stone. After a few months he began to have attacks of sudden severe pain and screaming, with brisk haematuria, interpreted as renal colic, and these caused such distress that abandonment of medical treatment was contemplated. These spasms fortunately ceased after he had been under treatment for nine months. Several further stones were passed per urethram and after nine months these were becoming flattened; previous stones had been ovoid. When aged 2½ he was able to ride in a car for the first time without having haematuria. At 3½ sulphonamide was stopped, and from this time all haematuria ceased. He now gets a seven-hour break at night without being wakened, and urine pH remains at 8 or 9 before and at the end of this. In March 1961, after six months of treatment, stones showed an altered arrangement and possibly some diminution in size. After eighteen months stones were fewer on the right side (April 1962) and almost certainly less on the left. After two and a half years (April 1963) no stones were visible, nor can they be seen in the latest film (October 1964).

Comment

Cystine stone formation in very young children seems unusual, though Böstrom (1959) reports a child aged 8 months with cystine stones. At such an age the difficulties of maintaining a high fluid and alkali regime are perhaps less than with older children, and they may then be conditioned to a pattern of drinking behaviour which will prove lifelong. Nevertheless considerable intelligence and resolve are required from parents for success. We find only one report since the original paper by Dent & Senior (1955) of the use of this regime. This is a note by MacDougall (1961) of an 11-year-old boy given 4 litres of fluid a day for eighteen months, without alkali, in whom considerable solution of stones occurred. Finally he was treated surgically to remove the last two stones.

REFERENCES

Massive Bilateral Adrenal Haemorrhage in the Newborn with Recovery
J Lorber MD FRCP

P E, boy, born 14.2.63
Admitted at 3 days of age because of continuous convulsions and failure to pass any urine and also because he had two symmetrical abdominal masses in the region of the kidneys. He was shocked and grossly dehydrated. Blood urea 150 mg/100 ml, sodium 139, potassium 6.3, chlorides 100 mEq/l., calcium 6.8 mg/100 ml, carbon dioxide 18 mEq/l.

The infant was treated with intravenous fluids including calcium gluconate. He did not pass urine for a further twenty-four hours, by which time the blood urea rose to 230 mg/100 ml. At 4 days of age, urine was passed for the first time; it was dark, but contained no red cells or other abnormal deposit; albumin over 400 mg/100 ml, urinary urea 617 mg/100 ml. Subsequent progress with intravenous hydration showed striking improvement. His blood urea returned to normal by the ninth day and has remained normal since. There was persistently low serum calcium (4.9-6.8 mg/100 ml) and high phosphorus (9.1 mg/100 ml); after 1 month of age these values returned to normal. The abdominal masses decreased rapidly and the right one disappeared within two weeks. All urine specimens after the initial one were normal until he was 5 months old, but he then had a urinary tract infection which responded to ampicillin.

IVP at 2 weeks old showed depression of both kidneys. Good excretion on both sides. No hydronephrosis. Acute kinking at left pelvi-ureteric junction. Dilatation of lower third of left ureter (Fig 1).

Subsequent progress was favourable and the left abdominal mass also disappeared after a few weeks. A second IVP, at 5 months old, still showed a kink at the pelvi-ureteric junction and dilatation of the left ureter. There were also faint shadows

Fig 1 IVP at 2 weeks of age, showing low position of the kidneys with acute kinking of the left pelvi-ureteric junction
supportive therapy by adrenocortical hormones, as was given by Gardner (1957) to two patients.

Cases of adrenal haemorrhage due to the Waterhouse-Friderichsen syndrome do not develop adrenal calcifications after recovery (Stevenson et al. 1961). The diagnosis of adrenal haemorrhage should be considered in the differential diagnosis of abdominal masses in the newborn, as in these cases operation is unnecessary.

REFERENCES
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Pseudo-pseudo-hypoparathyroidism with Osteoma Cutis
Alina T Piesowicz MRCP DCH
(for P R Evans MD FRCP)

G M, boy, aged 3 years
History: First child of healthy, unrelated parents. Pregnancy was normal and child weighed 2.8 kg. At the age of 1 month he developed eczema. At 6 months nodules in the skin were noticed and above the kidneys, probably representing calcifications in his adrenals. The last IVP, at the age of 19 months, showed similar appearances in the kidneys but there were now clear, gross bilateral calcifications in the position of the adrenals, corresponding to their anatomical shape (Fig 2).

Comment
The diagnosis of bilateral adrenal haemorrhage was not made immediately after admission, largely because the plasma electrolyte pattern did not suggest adrenal failure. The anaemia, associated with masses in the loin, suggested bilateral renal vein thrombosis. The absence of blood in the urine a day later, however, made this diagnosis very unlikely. The first indication that the masses were adrenal came from the IVP at 2 weeks of age, which showed a characteristic picture consisting of the depression of the kidneys with acute kinking of the pelvi-ureteric junction.

This child has not shown any sign of adrenal failure to date, but no real stress situation has as yet developed apart from a mild episode of pyelitis at 5 months of age. It is possible, however, that later, during acute illnesses or surgical procedures, he may manifest signs of adrenal failure as was observed by Lintz (1943), Minder (1954) and Schwartz & Fink (1956) and require

Fig 2 IVP at 19 months of age, showing massive calcification in both adrenals and dilatation of the lower third of the left ureter

Fig 1 Pseudo-pseudo-hypoparathyroidism. Facial appearance