tibial nerves can be used to estimate the gestational age of newborn infants.

The effect of various abnormal disease states in the newborn on the conduction velocity of the peripheral nerve has now been studied. We have found no significant difference from normal in the motor nerve conduction velocity in (1) light-for-dates infants; (2) hypoglycaemic infants; (3) hypocalcaemic infants; (4) jaundiced infants; (5) infants born to diabetic and prediabetic mothers; and (6) infants with neonatal asphyxia, as judged by an Apgar score at 1 min. of 5 or less.

The motor nerve conduction velocity, unlike some of the clinical criteria, can therefore be used both in normal and abnormal newborn infants for estimating the gestational age.

We have also done a sequential study on the rate of maturation of the peripheral nerves in pre-term infants reaching full-term status *ex utero*. No significant difference has been found between the motor nerve conduction velocity of pre-term infants at 40 weeks' post-conceptional age and full-term newborn infants.

5-Hydroxyindoles in Mongolism and Hydrocephalus. V. Dubowitz and K. Rogers (*Department of Child Health and Department of Pharmacology, University of Sheffield*). Low levels of 5-hydroxytryptamine (5-HT) in the blood of mongol children prompted Bazelon and her co-workers (1967) to treat these infants with 5-hydroxytryptophan (5-HTP), the immediate precursor of 5-HT, with apparent beneficial effect, particularly on the hypotonia.

Since 5-hydroxyindoles in the CSF should more

closely reflect the state of 5-HT metabolism in the nervous system than the level of 5-HT in the blood (confined to platelets), we have studied the CSF of mongol infants as well as other floppy infants and a group of controls.

There was no significant difference between the levels of 5-hydroxyindole acetic acid (5-HIAA) in 8 mongol children ($56.5 \pm SE 5.1$ ng./ml.), 21 controls (56.7 ± 3.5 ng./ml.), or 10 infants with severe hypotonia (47.1 ± 4.6 ng./ml.).

However, in 30 children with hydrocephalus there was a striking increase of 5-HIAA in every case irrespective of aetiology ($302 \pm SE 18.1$ ng./ml.; range 147–694 ng./ml.).

Blood levels of 5-HT in 7 hydrocephalic children ($334 \pm SE 21.5$ ng./ml.) were the same as in 8 control children (321 ± 43.9 ng./ml.), while the 3 mongol children had low levels (164 ± 12.4 ng./ml.), comparable to those in our 9 adult controls (165 ± 6.7 ng./ml.).

REFERENCE

Bazelon, M., Paine, R. S., Cowie, V. A., Hunt, P., Houck, J. C., and Mahanand, D. (1967). Reversal of hypotonia in infants with Down's syndrome by administration of 5-hydroxytryptophan. *Lancet*, **1**, 1130.

O.S.P. A. Salter (*introduced by V. Dubowitz*). Miss Salter gave an illustrated talk on Old Sheffield Plate at the City Museum. Members of the Society had the opportunity of handling some of the pieces from the Museum's collection, and of breathing on them to show up the tell-tale seam—the sign of genuine Old Sheffield Plate.