 (13.3)</td>
</tr>
</tbody>
</table>

In conclusion, this study has shown that most carers of children are aware of the benefits of using paracetamol for fevers. This knowledge increases the likelihood that paracetamol will be administered. Significantly more children presenting with a perceived feverish illness who had been pretreated were apyrexial on arrival in the A&E department. Paracetamol use did not influence the decision to admit or discharge patients from the A&E department. Education of carers and A&E department staff should be ongoing to improve knowledge of the benefits of antipyretics.

REFERENCES