information about subsequent vaccinations, health state, and development in 101 of the children was supplied by child health clinics. Four of the children were lost to follow up: two had moved abroad and the names of two were unknown. The parents of one child refused further vaccinations, and 16 children completed their schedule with the combined diphtheria, tetanus, and poliomyelitis vaccine (DTP-IPV). The other 84 children received further pertussis vaccine (DTP-IPV), totalling 236 doses; 74 received the full three doses. None of the children had recurrent collapse, and other adverse events were only minor. No systematic precautions were taken, although about half the children were given paracetamol prophylactically for the second vaccination; most of them did not take it for subsequent doses. At the time of follow up the children’s health and development showed no particular anomalies. One child who had not received further pertussis vaccinations developed severe pertussis.

Comment

The risk of recurrent collapse is higher than the background rate, which is low for second and subsequent vaccinations, but our data show that recurrence of collapse is exceptionally low (95% confidence interval 0% to 4.3%). A scheduled case-control study of all cases reported in 1995 would add to the numbers and contribute towards an understanding of risk factors and that vaccinations can still take place in a child healthcare clinic without special precautions. Parents, however, do need guidance and reassurance, and vaccination as an outpatient should be considered in the few cases in which parents’ fears are not allayed.

We thank the staff of the child health clinics for providing us with the data.

Contributors: PEV-deB designed the study, assessed the adverse events, designed the follow up study, acquired and analysed the data, and wrote the manuscript; she will act as guarantor of the study. JL designed the study, took part in the surveillance scheme, investigated reports, and helped write the manuscript. HCR designed the study, took part in the surveillance scheme, investigated reports, and helped write the manuscript.

Funding: None.

Conflict of interest: None.

References


Phantom pain, anxiety, depression, and their relation in consecutive patients with amputated limbs: case reports

K Fisher, R S Hanspal

Parkes suggested that emotional factors are influential in patients’ experience of prolonged pain in a phantom limb after amputation and concluded that this may be prevented if patients are encouraged to express grief over their loss.1 However, Katz and Melzack found no significant difference in standardised tests of psychological dysfunction between patients who experienced phantom pain and those who did not. They concluded that the pain is more likely to vary with the experience of preamputation pain, even retaining many of its characteristics.2 A review of the literature on measures used to diagnose psychopathology found that many measures include items that confound emotional distress with the physical disorder and thus overestimate it.3 We investigated whether people who had had arms or legs amputated experienced emotional distress, and the relation between the distress and pain, using standardised screening techniques designed for patients with physical illness.

Patients, methods, and results

Calculations of sample size indicated that 21 patients per group would be needed to show a reliable difference at the 5% level of significance. The participants were 93 consecutive patients who had been referred to the prosthetic rehabilitation clinic and were aged 34-91 (mean 65) years; 54 were men. Time since amputation was 1-58 (9.7) years. Sixty patients had had a leg amputated for vascular illness, including diabetes, 10 of them losing both legs. Twenty four patients had lost a leg and nine an arm because of cancer, 10 of them losing both limbs. Twenty one patients had had a leg amputated for vascular illness, including diabetes, 10 of them losing both legs. Twenty four patients had lost a leg and nine an arm because of cancer, 10 of them losing both limbs.

BMJ 1998;316:903

Papers

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bmy 1998;316:903-4

(Received 10 October 1997)
Table 1 Differences between patients with and without pain in phantom limb in time from amputation and scores on hospital anxiety and depression scale. Values are means (95% confidence intervals)

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Phantom pain (n=29)</th>
<th>Non-phantom pain (n=64)</th>
<th>Mann-Whitney U test</th>
<th>Kendall’s tau*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time from amputation (years)</td>
<td>6.79 (2.62 to 10.96)</td>
<td>11.06 (7.14 to 14.98)</td>
<td>873, P=0.65</td>
<td></td>
</tr>
<tr>
<td>Anxiety score</td>
<td>4.66 (2.74 to 6.66)</td>
<td>3.59 (3.38 to 3.80)</td>
<td>912, P=0.90</td>
<td>0.16, P=0.03</td>
</tr>
<tr>
<td>Depression score</td>
<td>3.45 (1.82 to 5.08)</td>
<td>2.78 (2.09 to 3.47)</td>
<td>892, P=0.76</td>
<td>-0.04, P=0.53</td>
</tr>
</tbody>
</table>

* For time from amputation.

Phantom pain (mostly mild) was reported by 29 patients. Fifty three of the remaining 64 patients reported non-painful sensations in the phantom limb. Mean scores on the anxiety and depression scale were 3.9 for anxiety and 2.9 for depression. Whereas 10 patients scored in the clinical range for anxiety, mainly about falling, only one patient scored in this range for depression. No patient gave a history of previous or concurrent psychiatric treatment.

The patients were divided according to whether they experienced pain, and their anxiety and depression scores and time from amputation were compared with non-parametric statistics. The table shows that the time from amputation, and anxiety and depression scores did not differ between the two groups. Time from amputation was not strongly significantly associated with distress, so anxiety and depression do not seem to vary consistently over time.

Comment

The incidence of phantom pain in this study was 31%, in keeping with current reports. Only a few patients experienced emotional distress, anxiety being reported more often than depression. The prevalence of depression was low, suggesting that it is an uncommon reaction to amputation. In this elderly group of patients who had discomfort due to vascular illness, loss of the limb did not constitute a bereavement in the way that Parkes suggested.1

These results, in agreement with those of Katz and Melzack,2 show little support for the grief hypothesis, since it is difficult to sustain a concept of grief in the absence of depression on objective measures. In addition, we found no relation between the experience of pain and emotional distress, suggesting that phantom pain is not a function of emotional adjustment.

Dr M J Campbell and Dr Robert West commented on the statistics.

Contributors: RSH undertook the initial assessment of the patients and administered the McGill pain questionnaire. KF administered the hospital anxiety and depression scale, analysed the data, and wrote the paper. KF is the guarantor for the study.

Funding: None.

Conflict of interest: None.


(Accepted 3 October 1997)

Influence of travel patterns on mortality from injury among teenagers in England and Wales, 1985-95: trend analysis

Carolyn DiGuiseppi, Leah Li, Ian Roberts

Injuries are the leading cause of death among teenagers.1 The Health of the Nation strategy aims to reduce mortality from accidents in young people by 25% by 2005.2 We previously analysed how changing travel patterns influenced death rates from unintentional injury among teenagers in England and Wales, 1985-95:3 Here we examine how they affect mortality from unintentional injury among teenagers.

Subjects, methods, and results

From the Office for National Statistics we obtained anonymised death certificates recording deaths from injury between 1985 and 1995 among people aged 15-19 years in England and Wales. Records included age, sex, external cause of injury (E code), and year of death. We defined deaths of road users by E codes (table) and calculated mortality using census data and the average distance travelled as denominators. Data on the average annual distances travelled were obtained from the national travel surveys, whose methods have been published.1 We analysed unpublished data from the 1985-6, 1989-91, and 1992-4 surveys for residents of England or Wales aged 15-19 (Department of Transport, 1996). We estimated the average distance travelled by car, motorcycle, bicycle, and foot each year, from travel survey midpoints using linear regression.4 We estimated trends using Poisson distribution.5

Between 1985 and 1995, 10 530 teenagers aged 15-19 died from injury in England and Wales; 7954 deaths were from unintentional injury, of which 6073 (76%) involved road users (table). Mortality from unintentional injury declined by 32% (95% confidence interval 37% to 27%) over this period. There were large declines in death rates for motorcyclists (−78%; −81% to −74%); pedestrians (−49%; −59% to

1 powered by Vercel