when the diet is finally discontinued, close follow-up being essential over a long period.

V. DUBOWITZ (Sheffield). 'Nerve Conduction Velocity—An Index of Neurological Maturity of the Newborn.' The conduction velocity of the ulnar and posterior tibial nerves has been measured in premature ('short gestation'), dysmature ('small for dates'), and full-term infants. 5 sets of twins were also included. The procedure is a relatively simple one and well tolerated even by newborn small premature infants. It is not influenced by factors such as state of sleep, or time after feed.

Sequential measurements have also been made in premature infants, and the conduction velocity attained at 40 weeks' post-conceptual age compared with the conduction velocity of full-term newborn infants.

There is a highly significant correlation between the motor nerve conduction velocity and gestation. The velocity increases with gestational age. In the twin studies there was no correlation of conduction velocity with weight at constant gestation.

'Small for dates' babies can be readily distinguished from premature infants of similar weight. Sequential studies on the same infants suggest that the rate of increase of conduction velocity after birth may be faster than *in utero*, but the differences are not statistically significant.

Studies in premature infants show that the conduction velocity of the premature infant at 40 weeks' post-conceptual age is significantly lower than that of the full-term newborn infant, suggesting a slower rate of maturation in premature infants.

Nerve conduction velocity is a useful parameter for assessing neurological maturity of the newborn infant for distinguishing premature from dysmature infants. Further data may also provide an accurate estimate of gestational age.

R. H. R. WHITE (Birmingham). 'Hypocomplementaemia and Progressive Glomerulonephritis.' A study of renal biopsy specimens obtained from patients showing clinical features of both the *nephrotic syndrome* and *nephritis* (i.e. haematuria, renal insufficiency and often hypertension) has revealed a specific morphological appearance in the majority. This consists of a combination of mesangial cell proliferation and marked, diffuse capillary wall thickening, due, mainly, to deposits of hyaline and fibrillar material on the *sub-endothelial* aspects of the basement membrane. These features distinguish 'membranoproliferative' glomerulonephritis (GN) from other forms of proliferative GN without capillary wall thickening, and from 'epimembranous' nephropathy, in which the deposits are on the *subepithelial* aspect of the basement membrane and proliferation is absent.

Nineteen children under 16 years of age and 4 adults showed this biopsy appearance; 10 were girls aged 8-15 years. Proteinuria occurred in all patients and was relatively unselective. Serum β_{1C} -globulin levels (estimated immunochemically by Dr. J. S. Cameron,

Guy's Hospital Medical School, London) were persistently lowered in 14 patients, in contrast to the normal levels found almost invariably in other patients with the nephrotic syndrome, and the transient depression observed in acute nephritis.

The illness runs a chronic course and does not respond to corticosteroid therapy. There is some evidence that cytotoxic drugs are beneficial if given early, however, and it is therefore urged that membranoproliferative GN should be recognized as soon as possible after onset, by the clinical, laboratory, and histological features described.

GRAHAM W. CHANCE introduced by PROFESSOR D. V. HUBBLE (Birmingham). 'Plasma Insulin Response to Oral Glucose in the Parents and Sibs of Children with Diabetes Mellitus.' The ratio of the increase in circulating insulin to increase in blood glucose at times of sampling after a glucose load has been empirically termed the 'insulinogenic index'. A low and delayed insulin response has been claimed to indicate a predisposition to diabetes mellitus.

Insulinogenic indices have been calculated for responses to oral glucose loads in the first-degree relatives of children with diabetes mellitus. One-third of the mothers and one-quarter of the fathers and sibs had a low index. In those with a low index the mean values for glucose and insulin suggest that the mothers may possess an antagonist to insulin and the fathers a limited insulin response to glucose. Early results in sibs suggest that a low insulinogenic index may indeed be of predictive value in the detection of early cases of diabetes.

CHRISTINE WATSON introduced by DR. MARY J. WILMERS (London). 'A Follow-up Study of Children Born to Diabetic Mothers, with particular reference to frequency of congenital abnormalities.' The frequency of congenital abnormalities in children of diabetic and non-diabetic mothers is still uncertain.

This study aimed to compare the serious congenital abnormalities in 206 viable infants born consecutively to diabetic mothers at King's College Hospital between 1956 and 1961, with 206 control infants born to non-diabetic mothers in the same hospital, over the same period. Almost all survivors in both groups were examined personally on at least one occasion between the ages of 3 and 11 years. Follow-up was completed on 96% of the 'diabetic' offspring and 87% of the controls.

Congenital abnormalities were found in 21 (10.7%) of 197 infants in the 'diabetic' group and 10 (5.6%) of 179 controls. This difference was not statistically significant, but there was a significant trend for major abnormalities to be associated with maternal diabetes. The frequency of congenital heart disease, cerebral palsy, and mental retardation was particularly striking in the 'diabetic' group. 163 (92%) of their sibs were also followed up. 18 children (11.0%) had congenital abnormalities which showed a similar distribution to those in the main 'diabetic' group.

Defects were not significantly increased in children