British Paediatric Association

Proceedings of the Fifty-third Annual Meeting

The Annual Meeting of the British Paediatric Association was held at York from 7 to 11 April 1981. 537 members and 37 associate members attended together with 3 Heinz Fellows and 328 guests. The George Frederic Still Lecture was given by Dr Barbara Ansell (Northwick Park Hospital, Harrow).

A plenary session on Paediatric Cardiology was mounted jointly by the BPA and the British Paediatric Cardiology Section on 7 April, and on 9 April the BPA/BAPS Joint Standing Committee on Accidents presented a plenary session on accidents in childhood.

The Annual General Meeting of the British Paediatric Association was held on Thursday, 9 April 1981. The President, Dr G M Komrower, was in the chair. The minutes of the last meeting, which had been published in the Archives of Disease in Childhood, were received and approved.

ELECTION OF OFFICERS. The following will serve the Association for 1981–82.

PRESIDENT: Dr G M Komrower
PRESIDENT-ELECT: Prof J P M Tizard
HONORARY TREASURER: Dr A D M Jackson
HONORARY SECRETARY: Dr D R Harvey
HONORARY ASSISTANT SECRETARIES: Dr J D Baum, Dr T L Chambers, Dr D W Fielding

NEW MEMBERS OF COUNCIL 1981–84: Dr O G Brooke, Professor A G M Campbell (Chairman of the Academic Board), Dr L Haas, Dr R D Jones, Dr C A Porter, Dr M Reid, Dr D C Robinson, Dr K Simpson, Dr J Syme.

HONORARY MEMBERS: Professor Charlotte Anderson, Dr Katherine M Elliott, Dr Walter Henderson, Sir Desmond Pond, Mr Kenneth Till, Dr A Wilkinson.

MEMBERS: S A R Ali Taha (Saudi Arabia), Layla Al Roomi (Glasgow), M Baraitser (London), T Bate (Manchester), Anne Bolton (London), I W Booth (London), J E H Brice (Nottingham), Valerie A Broadbent (Cambridge), Elizabeth C Burns (London), A N Campbell (Newcastle upon Tyne), Sheila Campbell (Dundee), D A C Candy (London), J C Catford (Southampton), P C Corry (Dundonald), A J Cottrell (Sheffield), M G Coulthard (Newcastle upon Tyne), Margaret Crawford (Leeds), Gillian M Cruickshank (Ipswich), Sylvia S Dockeray (Dublin), O B Eden (Bristol), A T Edmunds (Bristol), J Edwards (Oxford), P D L Edwards (Bridgend), S D Ferguson (Cardiff), H M Fleet (London), J S Forsyth (Dundee), M Fox (Canada), J S Freeman (Manchester), T J French (Bristol), G T Frost (Dundee), Ann J Goldman (London), Sheila J Goldsworthy (London), H L Halliday (Belfast), Ann Harvie (Glasgow), P J Helms (London), O J Hensey (Liverpool), J H Higgins (Stirling), Monica Holmes-Siedle (Oxford), Helen Issler (London), Suvendrini N Jazel (London), H S Joffe (Bristol), Katherine Verrier-Jones (Cardiff), Jean W Keeling (Oxford), E Lewis (London), J S Lilleyman (Sheffield), J H K Lim (Ballymena), E J McGrath (Sheffield), A C F Margerison (Birmingham), M Massam (Sunderland), P M Mathew (Birmingham), T R Maurice (Marlborough), R Miles (Sheffield), Hilary E C Millar (Ipswich), D W A Milligan (Edgware), A M B Minford (Bradford), Margaret E I Morgan (Cardiff), R J H Morgan (Cardiff), A I Mukhtar (Belfast), H Nazer (Jordan), J R Owens (Liverpool), R G Pearse (Sheffield), F J C Perera (Sri Lanka), J R Pincott (London), C R Pinkerton (Belfast), R W Pitcher-Wilmott (London), R J Pollitt (Sheffield), S A Roberts (Oxford), W Joan Robson (Liverpool), Gillian Sleigh (Oxford), A W Smith (London), M F Smith (Sheffield), Paula Sneath (Epsom), G M Steiner (Sheffield), M Super (Manchester), D Taylor (London), Roslyn M Thomas (London), Pamela Tomlin (Manchester), Grace Webster (London), M H Webster (Birmingham), B F Whitehead (Cambridge), K N Wilkinson (Aberdeen), L H P Williams (Worksop), Elspeth Wing (Gloucester), Cynthia R Woodhall (Manchester), M A W Woolridge (Craigavon), G P Wyatt (Portsmouth).

ASSOCIATE MEMBERS: Patricia Allington-Smith (Norfolk AHA), E J Applegate (Norfolk AHA), Hilary Bingham (Sheffield AHA), R Bulchand...
(Hereford and Worcester AHA), Elinor Corfan (Birmingham AHA), T Costigan (Mid Western Health Board, Irish Republic), M Dwyer (Southern Health Board, Irish Republic), Nora D Evans (Southern Health and Social Services Board, Northern Ireland), T Fitzpatrick (Mid Western Health Board, Irish Republic), Irene E Gibbs (Avon AHA), Susan Hetherington (North Yorkshire AHA), Elizabeth Higham (Salford AHA), M V Jones (Gwynedd AHA), Judith E Kleinberg (Salford AHA), Shirley Lewis (Nottinghamshire AHA), Olive M McKendrick (Liverpool AHA), D Meager (Southern Health Board, Irish Republic), Ruth Pollock (Lancashire AHA), Veena Mehta (Ealing, Hammersmith, and Hounslow AHA), Norah Nyhan (Southern Health Board, Irish Republic), Yael Sherman (Camden and Islington AHA), Maii Walker (Dyfed AHA), M Wallis (Hampshire AHA), Gwyneth V W Young (Greenwich and Bexley AHA).


1. OBITUARIES

The Association has suffered the loss of Dr J Apley (Honorary Member), Mr J Crooks (Honorary Member), Dr R H Dobbs (Honorary Member and Past President), Dr Ruth Harris, and Dr D N Raine.

2. COUNCIL

Membership: The following members of the Association have served on Council during 1980–81: Dr G M Komrower (President), Dr D P Addy, Dr J D Andrew, Dr E H Back, Dr J D Baum (Honorary Assistant Secretary), Prof F Cockburn, Dr A F Conchie, Dr D W Fielding (Honorary Assistant Secretary), Dr W R Forbes, Dr D R Harvey (Honorary Secretary), Dr A D M Jackson (Honorary Treasurer), Dr B W Lewis, Dr G M Lewis, Dr J M Littlewood, Prof B McNicholl, Dr M W Moncreiff, Dr D Morris, Dr C H Nourse (Honorary Assistant Secretary), Dr Aileen Redmond, Dr L Rosenbloom, Dr N J Royston, Dr H Simpson, Dr H B Valman, Dr P E Walker, Dr G H Watson, Dr S G F Wilson, Dr R S Trompeter (Junior Representative), Dr Anita Jenkins and Dr Elizabeth Pryce-Jones (Associate Members Representatives), Prof D Hull (Chairman of the Academic Board).

Observers: The Association is grateful to the following for assistance and advice both at Council and in many other ways: Dr Margaret Bell (Department of Health and Social Services, Northern Ireland), Prof F S W Brimblecombe (Member of the Central Health Services Council), Mr A Jolleys (President of the British Association of Paediatric Surgeons), Prof R G Mitchell (Association of Clinical Professors and Heads of Departments of Paediatrics), Prof T E Oppé (Advisor in Child Health, DHSS), Dr Marie Richards (Welsh Office), Dr B C S Slater (Scottish Home and Health Department), Dr Mary Tate (Department of Health and Social Security).


3. MATTERS CONCERNING THE ADMINISTRATION OF THE ASSOCIATION

The Association’s staff comprises an Executive Secretary and 4 Assistant Secretaries. A temporary secretary was again taken on for 2 months before the 1981 Annual Meeting to process the booking forms.

The Association would like to record its continuing debt of gratitude to the Institute of Child Health for portering and mailing services, duplicating facilities, and the use of rooms for meetings.

Academic Board. The 15th Annual Report of the Academic Board has been received by Council.

4. AWARDS OF THE ASSOCIATION

James Spence Medal: Dr Elsie M Widdowson.

Donald Paterson Prize: Dr M I Levene.

Heinz Fellowships of the BPA: Heinz Fellowships for 1981–82 have been awarded to Dr K T Harilal (India) and Dr J M Sseremba (Uganda)—Fellowship A; and Dr G P Hosking—Fellowship C. The Association remains indebted to the Nuffield Foundation for its advice and administrative help.

5. FINANCE AND ALLIED MATTERS

The Directors of Unigate have once again generously donated their annual travel grant, this year increased to £250, and have supplied the programme and stationery for the 1981 Annual Meeting.

Contributions of £100 from Abbott Laboratories Ltd and £50 from G D Searle and Co Ltd have been made to the President's travelling fund.

The European Collaborative Committee on Child Health has donated £25 towards the work of the Association.

A contribution has again been gratefully received by the Association from the Trustees of the Moorgate Trust Fund who this year have approved an increased donation of £600.
Commander and Mrs A H Blacow have given the sum of £1000 to the Association in memory of their son Michael, a trainee paediatrician, who was killed in an accident. The money will be invested and a money prize from the trust fund (in the first instance £100) will be presented annually for the best paper presented in Plenary Session by a paediatrician below consultant status. The first prize will be awarded at the 1981 Annual Meeting.

The BPA continues to benefit by a share of the profits from the sale of the Archives of Disease in Childhood. Unfortunately the recent strength of sterling has reduced the amount of money received from the sale of the journal overseas. The profits from the Archives have therefore dropped considerably.

6. MEETINGS OF THE ASSOCIATION

The 52nd Annual Meeting of the Association was held at York in April 1980. 801 members and guests attended. A joint session was held with the Royal College of Psychiatrists, Child Psychiatry Section. Council thanks the Academic Board for organising the scientific programme of these meetings and the many members and guests who submitted papers. Council also wishes to thank the conveners and members of specialty groups (13 of which held sessions during the meeting) for their contributions.

The next Annual Meeting of the Association will be held from 20 to 24 April 1982.

7. STANDING COMMITTEES AND WORKING PARTIES OF THE ASSOCIATION

Reports have been received by Council, and comments have been submitted to government departments and other bodies on many important issues.

Council is deeply grateful to the members who have served on committees and working parties and also to those who have represented the Association on both statutory and voluntary bodies. Many individual members have helped the Association by their advice, suggestions, and criticisms.

Council wishes to record its special appreciation of the work of the Editors of the Archives of Disease in Childhood; the journal continues to be of the greatest value to British paediatrics.

Other agenda items

1. The Honorary Treasurer's verbal report and the accounts for 1980 were accepted. The meeting approved increases in the members' subscription rates to take effect from 1 June 1981.

2. The meeting approved the revised rules of the Association circulated to members in December 1980.

3. Dr E N Coleman gave details of the accommodation and technical facilities which would be available for the joint meeting between the BPA and the Scottish Paediatric Society to be held 20–24 April 1982 in Aviemore, and the Secretary to the Academic Board outlined timings for the scientific sessions.

SCIENTIFIC PROCEEDINGS

GEORGE FREDERIC STILL LECTURE. The lecture 'Chronic childhood arthritis today' was delivered by Dr Barbara Ansell of the Northwick Park Hospital, Harrow.

Transcutaneous oxygen analysers in clinical use. A D Milner, J Douglas (Nottingham).

Six transcutaneous oxygen analysers currently available were evaluated during a period of 6 months. (1) Questionnaires were devised to collect information on design and function. Twenty-four nurses gave each of 28 items a 1-4 star rating. The nurses gave the Roche as their first choice, closely followed by the Draeger/Helliger and Airshield units. (2) The nursing time needed to keep each unit in use was calculated, ranging from 136 to 194 minutes per 24 hours. (3) The accuracy of the devices was measured by comparing umbilical artery samples with transcutaneous oxygen readings. The results showed wide scatter with correlation coefficients ranging from 0.51 to 0.71. In 5–10% of these comparisons information from the transcutaneous oxygen analysers would have led to an inappropriate decision, possibly causing hypoxia or retrolental fibroplasia. (4) The reliability of the devices was documented over the 3–6 month period. There were 12 breakdowns, only the Draeger functioning throughout the whole period. (5) The expense of keeping a unit working, based on performance and manufacturer's information, was £1028–£1521 per annum. It was concluded that these devices, although useful, are too unreliable to be used as a substitute for regular blood gas sampling, and have considerable nursing time and financial implications.


Liver disease associated with α-1 antitrypsin deficiency (PiZZ) presents difficulties in genetic
counselling despite its known autosomal recessive inheritance, since only 10–20% of PiZZ children develop liver disease and its prognosis is extremely variable. Of 78 PiZZ children from 62 families, 16 died of cirrhosis, 40 have continuing liver disease, 15 have recovered, and 7 have had no hepatic involvement. Antenatal determination of the PiZZ phenotype is now possible at 17 weeks’ gestation. To determine whether abortion of the PiZZ fetus should be considered, we have reviewed the liver disease in all 16 families with 2 PiZZ siblings.

In 4 families both siblings have now no evidence of liver disease. In 7 families, both siblings are severely affected, 11 having cirrhosis. However, in the remaining 5 families, which include 2 pairs of monovular twins, one sibling is unaffected. Three index patients have cirrhosis and 2 minor liver involvement with a possible good prognosis.

Although the study suggests that environmental factors in part determine the development of liver disease in the PiZZ child, the similarity of severity in 11, and possibly in 13, of 16 families, indicates that the pattern of liver disease in the index case should be considered in advising fetoscopy and termination of pregnancy.

**Delayed referral of patients with Hirschsprung’s disease.** V M Wright, J D Frank (London).

An analysis of over 80 patients with Hirschsprung’s disease who were diagnosed at The Hospital for Sick Children during the last 5 years has been carried out.

The purpose of this study was to determine whether there was a delay in referral of these patients in spite of a significant neonatal history. Seventy-six per cent of patients had at least two of the following symptoms in the first week of life: passage of meconium after 36 hours, vomiting which was often bile-stained, abdominal distension, and poor feeding. These symptoms prompted immediate referral in only half of them. In those in whom a delay occurred there was a 50% incidence of enterocolitis, a complication which carried a 25% mortality in this series. This complication can be largely avoided by early diagnosis as shown by the fact that only 6% of patients developed enterocolitis in the first week of life.

Suction rectal biopsy has proved to be a safe, reliable, and rapid method of diagnosing Hirschsprung’s disease in experienced hands. Therefore, earlier referral of the child with symptoms of Hirschsprung’s disease will reduce the morbidity and mortality of this condition.

**Screening for cystic fibrosis in East Anglia—a population study.** J W Clarke, A Heeley, J A Kuzemko, D King (Peterborough).

The long-term survival of children with cystic fibrosis (CF) is improving. Studies indicate that early diagnosis and treatment are associated with a better prognosis, although most survivors are considerably disabled. Recent developments—such as pseudomonas vaccines and improved pancreatic supplements—make it imperative to establish whether very early diagnosis together with such treatment improve the patient’s prospects. To establish very early diagnosis requires a reliable screening test. No established biochemical test can do this. Measuring immunoreactive trypsin in dried whole blood has however, in our experience, proved a reliable test. A retrospective study in 1979 confirmed that infants with CF had greater than normal trypsin levels on their 9th day Guthrie type screening specimens. Of 11 000 infants screened since then in East Anglia, 23 (0.2%) had levels greater than 80 ng/ml (95% centile is 46 ng/ml). Of these, 4 had persistently high levels and 3 have been confirmed as having CF. Raised neonatal trypsin levels were also found in several infants who presented with intestinal obstruction and have subsequently been confirmed as having CF. No other clinical condition in early infancy has been shown to result in raised immunoreactive trypsin levels.


A prospective neurological and developmental study was done on three groups of infants to compare the early development of infants with intraventricular haemorrhage (IVH) or ventricular dilatation with that of normal infants.

Group 1 consisted of 9 infants diagnosed by ultrasound as having persistent ventricular dilatation after IVH in the neonatal period. Gestational ages ranged from 27 to 34 weeks.

Group 2 consisted of 12 infants of similar gestational ages and birthweights who had IVH detected by ultrasound in the neonatal period but did not develop ventricular dilatation.

Group 3 consisted of 12 infants of 30 to 34 weeks’ gestation who had no evidence of IVH.

The infants were examined, without reference to the ultrasound findings, at 6 and 9 months after birth. The follow-up examination consisted of a detailed neurological examination and a Griffiths’s developmental assessment. Group 1 infants showed lower
total developmental quotients than either group 2 or group 3 infants. The scores for group 2 infants were
between those of group 1 and 3. Although the
corrected developmental quotient at 6 months was
normal in all infants, neurological abnormalities
were present in half the infants in group 1 and in
one-quarter of those in group 2.

Patterns of encephalopathies in young children.
E M Ross, M H Bellman (London).

The National Childhood Encephalopathy Study explored the epidemiology of acute severe neuro-
logical disease in infants aged between 2 and 36
months. Specialists throughout Great Britain were
asked to notify defined children between July 1976
and June 1979. Age-matched controls were also
sought.

From an analysis of the first thousand cases: 316
had prolonged febrile convulsions, 127 had non-
febrile convulsions, 275 had encephalitis/encephalo-
pathy, 212 had infantile spasms, 42 had Reye’s
syndrome, 28 had other problems.

Although patients throughout this age range were
notified, children who showed continuing defects
presented at 8 1/2 months (on average) but those who
recovered presented 5 months later (at about 13 1/2
months). The former group were at the age at which
routine immunisations are advocated. However, 951
(96·3 %) of the total group and 95·7 % of those who
had previously been normal had not been immunised
with triple vaccine within 7 days of presenting with
encephalopathy.

It was concluded that encephalopathies in infancy
form a very heterogeneous group with many
different causes. At the very worst, immunisation
can only be a marginal factor.

Febrile convulsions: developmental follow-up in
relation to recurrence of fits and anticonvulsant
therapy. J Aldridge-Smith, S Wallace (Cardiff). To
be published in full in the Archives, 1982, 57.

The value of a multifactorial study of all infant deaths.
E M Taylor, J L Emery (Sheffield).

Earlier studies in Sheffield of ‘sudden’ infant deaths
have shown that most cot deaths are unexpected
deaths in which many possibly preventable factors
were present.

It was decided to monitor all infant deaths in
Sheffield on a long-term service basis. A procedure
for follow-up and multifactorial analysis of all
postperinatal deaths has been developed which
could serve as a model for the continued monitoring
of the child care service.

For the procedure a detailed necropsy is carried
out and data are collected from obstetric and
paediatric records, the family doctor, health visitor,
midwife, and social worker if appropriate. An
extensive home visit is made by a senior clinical
medical officer. The material is collated at a case
conference held in the family doctor’s surgery.

The conclusions of case conferences are presented
to the area nurse (child health) and the specialist in
community medicine (child health) and appropriate
administrative action is undertaken.

In a population of 6000 births there was only one
infant death that could legitimately be described as
unexpected and unexplained.

The prognosis of child abuse. O J Hensey, J K
Williams, L Rosenbloom (Liverpool).

Systems for detecting child abuse and for protecting
the physical safety of the child are well established.
Little is known about the development and prognosis
of abused children. In this study the subsequent
development and life events of 50 children taken into
care during the period 1972–77 were determined.
Information was obtained by interview with the social
worker responsible for each case. Any further
information was obtained from medical and school
records.

All 50 children were traced: 37 (74 %) were still the
subject of a care order, 45 children were currently
living with a family, but 25 of them were with substi-
tute families. Rehabilitation at home was attempted
in 27 cases and failed in 7, five children suffering
further abuse. Twenty-three children had at some
stage displayed behavioural disturbance and 11 were
developmentally delayed.

The early identification of the future needs of
abused children and their families represents a
challenge in child abuse. In Liverpool those children
who best survived their experiences were those
where a positive decision had been made soon after
they came into care, either to rehabilitate at home or
to sever family links and find an alternative family.

Clinic non-attenders: are they a high-risk group?
N R Butler (Bristol).

Clinic non-attenders are an established high-risk
group who have received little investigation. Among
12,000 children in the CHES British National
Cohort Study of children born between 5 and 11
April 1970, 15·1 % did not attend child health
clinics in the first 5 years of life. Significantly more
non-attenders came from large families, from
social class V, rural areas, and from Scotland. The
characteristics of all the non-attenders were followed
until age 5 years when all received cognitive, behavioural, and health assessment. A comparison between attenders and non-attenders showed the latter to be disadvantaged, but this was so to a lesser extent after allowance had been made for social and environmental factors. This study has important implications for child health screening and clinic policy.

Pubertal growth and development and final height in 55 children with idiopathic growth hormone deficiency. J M Tanner, M A Preece, C Burns, N Cameron (London).

The ultimate result of long-term growth hormone (GH) treatment (2 to 15, average 5 years), in 39 patients with isolated GH deficiency (26 total, 13 partial), 10 with GH deficiency plus gonadotrophin deficiency, and 6 with multiple pituitary hormone deficiency (MPHD).

The final height of patients with isolated GH deficiency averaged 2.3 SD below the population mean (untreated, about 6 SD). Half the boys, but fewer of the girls ended above the 3rd centile. Both pubertal development and adolescent growth spurt were normal, though 2-3 years late, since bone age advancement averaged just 1 'year' per year during treatment. The trunk/limb relation was normal. Final height was affected more by midparent height (correlation 0.72) than by any other factor, but the degree of smallness at initial treatment also, independently, affected the final result (partial correlation 0.37).

Patients with GH deficiency plus gonadotrophin deficiency and with MPDH ended up taller (−1.5 and −1.0 SD) but only because their legs were (disproportionately) longer. Such patients have a choice between the outcome of final height, trunk/limb proportion, and degree of delay of induced puberty.

These results indicate that the unrecoverable 2 SD of height was lost during early childhood, and stress the importance of early diagnosis, before the patient has sunk too far below the normal standards.

Marrow transplantation in acute myeloid leukaemia. J G Watson, D N Lawson, R L Powles (Sutton).

Seventeen children with acute myeloid leukaemia (AML) in remission received bone marrow transplants. Thirteen donors were MHC identical siblings and four were haplotype identical parents. Methotrexate or cyclosporin A was used to prevent graft-versus-host disease (GVHD). The outcome was compared with that of 14 children with AML who remitted and received conventional maintenance.

Four of 14 receiving conventional therapy are alive and the median survival of these 14 is 74 weeks from diagnosis. Fourteen of the 17 children with transplants are alive and median survival/follow-up of the 17 from diagnosis is 90 weeks. Death was due to GVHD (1 patient) and recurrent leukaemia (2 patients).

Relapse occurred in the conventional group after a median of 31 weeks' remission. Those 13 children transplanted after less than 31 weeks' remission now have a median complete remission in excess of 41 weeks.

Eleven of 14 surviving children are completely well, a median of 90 weeks after diagnosis; 1 has recurrent leukaemia in remission and 2 have neurological deficits. Marrow grafting results in a greater proportion of children with AML surviving without disease for longer.

Curative treatment of Hurler's disease? K Hugh-Jones, Mrs Young, Mrs Mossman, A D Patrick, P F Benson (London).

A fully documented case of Hurler's disease mucopolysaccharidosis type 1, clinically, developmentally, radiologically, by urinary glycosaminoglycan analysis, and by leucocyte alpha-iduronidase estimations on child and parents, was given a bone marrow transplant from his mother on 24 June 1980, when he was just under 1-year old. His acute graft-versus-host disease (GVHD) has been controlled, and he is now being treated for chronic GVHD of the skin and liver.

His general condition is excellent 150 days after the graft; developmentally he is progressing not regressing, clinically the corneal clouding is clearing, and the hepatosplenomegaly decreasing.

The graft has obviously taken, as he has GVHD, his lymphocytes are now all female, and leucocyte alpha-iduronidase activity showed a rise by day 14, and was within the heterozygous range by day 37. The urine glycosaminoglycan/creatinine ratio was about five times normal before and immediately after the graft, but by 101 days had fallen to a level just above the normal range. The dermatan sulphate content was greatly decreased.

The mother, before the graft, was given an auto-blast immunisation which reduced the mixed lymphocyte reaction against her son. The graft was pretreated with ATG in an attempt to reduce the severity of the GVHD.

Isosorbide in the management of infantile hydrocephalus. S A W Salfield, J Lorber, A P Lonton (Sheffield).

During the 7 years ended August 1979, 106 infants
with various types of hydrocephalus were treated with isosorbide.

Sixty-five infants had moderate hydrocephalus. It was hoped that shunt surgery could be avoided and this was achieved in 36. In 17 shunt surgery was delayed by at least 28 days or until the infant was fit for surgery (worthwhile delay). In 11 isosorbide failed and shunts were inserted without delay. Isosorbide was stopped for other reasons in one.

In 41 infants the hydrocephalus was severe. The intention was to delay shunt surgery. However, 3 responded well enough to avoid shunts. Seventeen achieved a worthwhile delay. Isosorbide failed in 21.

Two of the 39 infants who avoided shunts died. Thirty-three of the 37 survivors have normal intellectual development.

In addition, 10 courses of isosorbide were given with the aim of avoiding or delaying revision of shunts. Revision was avoided in 4 children and delayed in 2, and isosorbide failed in 4.

Side effects were rare and were reversible on stopping isosorbide or reducing the dose.

It is concluded that in infants with moderate degrees of hydrocephalus, there is a good chance with isosorbide of avoiding the dangers of shunt surgery. In severe infantile hydrocephalus there is a small chance of avoiding shunt surgery and a reasonable chance of delaying it until the infant is bigger or fitter for surgery.

Isosorbide can help to avoid or delay surgical revisions in shunt-treated hydrocephalus.

**Effect of carbohydrate food source on blood glucose control of diabetic children.** A L Kinmonth, R Angus, J D Baum (Oxford).

Traditional diabetic diets pay more attention to amount of dietary carbohydrate than to source, other than discouraging sugar. We have compared the effect of unrefined (U) and refined (R) liberal carbohydrate diets (50-55% of calories) on the control of 10 diabetic children in a randomised crossover, domiciliary study.

U employed whole foods (for example beans, wholemeal bread) with a mean dietary fibre intake of 60 g/day. R employed processed foods (for example white bread, stewed apples) with a mean fibre intake of 20 g/day. Individual diets were isocaloric for carbohydrate, fat, and protein.

Glycaemic control was assessed by daily urine analysis, home blood glucose measurements (Eyetone: Ames), and HbA1. After 6 weeks on each diet diurnal blood and urinary glucose profiles were performed at home.

Blood and urine glucose was lower throughout the 24 hours on U, both on daily testing and on profile days; for example, on profile days mean blood glucose levels (mmol/l±SEM) for diets U and R were respectively: fasting 5·6±0·9 v 7·5±1·7; post breakfast peak 11±1·3 v 16±1·7**; midday 5·1±0·7 v 11·6±1·6**. Mean 24-hour urinary glucose (g/24h) was 9±1 v 38±15**.

Five children retained residual pancreatic activity measured by C—peptide. They showed the most striking improvement in control on the U diet.

Six months later children were eating significantly more dietary fibre than originally, mean g/day 35±3 v 20±1*. The use of a liberal carbohydrate diet based on acceptable unrefined foods can significantly improve glycaemic control of diabetic children.

*P<0·05 **P<0·01

**PAEDIATRIC CARDIOLOGY SESSION**

**The developing pulmonary circulation in health and disease.** Sheila G Haworth (London).

Normally the preacinar arteries and airways develop by the 16th week of intrauterine life while the intra-acinar (respiratory unit) arteries appear during late fetal and postnatal life. At birth, intra-acinar arteries dilate immediately and smooth muscle is reduced during the first weeks. The pulmonary circulation is remodelled as the child grows, to accommodate an increasing cardiac output without an increase in resistance. Early fetal abnormalities of reduced preacinar branching occur in many conditions including congenital diaphragmatic hernia, renal agenesis, and dysplasia. Later fetal abnormalities of intra-acinar arterial size, number, and muscularity occur in severe cardiac malformations—such as aortic or pulmonary atresia. At birth, failure to adapt to extraterine life occurs in persistent fetal circulation when increased muscularity and enlarged endothelial cells can fatally occlude the precapillary bed. Incomplete adaptation is a feature of cardiac malformations associated with pulmonary hypertension and later, the intra-acinar arteries may fail to develop normally. In children a high pulmonary vascular resistance may be due to growth failure and not to classical obliterative pulmonary vascular disease. Childhood respiratory disorders such as cystic fibrosis and kyphoscoliosis prevent normal pulmonary arterial development. Hypoperfusion is also harmful. Thus the developing pulmonary circulation is extremely susceptible to abnormalities of pressure and flow, and in childhood structural changes occur with startling rapidity.

Two hundred consecutive infants referred during 1976 and 1977, and under age 1 month at the time of first attendance, are reviewed. They constituted 20% of the new patients seen in the unit during the period. Structural congenital heart disease was present in 153 of them. Of these 20% are alive without surgical treatment and 40% are alive after corrective or palliative surgery. 18% have died after surgery and 22% died without surgery. Of the 47 patients without a structural abnormality 77% survived. Most of these patients had primary respiratory disease. Fifteen of the 35 patients presenting on the first day of life did not have structural congenital heart disease. VSD was the cardiac lesion most often seen, the majority having fairly small defects. Survival with transposition of the great arteries or coarctation was good, but among infants with cyanotic lesions and low pulmonary blood flow requiring palliation in the first months of life the mortality was high.

Surgery for the infant with congenital heart disease. D I Hamilton (Liverpool).

During the last decade (1970–80) unprecedented progress has been achieved in the management of congenital heart disease in infancy. 30% of children undergoing open heart surgery and 40% of cases undergoing closed cardiac surgery at the Royal Liverpool Children’s Hospital during 1980 were under 1 year of age. Surgical mortality is related to the complexity of the defect(s) and also to age. Problems remain where heart chambers and/or the pulmonary arteries are seriously underdeveloped, as in classical tricuspid atresia, pulmonary atresia with intact septum, and in pulmonary atresia with small or non-confluent branch pulmonary arteries. Improved results can be expected during the next decade with a further increase in corrective surgery during infancy. Initial palliative surgery will continue to be employed to ‘grow’ underdeveloped vessels and chambers.


The progress in the surgical management of children with congenital heart disease has increased in scope and success during the last 25 years. Although many are now able to lead normal lives, residual problems remain and long-term medical supervision and advice are required. This is reflected in the increasing numbers of adolescents (age 12–19 years) seen in the National Heart Hospital during the last 10 years. These patients are admitted for primary medical reasons such as treatment for rhythm disorders, occasionally infective endocarditis, problems in relation to increasing pulmonary vascular disease or to myocardial dysfunction. Others require further surgery for treatment of residual defects or replacing valves or conduits. In certain lesions palliation has prolonged life until the end of the ‘unnatural’ history has been reached in adolescence—many of these are tragedies.

Awareness of this newly created medical community, ‘the fruits of our labours’, is important. Mostly the outcome is very good but more thought is required about palliating certain lesions in infancy. The need for long-term support and care is vital. Few are completely cured and both cardiac and extracardiac problems may demand more medical advice.

ACCIDENTS IN CHILDHOOD SESSION

The environmental aspects of childhood accidents. R H Jackson (Newcastle upon Tyne).

The work of a children’s accident department. D G Young (Glasgow).

How do children cope with traffic? C I Howarth (Nottingham).

Child poisoning; a model for accident prevention in general? J R Sibert (Glamorgan).

POSTER PRESENTATIONS


Effect of lard on digestion and absorption of fat and energy by newborn infants. O G Brooke, C Ward.

Relationship between oxygen tension (toPo2), heart rate, breathing, and sleep during infancy after preterm birth. E A Carse, A R Wilkinson, P L Whyte, D J Henderson-Smart, P Johnson.
Cefuroxime in the early neonatal period. C H Dash, M R K Kennedy, D Cox, S H Ng.


Tracheal suction versus lavage in the prevention of meconium aspiration syndrome. R Dinwiddie, J Connell, D Lim, D R Harvey.


Comparison of low-risk women delivered in a GP maternity unit v matched women delivered in a consultant maternity unit. M Klein.


Incidence, aetiology, and prognosis of periventricular encephalomalacia in very low birthweight infants. I Morgan, N Coad, R W I Cooke.

How are diarrhoea and vomiting treated? PS Morrison, T M Little.

‘Windswept deformity’—a preventable problem? A Nicoll, R Stevens.


Age at onset and prognosis in childhood obesity. E M E Poskitt.

Oxygen monitoring during transfer of sick newborn babies. S Rom, M Silverman.

Visual aids or visual handicaps? G Rylance.


Estimation of individual kidney glomerular filtration rate from the renal uptake of 99mTc—DTPA during computer-assisted dynamic renal scanning. G Vivian, I Gordon.


Differentiation of 185 children without physical abuse from 366 referred for possible abuse. J M Wynne, M F G Buchanan.

GROUP SESSIONS

British Paediatric Cardiology Group

What influence does 2-dimensional echocardiography have on the assessment of the neonate and infant with congenital heart disease. J F Smallhorn.

Influence of balloon volume on results of atrial septostomy in transposition of the great arteries. T G Powell.

Prenatal detection of congenital heart defects. L D Allan.

Cross-sectional echocardiography and pathological correlations in right atrioventricular valve atresia. M J Godman.

Realtime echocardiography diagnosis of specific ventricular septal defects. G Sutherland.

Two-dimensional echocardiography in infants with left heart hypoplasia. C Zlochevsky.


Diagnosis of complete transposition of the great arteries using subcostal 2-dimensional echocardiography. E D Silove.

British Paediatric Immunology and Infectious Disease Group


Immune responses in obstructive jaundice of infancy: measurement of immune complexes and antiliver specific protein in sera. V F Larcher.

Oral immunoglobulin therapy in hypogammaglobulinaemia. D B L McClelland.

Slow deposition of C3 on yeasts by sera defective in yeast opsonisation. D M Robertson.


Maternal responses to antigens of the major histocompatibility complex in pregnant mice. C M M Stern.

Food antigen handling in atopic patients. R J Levinsky.

Secondary immunodeficiency in primary intestinal lymphangiectasia and successful treatment by surgery. S Strobel.


Associations of postenteritis enteropathy, responding to cows' milk elimination. J A Walker-Smith.

Chronic viral infection of the intestinal tract: a clue to immunodeficiency and to the 'jig-saw' of the pathogenesis of protracted diarrhoea in infancy. J W Booth.


Differing mechanisms of liver damaging immune responses in children with HBsAg-positive and HBsAg-negative chronic liver disease. G M Vergani.


British Paediatric Neurology Association

Management of the neuropathic bladder in childhood. M Borzyskowski.

Aim-orientated physical management. D Scrutton.

Counselling in families with a handicapped child. D C Taylor.

Neonatal intracranial bleeding—can it be prevented or treated? J Lucey.

Intracranial pressure and end-expiratory Pco2. S D Levin.


Factors associated with mortality and morbidity after clinically apparent intraventricular haemorrhage in the newborn. R O Robinson.

A 3-year survey of infantile spasms in Great Britain. M H Bellman.

Ontogeny of seizures in altered thyroid state. C Rajagopal.


Role of computerised tomography in children with 'non-specific' mental subnormality. S Lingam.

British Paediatric Nutrition, Metabolism, and Pharmacology Group

Effect on IQ of relaxing rather than stopping the low phenylalanine diet at 8 years of age in patients with phenylketonuria. I Smith.

Treatment of a late diagnosed case of B12-responsive methylmalonic acidemia. A Green.


Effects of maternal lorazepam on the neonate. A Whitelaw.

Carbamazepine pharmacokinetics in children after single and multiple dosing. T A Moreland.

Hepatic adenomas in glycogen storage disease. D B Dunger.


Nutritional aspects of chronic renal failure in infancy. R W A Jones.

Regional screening for maternal aminoacidaemia and changes in amino-acid concentrations in untreated cases during pregnancy. I B Sardharwalla.


Energy retention, nitrogen balance, and growth in preterm infants fed on expressed milk, low solute infant formulae, and a special 'premature' formula. O G Brooke.

**British Paediatric Tropical Child Health Group**


Neonatal admissions to the paediatric medical wards of Mulago Hospital, Kampala. P M Barnes.


Mother and child behaviour after early contact. M F Lowry.


Measles immunisation in protein-calorie malnutrition. S I Salih.


Cows' milk sensitive enteropathy: an important cause of chronic diarrhoea in Indonesian infants. P D Manuel.


Chronic liver disease in childhood in Pune, India. S Bhave.

Body shape in young children with homozygous sickle cell disease. M Stevens.


**Community Paediatric Group**

Relationship between health, development, and behaviour in the child and stress in the mother. M Bax.

Evaluation of the progress of 50 multiply handicapped preschool children attending the teaching group at the Mary Sheridan Centre. B J Armstrong.


Accidents in the first 5 years of life. J Golding.


**British Paediatric Perinatal Group**

The use of an orthodontic appliance as an aid to oro-gastric intubation to free the nasal airway in the premature infant. P G Sullivan.

The fourth goal of perinatal medicine. C Ounsted.

Supporting bereaved parents after perinatal death. G C Forrest.

Home and hospital delivery—an on-going controversy. N R Butler.

Retrolental fibroplasia re-examined. J Lucey.

The place of breast milk. J D Baum.

Transpyloric feeding. E Dryburgh.

Parental nutrition. C A Hughes.

**British Paediatric Radiology Group**

DMSA scanning. The results of a follow-up study on 32 children who had ureteric implant under 1 year. H Carty.

Intravenous urography or diuresis scintigraphy in upper urinary tract dilatation? S T Meller.
Value of radiology in childhood leukaemia. P S Thomas.

Radiological bone abnormalities in children with sickle cell disease. M McNair.


Thoughts on CT scanning in children. S E W Smith.

British Society for Paediatric Endocrinology


Diagnostic re-evaluation in congenital hypothyroidism. J A Hulse.

Age-related changes in cartilage responsiveness to plasma and plasma somatomedin activity in the fetal and neonatal rat. D J Hill.


Towards a reliable and practical system of home blood glucose monitoring in diabetic children. S D Ferguson.

Effect of somatostatin infusion on intermediary metabolism and enteroinsular hormone release in infants with hyperinsulinaemic hypoglycaemia. A Aynsley-Green.

Raised plasma 17OH—progesterone in hyponatraemic infants without congenital adrenal hyperplasia. M O Savage.


Gonadal function in adolescent girls with congenital adrenal hyperplasia. I A Hughes.

Use of the sex hormone primed insulin test in distinguishing growth delay from idiopathic growth hormone deficiency. E C Burns.

Measured exercise as a screening test for growth hormone deficiency. A G Nicoll.

Comparison of the oral clonidine and intravenous insulin tolerance tests for growth hormone secretion. N C Fraser.

British Paediatric Gastroenterology Group

Prognostic features of children with chronic constipation. G S Clayden.

Congenital neuronal dysplasias of the hind-gut—a histochemical study. E R Howard.

Culture of lymphocytes from colonic and small intestinal biopsies. H A Brown.


Small intestinal mucosa damage with E. coli O128 adhesion in traveller’s diarrhoea. A D Phillips.

Effect of E. coli heat-stable enterotoxin on electrolyte and water transport, transmural potential differences, and enzyme activities in the rat jejunum in vivo. D C A Candy.

Comparative effects of surose and glucose in modifying cholera toxin induced intestinal secretion. J Ksiazyk.


Antigen uptake in small intestinal mucosa in childhood—an investigation using horseradish peroxidase. D Jackson.

Detection of mast cells in human small intestinal mucosa is dependent on the fixation (and staining) technique. S Strobel.

A comparison between Indian childhood cirrhosis and the copper-treated lamb. A Kantarjian.


Is there an unidentified growth factor in cystic fibrosis? J G Yassa.

The British Association for Paediatric Nephrology

Reflux as a cause of renal damage. P Ransley.

Improvement in renal function after bilateral ureteric reimplantation for vesico-ureteric reflux. A R Mundy.


Levamisole in the management of frequently relapsing steroid-responsive nephrotic syndrome. J G Davies.

Serum immunoglobulins and lymphocytes sub-populations in idiopathic nephrotic syndrome. S de Mello.


Polyamines in children with uraemia and the nephrotic syndrome. R H K Mak.


Neurological complications of hypertension. R S Trompeter.


Spontaneous platelet aggregation in glomerular disease in children. M Levin.

British Paediatric Oncology and Haematology Group

Strengths and weaknesses of new imaging techniques in paediatric oncology. Janet Husband.


Assessment of adriamycin cardiotoxicity in paediatric oncology. A W McNinch.

Impaired renal function and growth after Wilms's tumour treatment. F Breatnach.


Prolonged impairment in the ability of the preterm infant's blood to deliver oxygen. B Holland.


Bone marrow transplantation in severe infantile osteopetrosis. C A Sieff.


British Paediatric Respiratory Group

Exercise induced asthma—the current state of play. S Godfrey.

Are preterm babies more likely to develop asthma? I L Black.

Growth and stature in perennial asthma treated with beclomethasone dipropionate. G Hambleton.

How valid are the results of short-term trials in asthma? N Wilson.

Allergy in cystic fibrosis. R Pitcher-Wilmott.

The lungs from cradle to grave. P Helms.

Obliterative bronchiolitis. A D Milner.


Uneven distribution of pleural and alveolar pressure in newborn babies: laboratory observations and clinical implications. C S Beardsmore.