35 weeks. Two exchange transfusions. On day 25 Hb was 7·4 g/dl, reticulocytes<1%. Intramuscular folic acid 0·48 mg daily was given for 3 days followed by 0·96 mg daily for a further 3 days. Red cell folate on day 4 of treatment was 170 μg/l. Reticulocytes rose to 6% and 10% on days 4 and 12 of treatment. Hb fell initially to 6·5 g/dl but on day 19 was 8·8 g/dl.

Thus while neither infant showed haematological evidence of folate deficiency, transfusion was averted by reactivation of haemopoesis occurring directly after folic acid therapy.

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References


III. Effect of folic acid supplementation. Archives of Disease in Childhood, 52, 16–21.


Estimation of glomerular filtration rate from plasma creatinine concentration in children of various ages

Sir,

Recent studies showed that measurement of plasma creatinine concentration (Pc) provides an accurate and simple method of estimating glomerular filtration rate (GFR) in children, provided that height is taken into consideration. Counahan et al. (1976) found that the results obtained by the formula 0·43 height (cm) per Pc (mg/100 ml) were as good as the 24-hour creatinine clearance values in children who were 2 months to 14 years of age.

We examined the variation with age of GFR in 21 infants aged 1–11 months and in 107 children 1–14 years of age. All of them were free of renal disease, and were hospitalized mostly for acute respiratory tract infections. Urine was collected for 24 hours and endogenous creatinine clearance was calculated according to the classical formula UV/Pc and the results were corrected to 1·73 m² body surface. These values were compared to those estimated according to the 0·43 height/Pc formula. Plasma and urine creatinine concentrations were determined by the traditional method of Popper et al. (1937), i.e. we did not measure true creatinine levels.

As shown in the Table, the mean values of GFR obtained by the two different methods were of the same magnitude. The high standard deviation values represent a large error of estimation with both methods, but the variation was a bit smaller in the case of height/Pc calculation. The latter proved to be unreliable in infants. As also shown by the very low correlation coefficient, the estimated GFR values were very scattered under the age of one year, and in spite of the difficulties of urine collection, the 24-hour clearance proved to be more reliable in this age group.

Our data confirm the utility of GFR estimation made from a single measurement of Pc and of body length. This seems to be a rapid and simple method in children over one year of age, even if no true creatinine concentration is determined, as in many laboratories. At the same time the method is probably of no special help in infancy. The reason for this is not quite clear, but the greater variation in the relation of length to body surface must contribute to it.

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Table Comparison of 24-hour clearance and estimated height per plasma creatinine values (mean ± SD)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>n</th>
<th>24-hour creatinine clearance (ml/min/1·73m²)</th>
<th>Mean difference 0:43 Height per Pc</th>
<th>Correlation r</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1</td>
<td>21</td>
<td>72 ± 31</td>
<td>51 ± 40</td>
<td>&lt;0·02</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>45 ± 11</td>
<td>55 ± 17</td>
<td>0·146</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>55 ± 41</td>
<td>46 ± 10</td>
<td>NS</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>60 ± 22</td>
<td>60 ± 21</td>
<td>NS</td>
</tr>
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<td>4</td>
<td>18</td>
<td>71 ± 35</td>
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</tr>
<tr>
<td>6</td>
<td>5</td>
<td>64 ± 33</td>
<td>65 ± 30</td>
<td>NS</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>67 ± 33</td>
<td>76 ± 34</td>
<td>NS</td>
</tr>
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</tr>
<tr>
<td>9</td>
<td>12</td>
<td>83 ± 21</td>
<td>82 ± 38</td>
<td>NS</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
<td>79 ± 21</td>
<td>68 ± 20</td>
<td>NS</td>
</tr>
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<td>11</td>
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<td>92 ± 47</td>
<td>76 ± 24</td>
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</tr>
<tr>
<td>12</td>
<td>5</td>
<td>109 ± 38</td>
<td>100 ± 38</td>
<td>NS</td>
</tr>
<tr>
<td>13–14</td>
<td>5</td>
<td>86 ± 42</td>
<td>104 ± 31</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>74 ± 34</td>
<td>85 ± 28</td>
<td>&lt;0·02</td>
</tr>
</tbody>
</table>

P <0·001
References


Measles vaccination and the nephrotic syndrome

Sir,
A child who had received measles vaccine (Wellcome Laboratories) 10 days later developed generalized oedema, and proved to have a nephrotic syndrome. I am anxious to know if such a case has been previously reported.*

D. C. DEMETRIOU
3 Pargas Street,
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*J. A. Kuzemko reported 3 similar cases in British Medical Journal, 1972, 4, 665. Ed.

Breast milk banks: the new model

Sir,
Present evidence seems to suggest increasingly that fresh human milk has a protective role in the syndrome of acute necrotizing enterocolitis and neonatal infection. For this reason (and many others), there appears to be a growing interest in the development of breast milk banks.

Considerable information already exists concerning the organization of such banks in the first decades of this century and earlier. However, the milk stored in these earlier banks was not usually fresh, being primarily required for feeding rather than control of bacterial colonization of the intestine. We have some information concerning earlier types of breast milk banks, and we felt it might be useful to supplement this with information from interested paediatric hospitals or neonatal units which already have 'new model' banks or are attempting to initiate them. We would also welcome any advice or references concerning earlier models.

If any such groups or unit would care to send their name and address to us, we would be happy to send them a very short questionnaire on practices, procedures, and problems. If sufficient response to such questionnaires is generated, we intend to analyse the results and make them available to correspondents, and possibly to a wider audience.

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Hydroxyquinoline derivatives should not be used in the treatment of diarrhoea

Sir,
There is overwhelming proof that drugs containing 8-hydroxyquinoline derivatives used in the treatment of diarrhoea may cause serious neurological damage. The therapeutic benefit from these drugs has not been shown to be in reasonable proportion to the side effects. According to generally accepted medical principles these drugs should for this reason not be used. We appeal to all pharmaceutical companies still selling these drugs to discontinue the sale immediately.

TORSTEN BERG
Chairman, Swedish Paediatric Association

BENGT HAGBERG
Chairman, Section for Child Neurology,
Swedish Paediatric Association.