Correspondence

Table Course of treatment with isoprinosine on 4 children with subacute sclerosing panencephalitis

<table>
<thead>
<tr>
<th>Case</th>
<th>Sex</th>
<th>Age at onset (years)</th>
<th>Duration of illness (months)*</th>
<th>Neurological state at start of treatment</th>
<th>Duration of treatment (months)</th>
<th>Course</th>
<th>Present state</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>6-8</td>
<td>20</td>
<td>Stage 3: dementia, quadriplegia, dyskinesia, intractable myoclonic seizures</td>
<td>9</td>
<td>Remission</td>
<td>Stage 3. Cognitive improvement, less spasticity and dyskinesia, controlled myoclonic seizures, increasing bulbar dysfunction</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>9-8</td>
<td>8</td>
<td>Stage 2: moderate dementia, myoclonic seizures</td>
<td>8</td>
<td>Slow progression</td>
<td>Stage 2-3. No further mental deterioration, early bulbar dysfunction, immobile, fewer seizures</td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>15-6</td>
<td>8</td>
<td>Stage 1: moderate dementia, speechless myoclonic seizures</td>
<td>7</td>
<td>Static</td>
<td>Mentally alert, immobile, fewer seizures</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>10-2</td>
<td>4</td>
<td>Stage 1: moderate dementia, generalised seizures</td>
<td>4</td>
<td>Static</td>
<td>Mentally alert, mobile, fewer seizures</td>
</tr>
</tbody>
</table>

*After diagnosis.


E McGrath and L Rosenbloom
Department of Neurology and Child Development Centre, Alder Hey Children's Hospital, Eaton Road, Liverpool L12 2AP

Paraquat poisoning in a child: vitamin E in amelioration of lung injury

Sir,

Ingestion of paraquat is followed by systemic toxicity to liver, kidneys, and gastrointestinal tract.

Pulmonary damage which later develops, is generally progressive and irreversible, and leads to respiratory failure and death even after ingestion of a small amount. Its toxicity is related to production of superoxide radicals and hydrogen peroxide, and each is capable of producing tissue and lipid cellular membrane damage. The pulmonary lesions in the respiratory distress syndrome of infancy resemble the ones observed in paraquat poisoning. Recently, a favourable outcome in infants with respiratory distress after the administration of vitamin E was reported.

A 3-year-old boy was admitted 24 hours after he had swallowed a mouthful of 20% paraquat solution. On physical examination the child was fully alert. Abnormal physical findings were limited to facial and oral erosions. Initial plasma urea was 12 mg/100 ml (4-3 mmol/l), serum vitamin E level 0-75 mg/100 ml, paraquat levels were 0-82 in serum and 0-38 mg/100 ml in urine. Chest x-ray was normal and arterial blood-gases showed pH 7-34, PaO₂ 126 mmHg (16-7 kPa), PaCO₂ 36 mmHg (4-8 kPa) on FiO₂ 0·21.

Combined treatment consisting of forced diuresis, stomach lavage with fuller's earth, haemodialysis, and haemoperfusion with coated charcoal followed by peritoneal dialysis was instituted. On day 2 after admission the boy lapsed into a semicomatous state accompanied by generalised hyper-reflexia and clonic jerks.

On day 4 he regained full consciousness but respiratory rate increased gradually from 24 to 40 breaths a minute and perioral cyanosis was observed. PaO₂ was 80 mmHg (10-6 kPa) on FiO₂ 0·4 via a face mask. Chest x-ray remained normal.

Plasma urea increased to 60 mg/100 ml (21 mmol/l) and bilirubin to 1·6 mg/100 ml (27·4 μmol/l). Repeated blood and urine samples for paraquat were constantly negative 36 hours after institution of haemodialysis. The child was treated with oxygen and daily intramuscular injections of vitamin E (200 mg/day), for 4 days. A steady improvement was noted and a week after admission the patient became entirely asymptomatic. Plasma urea, bilirubin, and arterial blood-gases returned to normal.

The appropriate management after paraquat ingestion is still controversial. Inhibition of gastrointestinal absorption is suggested as the most important measure, followed by forced diuresis, haemo- and peritoneal dialysis. A reasonable approach towards paraquat poisoning may be the modification of its cellular effects. Since vitamin E acts as an antioxidant by trapping free radicals, it may be effective in the amelioration of lung injury after paraquat ingestion if formation of superoxide radicals causes severe endothelial damage of pulmonary alveoli.

The prompt and complete recovery of our patient, despite incipient pulmonary insufficiency regarded by many as a poor prognostic sign, may partially be related to the administration of vitamin E.

References
Book reviews


This volume arises out of a series of workshops given at the Institute of Psychiatry which showed the need for a text bringing together widely scattered source material. The contributors aim to combine examples from practical experience with surveys of the relevant literature.

13 chapters and 3 appendices are used to show how to select appropriate behaviour for change, increase desirable behaviour, decrease undesirable behaviour, and to teach these skills to others. It is intended for all those who work with mentally handicapped children, including parents. The 3 appendices give a detailed account of the content of workshops run by the editors, a means of assessing basic knowledge of behavioural techniques, and a form for students to assess lectures.

This is one of the most useful books of its kind, especially as it is in a British rather than an American context. Although the standard of the contributors varies, and perhaps a heavier editorial hand could have resulted in a more even style, the general standard is high. The contribution of practical examples and literature review works well and should be repeated. In summary this book is essential reading for anyone concerned with behavioural problems of mentally handicapped children.

R L SMITH


This edition has been almost entirely revised by Morris Green with only one of the 73 chapters, that on child development, beautifully and simply written by Sally A Provence.

The text is in two parts - 'The interview and physical examination' and 'Signs and symptoms'. There follows a short appendix of weight and height charts and a comprehensive 59-page index of symptoms, signs, and disease headings. There are only 2 pages of pictures illustrating 10 facial syndromes.

The aim is to guide the paediatrician, already well armed with his standard textbooks, through the intricacies of history taking, examination, and interpretation of the findings.

The first section is full of good advice and hints, and takes care to point out what is normal and what is not. The second section is devoted to the differential diagnosis of presenting symptoms and signs, and each one is carefully dissected in an introduction which is backed up by a briefly annotated but comprehensive aetiological classification of the relevant diseases. References are included as an integral part of the text.

I liked this book for its good sense and useful advice which are not always found in the standard works. Some subjects such as 'Failure to thrive' and 'Headaches' are particularly well laid out, but there are unexpected disappointments such as 'Understature' where reference to parental heights is only found by searching, and emotional deprivation only merits 4 lines at the end of a 6-page classification.

It is unfortunate that the author has not tried formally to separate the manifestations of illness in the newborn from those of infancy and the older child, and disappointing that there is virtually no reference to, or advice on, the interpretation of laboratory and x-ray investigations. Despite these drawbacks, I am glad to have this book on my shelf.

JACK INSLEY


Provided that this book is looked on as something nearer to a research monograph than a general paediatrician’s handbook, it is a useful text for the neonatologist who has a particular interest in laboratory medicine. Where the book is dealing with the biochemistry of bilirubin metabolism and its transport it is undoubtedly scholarly, extensively referenced, and informative although rather heavy going. In contrast there are some very simple sections relating to the clinical aspects of jaundice which are too superficial.

The opening chapter has the admirably simple title 'Jaundice and the formation and excretion of bilirubin', but it is full of complex biochemistry, some of which is extremely interesting, and we are helped with some of the difficult concepts by a series of very clear diagrams — such as the diagram of the hepatocyte unit in the first chapter which is a model of clarity and in itself justifies looking at the book. Tucked away in the biochemistry are some general ideas which I found quite novel. For example, Professor Odell points out...
Paraquat poisoning in a child: vitamin E in amelioration of lung injury.
E Shahar, Z Barzilay and M Aladjem

Arch Dis Child 1980 55: 830-831
doi: 10.1136/adc.55.10.830

Updated information and services can be found at: http://adc.bmj.com/content/55/10/830.citation

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to: http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to: http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to: http://group.bmj.com/subscribe/