The incidence of renal calcification in preterm infants

Str.—In the report by Short and Cooke, the 21 infants developed renal calcification all had bronchopulmonary dysplasia. While Short and Cooke recorded details of steroid usage the relationship between steroid use and renal calcification was not explored. Their failure to do so is indeed surprising as nephrocalcinosis may be one of the side effects of the now widespread use of steroids for bronchopulmonary dysplasia.

IVAN BLUMENTHAL
The Royal Oldham Hospital, Rochdale Road, Oldham OL1 2JH

Dr Short and Cooke comment:
We thank Dr Blumenthal for his interest in our recent article, and note his comments regarding the use of steroid treatment. The hypercalcemic effects of steroids have been utilised for many years in the treatment of hypercalcemia in adult patients. We certainly considered the possible effects of such treatment in our own patients, and recorded dosage and duration of dexamethasone treatment.

The small number of patients with dexamethasone (two infants with bronchopulmonary dysplasia who developed calcification, and one who did not), however, preclude any useful comment upon the effects of such treatment in our study. In the two patients with renal calcification who received dexamethasone, renal ultrasound scans were normal before treatment was commenced. We therefore think that it would be relevant to postulate a direct causal relationship between steroid therapy and calcification. We would agree, however, that the increasing use of steroids provides an additional argument for close evaluation of the renal tract in all preterm infants at risk of renal calcification.

Who pioneered the use of alternative donors (and from the peripheral blood) in bone marrow transplantation?

Str.—Dr Hows writes her opinion that ‘The Seattle group has pioneered the use of peripheral blood matched family donor transplants . . . and perhaps that reflects her own experience, mainly in adult transplantation.’ As far as is known to us, the first successful bone marrow transplant from a father to a son was inspired by Professor J R Hobbs and undertaken on 29 August 1972 by the Westminster Bone Marrow Team for Mark Pegram who had severe aplastic anaemia. While the late Dr Iain Anderson was the consultant paediatrician and the late Professor James G Humble was the haematologist. Despite a stormy graft-versus-host disease (GVHD) in which bilirubin concentration rose to 118 μmol/l, Mark has survived to the present day with no evidence of chronic GVHD and has enjoyed a normal healthy life and currently plays rugby. He was probably the first human to be treated after bone marrow transplantation with antilymphocytic globulin. In 1985 the team published a series of 50 patients engrafted from genetic haplotype-sharing donors, and these were mostly for paediatric patients with higher survivals than the 40 in the Seattle paper.

The first intended HLA matched mixed lymphocyte culture negative transplant from a volunteer unrelated donor to produce an engrafted survivor was conceived by Professor J R Hobbs and undertaken on 13 April 1973 for Simon Bostic who had chronic granulomatous disease; Dr Kenneth Hugh-Jones was the consultant paediatrician, Dr David James was responsible for the HLA typing, and (now) Professor Masashi Yamamura perfected the mixed lymphocyte culture method8; the case was not reported in full until 1979.9 Cytoxan was only used for the induction to avoid total body irradiation which has more unpleasant sequelae for children, and it was thus discovered that this could only displace some of the human bone marrow, so that there was only engraftment of some 12% of the healthy female donor’s neutrophils. Neutrophil counts, nevertheless, were 0–7.1×10⁹/l and were identified by Professor Humble as they not only contained female ‘clubs’ but could also be shown by double staining to be strongly nitroblue tetrazolium positive in contrast to the majority of the totally negative cells. An almost identical result has since been reported.10 Such a good neutrophil count kept Simon completely free of life threatening infections and off all antibiotics for some six years, by which time the chimeric state had petered out and the nitroblue tetrazolium positive cells could no longer be detected. During that period, Simon flourished and grew normally and his lymphocytes remained negative to mixed lymphocyte culture negative against his donor when tested on seven occasions. With the final disappearance of the donor cells, Simon relapsed to his former severe illness developing liver and lung abscesses which prompted the introduction of intensive antibiotic treatment and subsequent prophylaxis, but thereafter his growth rate deteriorated and never again reached normal. He has grown to adulthood with modern care but was recently tested did not show much evidence of inducibility of increased staphylococcal killing capacity by the use of interferon gamma.11 His donor, Mrs Joan Macfarlane, went on to add two further children to the one she had at the time she volunteered, and, presumably as a result, she became mixed lymphocyte culture positive against Simon so was not used for a second graft.

A second boy with severe chronic granulomatous disease engrained for three months after a transplant in January 1975 for another matched volunteer unrelated donor and also derived immense benefit from the procedure to enjoy seven years of childhood life.12 Following our failure and an arose dying mother, who similarly had correction of his severe aplastic anaemia after a transplant in November 1975. A fuller account of the introduction of volunteer unrelated donors appears in Correction of Genetic Disease by Transplantation, 1989 a symposium report distributed by the Westminster Medical School Research Trust, 17 Horseferry Road, London SW1P 2AR. It gives the true credit for the initiation of the first volunteer unrelated donor bone marrow transplant to Professor James G Humble, who is its first case recipient, and Mrs Elisabeth Bostic, after the near miss when Professor Hobbs had proved a mixed lymphocyte culture negative matched unrelated donor from Holland for her first affected son, Andrew, who died just a few days before the graft could be undertaken in 1972. After Elisabeth’s death, full credit should then be maintained for the stoic work of Mrs Shirley Nolan who took up the fund raising to enable Dr James to build it up to its world famous size. On the above evidence, surely credit for pioneering the use of alternative donors belongs to Professor John R Hobbs and the Westminster Bone Marrow Team, who still enjoy the world’s best survivals from children so treated.

Incidentally, Hobbs was also responsible for the first transplant using stem cells of the peripheral blood, taken from a 4 year old donor in June 1970 to treat a boy with type I mucocutaneous candidiasis (migration inhibition factor is completely lost) with the disease which has proved fatal in all other cases who were not transplanted. The treated patient remains alive and well as the longest living survivor of a matched sibling transplant in Britain and Dr Hobbs is still the only person who has reported that this transplant was done at the Hammermill Hospital before she arrived.

K HUGHES-JONES
PG RICHES
Westminster Bone Marrow Team, Westminster Hospital, Paget House Wing, London SW1P 2AP


Dr Horas comments:
I am grateful to Drs Hughes-Jones, Selwyn, and Riches for their account of the pioneering role of Professor Jack Hobbs and other members of the Westminster Bone Marrow Transplant Team in the use of alternative matched donors in paediatric bone marrow transplantation.

I tried to write a short 'state of the art'
annotated of this specialised area which might be of practical use to paediatricians with a general interest in haematology. The emphasis is therefore on current concepts of donor selection and recent results.

Regrettably in this type of communication there is no space to address interesting historical perspective such as that provided by the Westminster team. Their experience would certainly take pride of place in a full length review article.

**District handicap teams: impediments to progress**

Sir,—Of the reasons discussed by Bax and Whitmore for lack of progress in setting up Court type district handicap teams,¹ much the most important is the inability or unwillingness of many doctors to contribute to effective interdisciplinary work. Education and social service departments are reluctant to commit resources to child development centres, especially those on hospital sites, because they anticipate medical domination of occupational policy (referrals, etc.), day to day management and "patient care" decision making. It would take much more than a commitment to provide a peripatetic service in satellite premises to overcome these reservations.

Similarly, professionals employed by education and social services are disinclined to recognise a divine right of doctors to be in charge under all circumstances, and are unlikely, with enthusiasm in such an environment. A senior social worker, himself committed to interdisciplinary working, said to me recently, 'a doctor's definition of a team is a group of people working together from he/she (the doctor) tells what to do'. The joke is on us, but it is really not at all funny.

Bax and Whitmore think that the Court committee's concept of a district handicap team was sound: I agree (I was a member of the committee) in the historical context of the late 1970s. Much has happened since then, however, and the changes in thinking and practice in the development of the Child Health Act 1981, the Disabled Persons' Act 1986, and the Children Act 1989 require that responsibilities for the management of childhood disability are shared far beyond the health services terms of reference of the Court committee. Of course the medical and health related contribution continues to be crucial and even pivotal in many instances, especially in early childhood.

Unless we collectively show more about our colleagues and less professionally arrogant in our attitude to interdisciplinary work, however, our influence will increasingly be marginalised.

We risk being consulted rather than involved, which would jeopardize compassionate care: the ultimate losers would be the children and their families.

The child development centre is a medical model (for example: are more whole hearted and less professionally arrogant in our attitude to interdisciplinary work, hence, our influence will increasingly be marginalised. We risk being consulted rather than involved, which would jeopardize compassionate care: the ultimate losers would be the children and their families.

The child development centre is a medical model (for example: are more whole hearted and less professionally arrogant in our attitude to interdisciplinary work, hence, our influence will increasingly be marginalised. We risk being consulted rather than involved, which would jeopardize compassionate care: the ultimate losers would be the children and their families.

**Major problems with paediatric bed usage statistics?**

Sir,—MacFaul and Long show that paediatric bed occupancy in two children's wards in Pinderfields Hospital can be calculated in five different ways, giving results ranging from 73% to 106%, depending on the treatment of empty beds and bed borrowing between specialties.²

Interesting as the exercise is, Dr MacFaul and Mr Long might ask their district management why such calculations should be necessary. The Körner committee recommended in 1982 that empty beds should no longer be allocated to a specialty.² Allocation of beds to specialties should be seen as a statement of operational planning intent and does not have to correspond to beds physically occupied or unoccupied, counted on a daily basis.³

Because of flexible use of beds between specialties, it is necessary to distinguish between ward bed occupancy and specialty bed occupancy. Ward occupancy is calculated as:

\[
\text{occupied bed days in ward} = \frac{\text{occupied bed days in ward}}{\text{available bed days in ward}}
\]

for each ward. This gives, as MacFaul and Long show, 54% for ward A and 69% for ward B in their example. Speciality occupancy is calculated as:

\[
\text{occupied bed days in any ward} = \frac{\text{occupied bed days in any ward}}{\text{allocated bed days for specialty}}
\]

In the Pinderfields example, on the information given, this is:

\[
949 \text{ (ward A) } + 3074 \text{ (ward B) } + 201 \text{ (intensive care and other)}
\]

5187 (allocated to paediatrics)

giving a paediatric bed occupancy over the period shown of 81%. This method follows not only 'the spirit of Körner', but also the letter.

This level of occupancy is well above the optimum of 75% for adult children's services mentioned in Health Building Note 23⁴ and supports concerns about a possible shortage of capacity to deal with peaks in demand.