BRITISH PAEDIATRIC ASSOCIATION

PROCEEDINGS OF THE TWENTY-SIXTH GENERAL MEETING

The twenty-sixth annual general meeting of the British Paediatric Association was held at The Old England Hotel, Windermere, from April 27 to 30, 1955.

BUSINESS PROCEEDINGS. The President, S. Graham, was in the Chair, and the following members were present:


The Minutes of the last annual meeting were approved.

ELECTION OF OFFICERS. The following were elected by ballot for the year 1955-56:

President: Professor F. M. B. Allen.
Treasurer: Dr. R. Lightwood.
Secretary: Dr. P. R. Evans.
Executive Committee (for three years):
Dr. J. Vernon Braithwaite.
Dr. F. J. W. Miller.
Dr. G. Clifford Parsons.
Dr. T. Pease Williams.
(to replace Dr. D. Court, Prof. W. S. Craig, Dr. D. Gairdner, Professor W. F. Gaisford).

ELECTION OF NEW MEMBERS. The following were elected by ballot to membership of the Association:

HONORARY MEMBERS:
Professor Stanley Graham.
Dr. Cicely D. Williams.

CORRESPONDING MEMBERS:
Dr. L. Emmett Holt, Junr. (New York).
Dr. Bronson Crothers (Boston).
Dr. G. Huët (Holland).

ORDINARY MEMBERS:
Dr. E. G. Brewis (Newcastle).
Dr. J. O. Forfar (Edinburgh).
Dr. C. Harvey (Doncaster).
Dr. W. Henderson (York).
Dr. F. P. Hudson (Southport).
Dr. J. Lorber (Sheffield).
Dr. W. H. Patterson (Manchester).
Dr. K. B. Rogers (Birmingham).
Dr. J. Thomson (Edinburgh).

The Treasurer's report was received and approved.

The report of the Executive Committee was received and approved and is printed below. Arising out of item 6, the Committee was asked to consider having a few longer communications from members or guests if there was no lecture at the meeting. Arising out of item 9, it was resolved not to publish the report on children's hospitals before the Paediatric Committee of the Royal College of Physicians of London had expressed its views.

The President made a statement about the joint meeting in Quebec, and the Hon. Secretary spoke about the International Paediatric Association meeting in Copenhagen in 1956.

There were 54 guests present including 12 from overseas.

The George Frederic Still lecture was delivered by Professor F. A. E. Crew.

Report of the Executive Committee 1954-55

1. The Association will wish to congratulate Dr. E. A. Cockayne on the award of the O.B.E.: Dr. J. L. Gamble on receiving the Moxon Medal of the Royal College of Physicians of London; Professor S. Graham on his appointment as President of the Royal Faculty of Physicians and Surgeons; Dr. W. Sheldon on being appointed a member of the Clinical Research Council; Professor
R. W. B. Ellis on being appointed a member of the Scottish Advisory Committee on Medical Research.

At the meeting of the Council of the British Medical Association on April 13, Professor Norman B. Capon, of Liverpool, was presented with the Dawson Williams Memorial Prize for 1955 in recognition of his work in child health, particularly in the field of neonatal paediatrics.

2. The Association has suffered the loss, since its last Annual Meeting, of Sir Edward Mellanby, Sir James Spence, Dr. E. M. Stephen and Dr. Harold Waller.

3. The Executive Committee has met three times since the last Annual General Meeting: the following is a summary of the matters with which it has been concerned.

4. MEETING IN QUEBEC JUNE 15-18, 1955. About 20 members will be attending, and most of them taking an active part in, this joint meeting of the Canadian and the two American societies. To commemorate the occasion the B.P.A. delegation hopes to present its Canadian hosts with a gavel carved from a surviving piece of the plane tree which stood in Dr. Mead's garden in Great Ormond Street, and which many ex-residents of the old hospital will remember.

5. INTERNATIONAL PAEDIATRIC ASSOCIATION. The next International Congress will be held in Copenhagen from July 22 to 27, 1956, under the Presidency of Professor Plum. A small sub-committee (A. A. Moncrieff, D. Gairdner, P. R. Evans) has considered and commented on the programme suggested by Professor Plum.

6. ANNUAL GENERAL MEETING. The Executive Committee discussed the value to the Association of having annual lectures ('Still' alternating with 'Windermere'). No recommendations as to the future policy were made but the matter will be reconsidered during the forthcoming year. (The endowment of the Windermere lecture ends in 1956.)

7. ARCHIVES OF DISEASE IN CHILDHOOD. The Executive Committee accepted recommendations of the Editorial Committee lengthening the term of service on the Committee to five years and altering the method of appointment of editors and committee members. They will in future be nominated by the Editorial Committee and the nominations will then be submitted to the Executive Committee.

8. HISTORY OF THE B.P.A. Dr. H. Cameron's history of the first 25 years of the Association is now in process of publication. To facilitate the task of the author of the next volume by keeping year-to-year notes, Dr. R. Mac Keith has been appointed Assistant Historian. The Executive Committee has expressed the gratitude and thanks of the Association to Dr. Cameron for his admirable work.

9. FUTURE OF CHILDREN'S HOSPITALS. The final report on this subject has been circulated to members and has been submitted to the Paediatric Committee of the Royal College of Physicians of London.

10. PROPHYLACTIC IMMUNIZATION. The report on this subject has been reconsidered, modified and submitted to the Ministry of Health, and discussed there with our representatives (J. L. Henderson, I. A. B. Cathie and R. E. Bonham Carter). No further action is contemplated until the Ministry's recommendations are known.

11. NOTIFICATION OF EPILEPTIC CHILDREN. It was considered that recommendations that epileptic children should be notified to school medical officers as soon as possible after the age of two years (Min. of Health 26/33) were open to misconstruction. A short memorandum on the subject was sent to the Ministry of Health (Sub-Committee: E. M. Creak, D. Gairdner, J. P. M. Tizard and P. R. Evans).

12. PAEDIATRIC EDUCATION QUESTIONNAIRE. This questionnaire was discussed, with considerable dissatisfaction, but no resolution was taken as it was noted that W.H.O. would provide funds for the International Paediatric Association so that a consultant could visit those who had and those who had not completed the questionnaire, for discussion.

13. OVERSEAS ACTIVITIES. The Executive Committee considered a letter from Dr. Cicely Williams advocating extension of the activities of the Association to paediatricians in the Colonies, many of whom were cut off from association with other paediatricians. The Committee concluded that such extension was desirable and the Colonial Office has been invited to send an observer to meetings, as the Ministries of Health and Education already do. The Committee offered the aid of the Association in helping visiting paediatricians to make the best use of their time in Great Britain and Ireland. It is hoped that many members will cooperate with the Hon. Secretary (to whom requests for advice will be sent) in forwarding the arrangement, and also in seeing that Commonwealth and Colonial visitors continue to be given the opportunity to attend the annual general meeting.

14. HYPERCALCAEMIA. A sub-committee (C. F. Harris, W. Sheldon, R. Lightwood, T. Stapleton) has been set up to investigate the incidence of infantile hypercalcaemia and the diets of children who develop it.

15. NATIONAL DRIED MILK. The Executive Committee has considered the policy of labelling tins of National Dried Milk, and the caloric requirements of infants. A sub-committee (J. Forest
16. STANDING SUB-COMMITTEES. Dr. John Hay has been appointed to succeed Dr. Bernard Schlesinger on the Convalescent Homes Sub-committee.

Progress reports have been received from the Prematurity and Growth Study Sub-committee (V. Mary Crosse, Cecile Asher). Dr. F. M. Martin’s report on prematurity has now been published (Med. Off., 1954, 92, 263).

17. Other matters in which the Committee has intervened during the year have been concerned with possible appointments of S.H.M.O.s and general practitioner-consultants to paediatric posts, and of a sister not on the R.S.C.N. as matron of a children’s hospital used for training for this register.

Scientific Communications

AGNES R. MACGREGOR (Edinburgh). ‘The Incidence of Infection in Neonatal Deaths.’ A review was made of 401 necropsies in cases of neonatal death in the Simpson Memorial Maternity Pavilion of Edinburgh Royal Infirmary during five years, from 1949 to 1953. The results were compared with those of a similar review previously made of 618 necropsies during five years, from 1939 to 1943, with special reference to the incidence and nature of lethal infection. Deaths attributed to infection in the later series were 55 or 13.7%, compared with 190 or 30.7% in the earlier series. A large increase in deaths attributed to uncomplicated anoxia and hyaline membrane in the later series suggested that better control of infection in infants of that type had not achieved a corresponding saving of life. Of deaths after the first week, 22 or 50%, were attributed to infection in the later period, compared with 128 or 78% in the earlier. Gastro-enteritis and oesophageal thrush, which accounted for 45 and 19 deaths respectively in the earlier period, caused no deaths in the later, during which pneumonia was the only comparatively common lethal infection.

DR. THOMAS B. MEYER (Birmingham). ‘Prematurity, Jaundice, Kernicterus Syndrome.’ A study of serum and C.S.F. levels of bilirubin in full-term and premature babies and the relationship of those levels to kernicterus was made.

The study shows the curves of serum bilirubin levels on 93 babies of all weight groups and indicates that babies under 2,000 g. (4 lb. 6 oz.) have levels still rising on the sixth day, babies of 2,000-2,500 are levelling out, and levels of babies over 2,500 g. are falling by the sixth day.

Premature babies developing kernicterus have generally higher serum levels of bilirubin and the majority have levels of over 18 mg. % at the onset of signs. Kernicterus is very likely to occur when serum levels of bilirubin rise above 18 mg. %.

There appears to be no critical level of bilirubin in the C.S.F. at which staining of basal nuclei takes place and there is no correlation between the bilirubin levels in the serum and that in the C.S.F.

It is suggested that all jaundiced premature babies should have serial bilirubin estimations, the frequency of those estimations depending on the level of bilirubin and the rate of rise of that level.

It is suggested further that replacement transfusion may be effective in the prevention of kernicterus in babies whose serum bilirubin levels are above 18 mg. % or whose rate of rise is rapid.

A. C. ALLISON (Oxford). ‘Haemolytic Anaemia with Poikilocytosis in Children.’ Ten children with atypical haemolytic anaemia have been investigated in the Radcliffe Infirmary, Oxford, during the past few years. All showed moderate or severe haemolysis together with distortion and fragmentation of erythrocytes. Eight of the children, aged 6 weeks to 7 months, seemed to have had one syndrome, manifesting itself in varying degrees of severity. The children were acutely ill, and the haemolysis was accompanied by proteinuria, together with haemoglobinuria and an elevated blood urea level in some instances. Transfused erythrocytes, like those of the patients, were rapidly destroyed. Two fatal cases showed at necropsy widespread obstruction of the renal vessels by small thrombi consisting chiefly of blood platelets. Six other cases responded favourably to repeated blood transfusions when necessary and made spontaneous, and apparently complete, recoveries.

The remaining two cases were premature newborn children. One was a twin with a normal sibling who had a syndrome similar to that described fully by Gasser (Hely. Paed. Acta., 8, 491, 1953). Three days after birth the majority of the circulating erythrocytes had Heinz inclusion bodies: these disappeared about the sixth day, leaving distorted cells which were removed from the circulation. During the period of haemolysis the child received blood transfusions, the transfused erythrocytes surviving normally, and a complete recovery was made. The other child developed kernicterus and died on the fifth day of life. The only medication which these two babies had received was ‘synkavit’ in relatively large doses (30 mg. and 20 mg./day) and it is suggested that the administration of this substance may have been a factor in the aetiology of the haemolysis.

Injections of ‘synkavit’ and other vitamin K analogues into rats in doses of the same order of magnitude produce severe haemolysis and haemoglobinuria when the animals are deficient in vitamin E. Many newborn infants, in particular premature babies, are known to be deficient in this vitamin, and because of their poor liver function they are susceptible to cumulative action of noxious drugs.

It is therefore concluded that vitamin K analogues are potentially haemolytic and should not be given in large doses or over a long period of time to newborn children.

ROY ASTLEY (Birmingham). ‘Ciné-radiography in Paediatrics.’ The conventional method of ciné radiography involves the photography of the fluorescent screen. This requires a heavy loading of the x-ray apparatus and a high dosage of radiation to the patient.
These disadvantages have been considerably reduced by the development of the image amplifier which produces a screen picture reduced in size but much increased in brightness. A ciné camera, linked to the x-ray generator so that each ciné frame is exposed as an individual radiograph, is used to photograph the amplified image. Disadvantages are the restricted field (at present a 5-in. circle) and limited definition; the gain of a sense of movement overcomes this latter failing and the field is adequate for many paediatric examinations. For analysis the films are shown as endless loops by a special projector that allows slowing or stopping of the picture.

(The following examples of the use of ciné radiography were shown: slow-motion angiocardiography at 32 pictures a second in tricuspid atresia, Fallot's tetralogy, atrial septal defect; barium examination in gastro-oesophageal incompetence; disordered swallowing in thrush oesophagitis; urethography: portal venography in the Banti syndrome.)

The development of the apparatus was made possible by the Endowment Research Fund of the Birmingham United Hospitals.

J. D. Hay (Liverpool). 'A Surgical Treatment of Atrial Septal Defects.' Ten patients with atrial septal defects, eight children, aged 7 to 16 years, and two adults, aged 21 and 35 years, were treated surgically. Their condition before and after operation was described, the post-operative periods being from one to eight months. The diagnosis was confirmed in nine cases by cardiac catheterization and in one by angiocardiography. Three had developed pulmonary hypertension before operation.

Two patients died following the operation. In the other eight, surgical closure of the defect was thought at operation to be complete or almost complete in six. Following the operation the right atrium appeared smaller on radiography in four: pulmonary vascularity appeared to be less in four: the P wave in lead 2 of the E.C.G. was smaller in four: the systolic murmur in the pulmonary area ceased or became softer, suggesting a reduced blood flow through the pulmonary artery, in six: and exercise tolerance was increased in three of the five in whom it was reduced before operation. One or more of these changes occurred in every patient whose defect was repaired. It was therefore considered that in some cases at least of atrial septal defect the surgical procedure adopted achieves immediate satisfactory closure of the defect. The permanency of such closure and its ultimate value must await a long-term follow-up which should include catheterization of the heart.

Hugh Jolly (Plymouth). 'The First Three Years as a Provincial Paediatrician.' The work of the paediatrician in London and the Provinces was critically compared in an attempt to reduce the gulf between them. The greatest loss sustained by the lone provincial paediatrician was the reduction in academic atmosphere and the absence of student-teaching, though there were other compensations. In the provinces it was easier to develop a close liaison with the general practitioners and the Public Health Department, and because of this and the compactness of the area one could practise child health in all its aspects rather than treat sick children in hospital. A further compensation was the greater opportunity for combined clinical work with colleagues in other specialities. The paediatrician, more than any other consultant, was in a position in which he could serve a community.

There should be more interchange of staff between teaching and provincial hospitals and this should certainly include the registrar but could also include the students. These might spend part of their training in small groups attached to a provincial paediatrician.

The newly appointed provincial paediatrician was advised to concentrate his work in one hospital and immediately to start a premature baby unit if none existed. He should not undertake peripheral work until his base was secure.

The conclusion was reached that whatever the particular interest of the young paediatrician he should spend at least five years in the provinces as an essential part of his training.

Mildred Creak (London). 'Child Psychosis.' Eighty-seven cases of psychotic illness in early childhood are reviewed. Only eight are able to attend normal school and at least one of these can only do so receiving special consideration. The others are either in special (E.S.N.) schools, or institutions for the mentally defective, or awaiting admission. Some are at home being personally cared for by their parents, but many of these appear likely to be suitable for such admission at a later date.

It appears certain that this is not a homogeneous clinical group. The criterion of inclusion has been a period of apparently normal development followed by a cessation of development which especially affects speech, social capacity, and learning. Motor agility and fine coordination remain good, although movements may become aimlessly repetitive or stereotyped. The essential feature is the way in which the child withdraws into himself.

Whether organically (i.e. structurally) determined, as it seems to be in some cases resembling a post-encephalitic illness, or whether emotionally determined, as when the regression follows on a situation of grief or tension, this clinical group appears to be one which contributes significantly to the so-called mentally defective population.

Henning Andersen (Copenhagen). 'Some Changes in Mesenchymal Tissues in Hypothyroidism in Children.' Previous reports and recent findings show that increased amounts of metachromatic ground-substance and highly granulated mast cells, hyperkeratosis oedema and fibril changes could be demonstrated in skin biopsies in 21 out of 39 hypothyroid children, untreated or off treatment at the time. These changes, too, were found in 10 of 22 probably hypothyroid, in none of 75 euthyroid children. The changes followed the medication or withdrawal of thyroid.

Provided that the skin changes are due to an action of thyrotrophin they would not be expected in cases of pituitary hypothyroidism. Simultaneous skin biopsies and serum thyrotrophin determinations, together with
radioactive iodine studies on these children seemed to support this view.

From examination of bone tissue, especially the spine, of 14 cases of untreated or very insufficiently treated cases of hypothyroidism, aged from 3 months to 16 years, the x-ray findings were shown. The histochemical findings will be reported later. Dysgenesis of the spine could be demonstrated in all cases, following closely the retardation in bone-age and the degree of epiphysial dysgenesis. Localized deformities were found in four cases.

G. A. Neligan (Newcastle-on-Tyne). 'The Effect of Intramuscular Streptomycin in Cases of Hyperchloroemic Renal Acidosis.' Twenty-one infants suffering from hyperchloroemic renal acidosis were treated with intramuscular streptomycin, 20 mg. per lb. body weight daily, for a period of three weeks. The full diagnostic criteria included a serum alkali reserve under 35 ml. CO₂ %, and a urine pH above 6.75, on at least two occasions. Eleven cases fulfilled these criteria completely: their average rise in alkali reserve during treatment was 20 ml. CO₂ %, and their average rise in weight was 18 oz. But five of them showed an immediate subsequent biochemical and clinical relapse and required to be treated with alkali; the remaining six did not require further treatment, although some showed a temporary biochemical relapse. Another 10 cases did not quite fulfil the criteria in all respects, and evidence was produced to show that these were probably milder cases. Their initial response to streptomycin was as satisfactory, and only two required any further treatment. It was concluded that streptomycin can be relied upon to produce marked clinical and biochemical improvement in this disease, probably by some unexplained direct action upon the renal tubules, but that its effect ceases with cessation of treatment. It was decided to make use of the initial dramatic effect in future by giving streptomycin for one week before starting an appropriate dose of alkali, and this worked very well in the only case of the disease encountered since this decision was reached, over a year ago.

K. W. Cross, J. P. M. Tizard and D. A. H. Trythall (London). 'The Metabolic Response of Newborn Infants to Varying Concentrations of Oxygen.' An investigation was made into the metabolic response of newborn infants to low oxygen mixture (15% oxygen). The infant was placed in a body plethysmograph and a mask placed over its face through which either air or the 15% mixture could be drawn with a suction pump. With the infant asleep, samples were collected over 10-minute periods consisting of a mixture of expired air plus the original gas mixture. Collection was made in 20 l. apparatus over a saturated salt and glycine mixture and analysed for oxygen and carbon dioxide content in a research Haldane apparatus. Thus the oxygen consumption and carbon dioxide output were calculated and from these the respiratory quotient.

Three groups of babies were examined aged 0-14 days: (a) Eleven full-term infants who had two 10-minute period samples both on breathing air with a five-minute gap in between; (b) 16 full-term and (c) 16 premature infants who had an initial 10 minutes' sample on air then 15 minutes on 15% oxygen during the last 10 minutes of which a sample was taken.

The infants did not over-breathe during the collection period on 15% oxygen and there was a rise in respiratory quotient which varies from 0 to 15%, increasing with age. There was, however, a marked and significant fall in oxygen consumption of about 17%. This appears to be an observation not previously described.

Walter Henderson (York). 'Congenital Defects of the Skull with a Consideration of the Prognosis for Cranial Meningocele.' A short series of cases of midline defects of the skull was described and illustrated with lantern slides. The great variation in size, shape and position of the bone gap in cases of cranial meningocele was noted.

In contrast the radiological appearances in congenital dermal sinus with intracranial dermoid cyst were demonstrated, and the need stressed for accurate radiology when this diagnosis was suspected.

Discussion of cases of cranial meningocele showed that while a severe defect may preclude operative help there is much to be said for early operation in many cases. Follow-up of some cases for seven years showed that normal development was possible after operation and it was noted that in no case in the series had the bone gap been filled in with bone substitute.

The need for a full discussion with the parents of the implications and significance of a cranial meningocele was particularly stressed.

This series demonstrated the possible association of midline skull defects with other congenital defects, especially congenital defects of the cervical vertebrae; also with hydrocephalus, microphthalmia and craniostenosis.

Thomas Stapleton and William B. Macdonald (London). 'Balance Studies during the Treatment of Idiopathic Hypercalcemia.' Study of three cases of idiopathic hypercalcemia of infancy has shown ways in which the serum calcium can be lowered.

A synthetic calcium-free milk caused a fall in the serum calcium and a negative balance, but the negative balance became much more marked when a calcium-free cereal, which had a high inorganic phosphorus and phytic acid content, was added to the diet.

Cortisone caused a fall in serum calcium, but the level rose again when the cortisone was discontinued. No significant changes in the phosphorus or magnesium balance were found.

R. M. Forrester (Manchester). 'The Dental Changes in Kermikterus.' Published in full on page 224.

The following also read papers:

Denis Browne (London). 'Analysis of Results of the First Hundred Cases of Swenson's Operation (Recto-sigmoidectomy) for Hirschsprung's Disease.'

Ronald Edwards (Liverpool). 'Evolution of the Operative Procedure Adopted for Atrial Septal Defects.'