An oral calcium test feed has been designed to
born to diabetic mothers with vascular complications,
but no diabetic mothers in this study had proliferative
retinopathy or nephropathy.

David Barr introduced by Professor J. O. Forfar
(Edinburgh). 'An Oral Calcium Test in Infancy.'
An oral calcium test feed has been designed to
investigate the handling of dietary calcium as reflected by short-
term changes in the serum calcium level.

The response of a normal control group is defined and
compared with results in infants suffering from a
variety of calcium disorders.

In the acute phase of idiopathic hypercalcaemia,
an extremely high and prolonged hypercalcaemia is
found after the test feed. The effects of treatment
and recovery are followed.

In further infants who were not strikingly hyper-
calaemic, abnormal loading tests suggested that the
test was a more sensitive diagnostic index than sporadic
estimates of serum calcium. The test may be a guide
to the need for continuing therapy, and a persistently
abnormal loading test has been associated with a poor
long-term prognosis.

In patients with nutritional rickets, vitamin D caused
a 'shift to the left' in the shape of the loading curve.
A similar effect was seen in a group with neonatal
tetany when those undergoing spontaneous recovery
were compared with those given vitamin D. The
curves obtained in infants with idiopathic hypercalcaemia
were compared with those in infants receiving
vitamin D.

I. B. Houston introduced by Professor J. A. Davis
(Manchester). 'Renal Tubular Acidosis and Growth
Retardation.' To be published in full elsewhere.

J. T. Harries introduced by Dr. June K. Lloyd
(London). 'Studies of Vitamin E Function in Children
with Malabsorption.' Though symptoms of Vitamin E
deficiency are easily recognized in animals, the clinical
importance of this vitamin in man is less well established.
Vitamin E is a powerful antioxidant and probably
plays a part in the functional integrity of cell membranes.
This paper reported investigations on the vitamin E
status of children with various types of malabsorption.
The function of the red cell membrane has been
studied by estimating autohaemolysis and peroxide
haemolysis of the cells, and then correlating these
effects with the serum levels of the vitamin. Many of
the children with low serum levels of vitamin E (< 0.5
mg/100 ml) had increased red cell haemolysis. Where-
as autohaemolysis was increased from 6 to 62%,
peroxide haemolysis was even more increased, varying
between 20 and 90%. In most patients administration
of the vitamin was followed by a prompt fall in haemolysis.
The serum vitamin levels, however, took much longer
to rise, and in some children low levels persisted for
long periods after haemolysis had been restored to
normal. Tests of red cell haemolysis appear to be
much more sensitive indicators of vitamin E action at the
cellular level than are estimations of the serum vitamin
concentration, and it is probable that peroxide haemoly-
sis will prove to be even more sensitive than auto-
haemolysis.

N. R. C. Robertson introduced by Professor J. P. M.
Tizard (London). 'Relation between Arterial Oxygen
Tension, Systemic Blood Pressure, and Electroencepha-
logram in the Respiratory Distress Syndrome.' To be
published in full.

C. Picton-Warlow introduced by Dr. J. W.
ScopeS (London). 'Peripheral Circulatory Responses
to Postural Change in Healthy and Sick Newborn
Infants.' Venous occlusion plethysmography has been
used to study forearm blood flow in healthy mature
infants, healthy premature infants, and premature
infants with respiratory distress syndrome.

In both mature and healthy premature infants, of
birthweight varying upwards from 760 g., head-up
tilting produces a rise in heart rate, a slight fall or no
change in systolic blood pressure, and a reduction of
forearm blood flow of 25-30% of the supine value.

Premature infants with severe respiratory distress
syndrome have low forearm blood flow and low systolic
blood pressure. Head-up tilting is followed by an
increase in forearm blood flow. The physiological
and clinical significance of this 'paradoxical' response
to posture was discussed.

Bernard Klionsky introduced by Dr. W. W.
Payne (London). 'Role of Hyperkalaemia in Experi-
mental Fetal Asphyxia.' The levels of cardiac carbo-
hydrate reserves are currently believed to be of prime
importance in the ability of the fetus and newborn
animal to resist anoxia. Histochemical observations
on the hearts of anoxic stillbirths have shown persist-
ence of considerable quantities of carbohydrate, indi-
cating that death may occur before cardiac glycogen is
depolated. This observation has prompted investigation
of the possible role of hyperkalaemia as a cause of cardiac
arrest in fetal anoxia. Changes in total cardiac carbo-
hydrate and cardiac glycogen levels, pH, blood gases,
and potassium levels have been studied in fetal rabbits
after clamping the uterine vessels. Conspicuous in-
creases of serum potassium are significantly higher
than those reported in other experimental models.

The significance of the results was discussed in
relation to the problem of human fetal anoxia.

Nina A. J. Carson introduced by Professor I. J.
Carré (Belfast). 'Biochemical Response to Oral
Pyridoxine in Homocystinuria.' Homocystinuria is an
inherited disorder in the metabolism of the essential
sulphur-containing amino acid methionine. In the
normal individual, methionine is demethylated to
form homocysteine which is then condensed with serine by the aid of the enzyme cystathionine synthetase
to form cystathionine. This thioether is then cleaved
by cystathionase to form cysteine. The presence of
pyridoxine is required as a coenzyme in the latter two
reactions.