general management of hypernatraemia in infancy was discussed.

K. A. LACEY introduced by J. M. Parkin. Newcastle. 'Community study of short stature'. This paper describes a total community study to determine the causes of short stature in childhood.

In the Newcastle study of child development, data have been collected prospectively from birth from all children born to Newcastle mothers in 1960, 1961, and 1962. Those children who were born in 1960 and whose heights at the age of 10 years were below the third centile were identified and brought to hospital for examination and investigation.

Of the 98 children seen, an organic explanation was present in 16. 13 of these had a gross and previously well-documented problem (e.g. Down's syndrome, cerebral palsy, congenital heart disease). A boy with renal failure had been diagnosed a few weeks before the study, and a girl with a chromosomal abnormality and one with probable growth hormone deficiency, were diagnosed as a result of the study. The remaining 82 were 'small normal' children and had either a family history of short stature, a delayed bone age, or both. In 50% of these there was a significant social problem. It is concluded that short stature is more commonly associated with adverse home circumstances than with organic disease.

CATHERINE S. PECKHAM (Sheila Sheppard and W. C. Marshall) introduced by J. A. Dudgeon, London, and R. W. Smithells, Leeds. 'Surveillance of congenital rubella defects'.

C. PAPADATOS. Hellenic Paediatric Society. 'Immunoglobulin levels in postmature newborns.' Premature termination of pregnancy together with pregnancies lasting longer than 42 weeks have always been recognized as important factors affecting fetal survival.

The present investigation was carried out with the object of studying immunoglobulin in different stages of postmaturity and comparing them to maternal levels.

Our material consisted of 91 newborns. Of these, 32 were term, unselected babies with a normal pregnancy and delivery, and 59 were consecutive postmature infants born after a gestation by history of 42 or more completed weeks.

Immunoglobulin levels were evaluated on the basis of 3 criteria. (1) Gestational age. With duration of pregnancy as basic factor, 32 newborns were considered term and 59 postmature. (2) Occurrence of histopathological placental abnormalities. In term pregnancies placentas were normal, while in postmature babies definite placental anomalies were noted. On the basis of this criterion, 33 babies were considered as term and 58 as postmature. (3) Clinically recognizable signs of postmaturity. Taking this factor into consideration, 39 newborns were considered as term and the 52 with obvious clinical signs as postmature.

Statistically significant differences were noted in immunoglobulin levels if postmaturity is judged on the basis of duration of pregnancy, placental histopathology, or clinically obvious signs of postmaturity.

C. DACOU-VOUTETAKIS. Hellenic Paediatric Society. 'Screening for congenital hypothyroidism: a preliminary report.' No screening procedure has thus far been proposed for congenital hypothyroidism (CH), the most frequent metabolic abnormality with preventable mental retardation. The observation that the ossification centres at the knee appear at the 8th month of gestation and are usually absent in the 2- to 3-month-old infant with athyrotic cretinism prompted us to investigate the possibility of diagnosing CH by taking an x-ray of the knee shortly after birth. 1548 newborns, of birthweight >2800 g, were x-rayed. The newborn was covered with a leaf of lead and only a small window was left at one knee. The ossification centres were absent in 10 cases (0·65%) in which serum thyroxine was subsequently determined. None of these cases showed clinical or chemical evidence of hypothroidism up to the age of 3 months. Our experience thus far may be summarized as follows. The procedure is easy to perform, inexpensive, safe, does not require special training, and the false positive results are low (0·65%). Further work is obviously needed to determine the percentage of false negative results, and also the final IQ of cases so detected.

A. M. ELSEED introduced by E. A. Shinebourne. London. 'Assessment of techniques for blood pressure measurement in infants and children.' In paediatric practice measurement of arterial pressure presents technical problems especially in obese infants, in patients with coarctation, or after arteriotomy. Palpation, auscultation, flush, and recently the Doppler shift technique have been used, but no controlled trial has compared these indirect methods with simultaneous intra-arterial recordings. We present the results of a double-blind controlled trial of 22 children aged 4 months to 11 years, where the indirect techniques were applied in a randomized order both by a doctor and a trained nurse, while a third observer recorded intra-arterial pressure. All patients had indwelling intra-arterial lines for routine postoperative management and pressures were recorded using a fluid-filled catheter-transducer system, amplitude response flat to 12 Hz. Nurses and doctors obtained similar readings. There was no significant difference between direct readings and pressures obtained by the Doppler technique, but the other techniques underestimated systolic pressure: auscultation $3·6 \pm 7·6$ mmHg (mean systolic difference $\pm$ SD) $P < 0·05$; palpation $10·9 \pm 7·9$, $P < 0·001$; flush $40·1 \pm 11·6$, $P < 0·001$. Flush pressure approximated to mean pressure. The Doppler technique was also assessed in situations where it was impossible to record systolic pressures by other indirect methods and was successfully used for lower limb pressures in 10 of 12 infants with coarctation, in 4 obese infants, and in 4 children after arteriotomy.

B. HARCOURT introduced by R. W. Smithells. Leeds. 'Detection and investigation of homonymous hemianopic

visual field defects in young children'. Homonymous hemianopia is a common accompaniment of infantile hemiplegia, affecting approximately 25% of cases, and occurs more frequently when the condition is acquired after birth.

Young children often strongly resist occlusion of one eye, so that testing for uniocular visual field defects is very difficult. Homonymous field defects can, however, be assessed with both eyes open simultaneously and are thus much more readily noted in young children provided that the examiner remembers to employ the necessary simple tests. Visual stimuli such as brightly coloured toys or balls are introduced into the periphery of the field of vision, watching for refixation movements of the eyes on to the target. Such stimuli should be introduced from behind the child's head, either singly into first one and then the other lateral half of the binocular visual field looking for asymmetry of response or simultaneously and repeatedly into both temporal fields seeking for evidence of a constant preference towards one side for refixation. If a target is held across the upper part of both halves of the field of vision, and a second target is introduced from the defective side into the lower half, refixation will occur on to this second target only when it crosses the midline into the seeing half of the visual field.

Homonymous hemianopia is associated with reading difficulties in some cases, especially when the right halves of the fields of vision are affected. It is also known that such difficulties are more commonly found with right hemiplegia than with left hemiplegia even in the absence of visual field defects, so that reading problems may be a direct result of the dominant hemisphere lesion rather than indirect on account of difficulties in scanning along lines of print. Homonymous field defects are a particular hazard to children when learning to cross roads, and may be a bar to issue of a driving licence in adult life. Many affected children nevertheless seem to compensate very adequately for their handicap, either by frequent rapid movements of both eyes towards the blind side, or by adopting an abnormal head posture, turning the face towards the affected side.

P. J. MILLA introduced by R. M. Hardisty. London. 'Control of infection in children with leukaemia and lymphomas'. Patients with leukaemia and lymphomas are particularly susceptible to infection when the disease is in relapse; this frequently compromises the administration of antileukaemic therapy and is now the commonest cause of failure to achieve remission. 51 new patients, referred to The Hospital for Sick Children during 1972 for initial treatment, formed the subject of this study. The most important factor in the pathogenesis of infection was neutropenia: 45 patients were neutropenic during induction therapy and 28 of these developed an infection, 12 having proven septicaemia. 2 patients died from an overwhelming infection before remission could be induced. The time spent with infection was inversely proportional to the level of circulating neutrophils, serious infections being commoner at lower neutrophil levels. Gram-negative organisms cause the majority of severe infections, which may be rapidly fatal unless adequate treatment is instituted promptly.

In an attempt to reduce the incidence of infection, a simple regimen of topical antiseptics and antibiotics combined with oral nonabsorbable antibiotics (group I; 14 patients) was compared with a control group on normal ward nursing (group II; 16 patients). Septicaemia occurred in 14% of patients in group I and 38% in group II. 20% of septicaemias in group II, but none in group I, were due to pseudomonas. Of the total number of days during which patients were neutropenic, 15% were spent with infection in group I, and 32% in Group II. These preventive measures form a useful part of the supportive care of such children and are conducive to a high remission rate.

M. K. STRELLING. Plymouth. 'Should low birthweight infants be given supplements of folic acid?' A recommendation that supplementary folic acid be given to infants below 2·0 kg birthweight is based on evidence of the frequency of deficiency, definition of the infant most at risk, and consideration of the maternal folate state.

Further analysis of a population of special care babies showed that 24% of those under 2·0 kg developed folate deficiency severe enough to cause megaloblastic change on buffy-coat blood films.

A low Hb was an unreliable guide to folate lack; Hb was over 9 g/100 ml in 7 of the 19 affected infants. Red cell folate levels were usually, but not invariably, low at diagnosis.

The risk of megaloblastic change was greatest in infants of lowest birthweight, irrespective of maturity, and was especially high in those who were small-for-dates, including the smaller of twins. Deficiency developed rapidly after birth and was most marked in the second and third months. Evidence for folate depletion other than megaloblastic change was found in two infants with haemolytic anaemia.

The average daily folate intake of megaloblastic infants was probably less than 20 μg but a full haematological response and rise in red cell folate required 120 to 480 μg of intramuscular folic acid a day.

Maternal folate deficiency was associated with low infant red cell folate levels from birth until 5 to 10 weeks, but maternal folic acid treatment was associated with normal infant levels. Tissue folate stores of the smallest infants, even if augmented by supplementary folic acid during pregnancy, would be unlikely to meet their requirements beyond 1 to 2 months.

Infants below 2·0 kg at birth probably need additional folic acid from 2 to 4 months and a daily oral dose of 50 to 100 μg may be appropriate.

J. A. FORD (W. B. McIntosh and M. G. Dunnigan) introduced by I. D. Riley. Glasgow. 'Aetiology of Asian rickets and osteomalacia in the United Kingdom.' Recent evidence suggests that late rickets and osteomalacia in Indian and Pakistani immigrants is due to a high intake of dietary phytate combined with a suboptimal intake of vitamin D. 10 Pakistani subjects with