‘... officiously to keep alive’

Sir,

May I congratulate Dr Walker and Professor Campbell on their excellent contributions, with most of which I wholeheartedly agree.1,2 I would, however, like to comment on two things said by Professor Campbell. Firstly, his attitude towards the abortus that refuses to die. I am unhappy with a blanket statement that we should resist all pressures to resuscitate such neonates. Each case must be assessed on its merits. The fact that the parents do not want the baby is irrelevant. I have certainly been involved in cases where a genuine error of gestational age assessment has been made with the result that a near 1000 g baby has been produced. The odds are in favour of such a baby being normal and adoptable, and we should not deny him that chance.

Furthermore, if an obstetrician is man enough to admit a mistake and ask a neonatologist’s help, we should give it, and I believe that that means providing all the components of standard neonatal care. If the neonate is ‘fetal’, and weighs a lot less than any previous survivor in that neonatal unit, then of course it is correct not to resuscitate it, but it should be admitted to the neonatal unit, and kept warm and comfortable. Apart from anything else, this is the only way both members of the perinatal team can be protected from the unpleasant activities of what Dr Walker neatly calls ‘clandestine groups’.

Secondly, and much more important, I am perpetually irritated by people who say we have to practice within economic constraints. Who says we have to? For the money required to establish satisfactory standards in neonatal care resources are not limited in real terms, only by dint of government control. The United Kingdom spends a ludicrously small 5.8-6.0% of its national product on health care,3 and an increase of 2% to bring us in line with say Switzerland or Australia (and incidentally still well below Sweden and France) would give us at least an extra 5 billion pounds to spend. Neonatal paediatricians would settle for a mere 1% of this, which is well above that which was asked for after the Short report.4 When and if we have spent all this, opinion polls show that the electorate are prepared for extra taxation to cover health care.5 Only when this option is exhausted, if indeed it ever can be exhausted, should we begin to admit that resources are limited. Until then paediatricians should continue to make clear and well documented demands for more funds to provide an acceptable standard of care for our patients, and stop creeping around toeing the party line.

References


N R C Roberton
Riyadh Armed Forces Hospital,
PO Box 7897,
Riyadh 11159,
Kingdom of Saudi Arabia

Intestinal permeability tests and integrity of the small intestinal mucosa

Sir,

We read with interest the article by Nathavitharana et al.1 These workers have studied lactulose and mannitol intestinal permeability in 43 children with various degrees of intestinal mucosal damage, and compared the results with a control group of 53 children with histologically normal jejunal biopsy specimens. They showed that urinary mannitol:lactulose ratio was a sensitive test only for the detection of severe villous atrophy. Lesser degrees of mucosal damage could not be detected by this test.

We have developed and validated a sugar solution test in normal children and then used it to determine gut damage from chemotherapy in children with cancer. The sugar solution contains lactulose 5 g, mannitol 5 g, and 3-O-methyl-D-glucose 2 g, made up to 100 ml with water, which gives a measured osmolality of 696 mmol/kg. The dose given is 80 ml/m2.2 The addition of 3-O-methyl-D-glucose to the standard intestinal permeability test also allows the measurement of active transport and may increase the sensitivity of the test in the detection of mucosal abnormalities. We have recently reported the preliminary results, which showed the test allows quantification of severity and timing of gut damage after chemotherapy.2 The sugars are accurately assayed by gas-liquid chromatography, the test is easy to perform and was well tolerated by normal children and children with cancer.

The osmolality of the test solution used by Nathavitharana and colleagues was 274 mmol/kg and differs from ours.

The Birmingham group recognised that the use of a more hypertonic solution might have improved the discrimination between damaged and normal mucosa.3 They suggested, however, that there was potential risk of inducing osmotic diarrhoea associated with the ingestion of hyperosmolar solutions in children. Our study has shown that children can tolerate relatively hyperosmolar oral solutions. Out of 49 normal children who performed the test, mild nausea was observed in two occasions and the passage of one loose stool was reported in two children.

I BLUMENTHAL and D FENTON
Oldham and District General Hospital,
Rochdale Road,
Oldham OL1 2JH

308 Correspondence

Some children with cancer have repeated the test on more than 20 occasions as part of their follow up investigations and no important gastrointestinal symptoms have occurred.

References


A L Brunetto, A D J Pearson, M F Laker, and A W Craft
Department of Child Health, The Medical School, University of Newcastle upon Tyne, Newcastle upon Tyne NE2 4HH

Sweat tests and fluocxacillin

Sir,

While being in agreement with Williams and colleagues that the use of isoxazolyl penicillins are not a contraindication to sweat testing, I feel I should inject a note of caution based on my own experience.

Shortly after the original report of antibiotic interference with sweat chloride concentrations in cystic fibrosis, I encountered a 6 month old boy with a severe chest infection and a history of several previous such episodes. The initial sweat chloride concentrations, using the Orion sweat chloride meter, were borderline at around 55 mmol/l, but were reproducible within the variability of the method (±5 mmol/l at that time). Because of the strong clinical suspicion of cystic fibrosis, and because he was being treated with sodium chloracillin, I performed several further tests in the following two weeks and observed a rise in sweat chloride to 120 mmol/l after withdrawal of the treatment. The subsequent progress of the disease in this child confirmed the diagnosis. The assays were all performed by myself, and I do not believe that I was observing spurious results as falsely low sweat chlorides are unusual artefacts with this method, and the technique we use is rigorously standardised to avoid this. There was also good agreement between duplicate readings at different sites on each occasion.

Since that occasion we have made a particular note of the treatment of tested children and have seen only one other similar case, in a child with cystic fibrosis who was on ampicillin at the time of first testing. We were unable to perform the repeat tests as often as in our first case, however, and I could not be so sure that technical problems did not affect this observation.

Thus in 15 years I have observed one case which is similar to that reported by Griffiths and Bull. During this time we have performed approximately 3000 tests and detected about 40 new cases of cystic fibrosis. I thus believe that although the phenomenon is clearly rare, it nevertheless exists. Furthermore I have heard anecdotally of other cases, though I cannot vouch for their credibility. Williams and colleagues are perhaps therefore a little too strong in their implication that the phenomenon does not exist just because they observed no cases in their small study population. It is also worth observing that the children in the original report and the children in my case were taking cloxacinil and not fluocxacillin.

As to the suggestion that cloxacinil may be substituted for chloride ion in the sweat, these were to be on a mole for mole basis (which would be necessary to maintain electrochemical neutrality), then the amount in the sweat would exceed the dose given to the patient. It seems more likely that the drug, or a metabolite, acts in an idiosyncratic way in these patients to alter the process of secretion or reabsorption of sweat chloride. It is tempting to suggest that there may be an interesting line of research open to those workers who are currently involved in studies of the control of chloride ion transport in isolated cystic fibrosis glands.

I feel that while we should not refuse to perform sweat tests because a child is on antibiotics, it is good practice to delay the test until the child has recovered from the acute phase of the infection for which they have been prescribed. This avoids the common spurious results associated with poor sweating in pyrexial and dehydrated subjects, and avoids parental anxiety and awkward questions about tests that need to be repeated. Nevertheless where it is clinically desirable to clinch diagnoses in the acute phase, sweat tests should not be avoided. Interpretation should, however, be tempered by an awareness of drug interference, and fortified by other diagnostic strategies such as repeat sweat tests with simultaneous sodium and chloride analyses, or in young children by assay of serum immunoreactive trypsin. This latter assay (by courtesy of Dr A Heele in Peterborough) has proved very useful, but we are fortunate in that the Scottish Guthrie card samples are retained in good storage conditions which allows retrospective neonatal assays to be performed.

References


D B Walsh
Department of Biochemical Medicine, Ninewells Hospital, Dundee DD2 9SY

Rising asthma admissions and self referral

Sir,

In their paper Dr Storr and colleagues suggest that diagnostic transfer between asthma and bronchitis is not a
Intestinal permeability tests and integrity of the small intestinal mucosa.
A L Brunetto, A D Pearson, M F Laker and A W Craft

Arch Dis Child 1989 64: 307-308
doi: 10.1136/adc.64.2.307-a

Updated information and services can be found at:
http://adc.bmj.com/content/64/2/307.2.citation

Email alerting service
These include: 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/