results are compatible with the patient having MPS I (Hurler's syndrome) but do not explain why chondroitin sulphate was the principal urinary and hepatic glycosaminoglycan.

REFERENCE

Benson, P. F., Dean, M. F., and Muir, H. (1972). A form of mucopolysaccharidosis with visceral storage and excessive urinary excretion of chondroitin sulphate. *Developmental Medicine and Child Neurology*, **14**, 69.

Blood pressure and angiotensin II in the newborn. F. B. Pipkin and O. R. C. Smales (introduced by D. Hull). City Hospital, Hucknall Road, Nottingham.

Angiotensin II (AII) is the most potent naturally occurring pressor agent known. It has been measured by radioimmunoassay on 1–2 ml plasma obtained from infants in the first week of life at the time of sampling for routine investigations. Systolic blood pressure was measured before sampling, using the Doppler ultrasound technique. Venous samples were obtained from 25 infants in whom physiological jaundice or prematurity was the only abnormality. 20 infants were sampled in whom there were additional clinical complications, such as respiratory distress or vomiting. AII levels fell from a mean of $178 \cdot 4 \pm 26 \cdot 2$ SE pg/ml in cord venous blood at birth to a mean of $60 \cdot 3 \pm 9 \cdot 2$ pg/ml during the first 6 days of life. Mean adult values were $28 \cdot 8 \pm 4 \cdot 2$ pg/ml as compared with $97 \cdot 5 \pm 9 \cdot 0$ in pregnant women at delivery. AII levels were higher in preterm infants than in term infants (mean $75 \cdot 6 \pm 11 \cdot 4$ pg/ml against $54 \cdot 6 \pm 12 \cdot 1$ pg/ml), but this was not statistically significant. Systolic blood pressure in 70 infants increased significantly during the first week of life ($P < 0 \cdot 001$, $r = 0 \cdot 5490$), but was more closely related to birthweight ($P < 0 \cdot 001$, $r = 0 \cdot 7411$, no. = 66) and gestional age ($P < 0 \cdot 001$, $r = 0 \cdot 7313$, no. = 67). There was a significant inverse relation between the mean arterial blood pressure and venous AII in the 45 infants in which both were measured ($P < 0 \cdot 01$).

Plasma renin activity and aldosterone concentration in children: results in salt-wasting states. M. J. Dillon and J. Ryness. The Hospital for Sick Children and Institute of Child Health, London.

Semimicro methods for the measurement of plasma renin activity (PRA) and plasma aldosterone concentration (PAldo) by radioimmunoassay have been developed using 0·25 ml plasma and between 0·5 ml and 1·0 ml plasma, respectively. Normal ranges for healthy children on free diets have been established and it was found that values of PRA and PAldo varied inversely with age. In infants, the mean PRA value was 1404 pgAI/ml per h (range 472—3130) with a progressive decrease through childhood to the mean adult value of 85 pgAI/ml per h (range 22–311). In children under 1 year of age the mean value for PAldo was 24 ng/100 ml (range 8·3–75). There was a similar decrease with age, such that mean value between 5 and 9 years of age was 4·5 ng/100 ml (range 1·0–15), but this was followed by a slight rise to the adult mean of 8·2 ng/100 ml.

PRA and PAldo values were considerably greater in children with evidence of saline depletion than in healthy children of equivalent age. Children with hypernatraemic diarrhoeal dehydration were found to have lower values of PRA and PAldo than children with gastroenteritis but no evidence of hypernatraemia. In children with chronic saline depletion PRA values were markedly increased with a mean figure of 25 000 pgAI/ml per h. However, PAldo values were not uniformly raised and those from children with adrenal insufficiency were within the normal range compared with the very high values from the other salt-wasters. The relation shown between PRA and PAldo in individuals with no abnormality of the aldosterone response to renin/angiotensin stimulation permit identification of situations in which inappropriate responses occur, e.g. congenital adrenal hyperplasia and Conn's syndrome.

Is human milk the best food for preterm infants? D. P. Davies. Department of Child Health, University Hospital of Wales, Cardiff.

Since the early days of caring for preterm infants it has been widely held that human milk is the food of choice for these infants. This belief, however, has not prevented some paediatricians from suggesting that human milk might not in fact be the ideal food on the grounds that its low protein content is insufficient for growth requirements. Adequate protein intake in the early weeks of life is necessary if growth is to proceed normally. Failure to grow satisfactorily at this stage might result in permanent detrimental effects on body growth. The question of optimum protein requirements for preterm infants is therefore an important one. The present study investigates the adequacy of human milk for the growth of preterm infants. 106 preterm infants were fed one of three isocaloric milks for a period of 2 months. Milk A: high protein milk (21% calories as protein); milk B: medium protein milk (15% calories as protein); milk C: human breast milk (7% calories as protein). Changes in weight, length, head circumference, and triceps skinfold thickness were evaluated. The results suggest that though human milk is adequate for the growth needs of the more mature preterm infants (33–36 weeks' gestation), less mature infants (28–32 weeks' gestation) fed human milk failed to achieve adequate growth rates compared with infants on higher protein intakes.

Fat absorption and weight gain of small babies fed two filled milk formulae. R. D. G. Milner, Y. Deodhar, C. R. Chard, and R. M. Grout. St. Mary's Hospital, Hathersage Road, Manchester M13 0JH. To be published in full in the *Archives*.

Calorific cost of activity in neonates. J. Meyer (introduced by J. Scopes). St. Thomas's Hospital, London S.E.1.

The data on calorific expenditure on activity in neonates are incomplete. An experimental situation was devised where total calorie balance studies could be