accident and emergency departments,—that is, easier if other young children were at home, less disruptive if child at school. Duplication of services provided by practice attached nurses was a consideration, but only 25% of local practices have such a nurse, they do not go into schools, they generally do not see the handicapped, and most have little specialised paediatric training.

The service could have been interpreted by generalist district nurses as causing them to lose out on paediatric experience, but no dissatisfaction was expressed to us. Similarly, accident and emergency staff might have felt deprived of practical paediatric work. However, staff thought that there were sufficient numbers of children attending accident and emergency departments to provide this experience and that they were able to care more effectively for new patients and those requiring hospital follow up. During the period reported no additional case of frank non-accidental injury was detected by the scheme, but there seemed to be ample opportunity and scope for practical help regarding health education and secondary accident prevention.

The overlap between health visitors and the community paediatric service was potentially great, but referrals were redirected accordingly, and the existence of the service improved the casualty medical staff’s understanding of the health visitor’s role.

Paediatric home care team schemes that report costs suggest that they are economically viable. In our scheme the community paediatric service sisters were already employed to visit children at home, and no additional staff were required for this accident and emergency based service. No appreciable extra travel costs were incurred, and as nursing costs represent the most expensive fraction of the cost of an attendance at an accident and emergency department, community care of this kind seems to be cost effective. The service has been assessed as being beneficial by providers, it is appreciated by users, and continues as a valuable community extension of combined accident and emergency and paediatric nursing care. This home care scheme should be considered as one component of a health care system accommodating the special needs of children and their families.

We are grateful to the staff and patients of the accident and emergency department at Central Middlesex Hospital who participated in the development of this service and to Dr B Taylor and Miss S Smith for help with the manuscript.

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Height at diagnosis in acute lymphocytic leukaemia

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SUMMARY The heights of children with acute lymphocytic leukaemia were compared with controls matched for age, sex, and period. In contrast to a previous report the subject patients were not taller than their matched controls.

Various kinds of growth factors have been implicated to have important roles in carcinogenesis. It has been suggested that growth hormone may be involved in the development of acute lymphocytic leukaemia. It has also been reported that children with acute lymphocytic leukaemia are taller than the normal population. To validate this finding pre-treatment heights of children with acute lymphocytic leukaemia were compared with those of matched controls.
Materials and methods

Forty four children with acute lymphocytic leukaemia were chosen as the subjects of this study. All of the subjects were diagnosed after 1977 when modern methods of treatment of acute lymphocytic leukaemia were begun at our institute. Two controls matched for age, sex, and period were chosen for each subject from patients who were admitted because of acute illnesses. The matched period was defined as a period within 1-5 years from the time when the patient was admitted. Thirty eight of the subjects were able to have paired controls, but the remaining six patients had only a single control. A total of 82 control patients were available.

Standard deviation scores were calculated by using a standard height chart for each sex compiled from the data for Japanese children obtained in 1975.

The patients were divided into two groups. Group 1 consisted of 34 patients who had been in continuous complete remission for at least one year, and group 2 consisted of nine patients who had relapsed within one year after diagnosis. One patient was omitted from this grouping because she died from measles pneumonia early in complete remission.

Student’s t test was used for statistical analysis when appropriate.

Results

The results are shown in the Figure and the Table. The mean height of patients was never greater than that of controls. The mean height of group 1 or group 2 was not greater than that of controls. The mean heights of the controls were slightly larger than those of patients, although the differences were not significant.

Discussion

It has been shown that children with leukaemia, as well as other common children’s cancer, have greater birth weights than normal children. The hypothesis was that growth hormone might be involved in the development of acute lymphocytic leukaemia, and Broomhall et al reported that children with acute lymphocytic leukaemia were taller than the normal population. In contrast, this study could not show that the heights of children with acute lymphocytic leukaemia were greater than those of the normal population. Broomhall et al compared the heights of children with acute lymphocytic leukaemia with those of the normal popula-

![Figure](http://adc.bmj.com/)  
**Figure** Standard deviation score of height at diagnosis of patients with acute lymphocytic leukaemia and controls matched for age, sex, and period.

- = Patients in continuous complete remission for more than one year (group 1) and their matched controls; = patients who relapsed during the first year after diagnosis (group 2) and their matched controls; = patient who died of measles pneumonia early in complete remission and her matched controls; solid thick bars = means of standard deviation scores of all patients and their matched controls; solid thin bars = means of standard deviation scores of group 1 and matched controls; broken bars = means of standard deviation scores of group 2 and matched controls.

<table>
<thead>
<tr>
<th>Table</th>
<th>Comparison of standard deviation scores between patients and their controls matched for age, sex, and period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard deviation score (mean (standard deviation))</td>
</tr>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Patients</td>
<td>0.31 (0.91)</td>
</tr>
<tr>
<td>n=</td>
<td>44</td>
</tr>
<tr>
<td>Controls</td>
<td>0.45 (1.02)</td>
</tr>
<tr>
<td>n=</td>
<td>82</td>
</tr>
<tr>
<td>p Values</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Group 1: patients who were in continuous complete remission for more than one year.
Group 2: patients who relapsed during the first year after diagnosis.
tion in general. They assumed that the heights of children had not changed significantly during the observation period; this assumption, however, might be invalid. Indeed, the mean of the standard deviation scores was greater than 0 in the present study, though there was no difference between the means of the scores of patients and controls. Therefore, comparison with matched controls is essential in this type of study.

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Late onset cystic leucomalacia

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Summary The ultrasound findings of eight premature infants who developed extensive cystic leucomalacia after the first two weeks of life are reported.

Ultrasound examinations should be considered after any clinical deterioration in preterm infants up to 40 weeks’ postmenstrual age to avoid missing cases of extensive cystic leucomalacia.

Cranial ultrasonography was first introduced to neonatal intensive care units in 1979 and has now gained widespread acceptance as the diagnostic method of choice in the recognition of intracranial pathology.1 The diagnosis of periventricular-intraventricular haemorrhages during life was initially seen as the main asset. These haemorrhagic lesions were noted to be common, especially in infants weighing 1500 g or less.2 Most studies have shown that periventricular-intraventricular haemorrhages tend to occur within the first few days of life and, even in the presence of major problems, rarely after the first week of life.2

More recently we have become aware that ischaemic lesions can also be diagnosed by this technique.3 The ischaemic lesions seem to be less common than the haemorrhagic ones.3 In the past it has been assumed that this lesion occurs due to either prenatal insults or major problems in the immediate postnatal period.

We have been able, however, to document eight preterm infants who had normal ultrasound scans during the first two weeks of life and subsequently suffered an ‘insult’, which led to the development of extensive cystic leucomalacia.

Methods

Infants admitted to the Hammersmith Hospital Regional Intensive Care Unit were routinely scanned, daily during the first week of life and twice weekly thereafter until discharge, using an ATL Mark III sector scanner with a multifrequency scan head (3–5–7.5 MHz crystals).

Extensive cystic leucomalacia was defined as areas of increased echogenicity followed by cystic degeneration seen both in the coronal and the parasagittal view in the periventricular or subcortical areas.

Results

Between January 1982 and October 1985, 20 infants were diagnosed as having extensive cystic lesions, either in the periventricular or in the subcortical areas.

In 12 infants the cystic lesions were related to an antenatal or perinatal insult. In the remaining eight infants, however, evidence of leucomalacia, as noted by areas of increased echogenicity, was first noted between 16 days and 10 weeks after birth. The initial ultrasound scans were normal in seven of the eight infants, and the remaining infant was noted to have a small intraventricular haemorrhage (Table).

References


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