large amounts of chlorpromazine. Since he was not breast-fed, this must have been due to placental transfer. The slow clearing of the drug is explained by the immature liver of the newborn. The infant's subsequently normal development suggests that the initial symptoms were due to a transient cause, rather than to any permanent perinatal cerebral damage.

Summary

A newborn infant, whose mother had received a high dose of chlorpromazine in late pregnancy, was found to be abnormally apathetic in the neonatal period. Drug excretion studies showed this to be associated with placental transfer of chlorpromazine.

We thank Dr. L. Stimmmer for allowing us to give details of his patient.

References


*J. E. Hammond and P. A. Toseland

Department of Paediatrics and Department of Clinical Pathology, Guy's Hospital, London S.E.1.

*Present address: The Hospital for Sick Children, Great Ormond Street, London W.C.1.

Congenital Narcotic Addiction

The occurrence of withdrawal symptoms in the newborn infants of mothers addicted to heroin or morphine is now well documented. The subject has been extensively reviewed by Hill and Desmond (1963) and by Cobrinik, Hood, and Chusid (1959). Nearly 300 cases have now been reported, all from the United States of America. The following is the first report of a case in the United Kingdom.

Case Report

The child, a male, was born spontaneously at term, weighing 3900 g. The mother was a known heroin addict, who by her own account was taking heroin 20 mg. thrice daily and methadone 10 mg. 4-hourly intravenously. Her last dose of heroin 20 mg. was given 1 hour before delivery of the infant. Initially he gave no cause for anxiety, but at 45 hours he refused part of a feed and vomited once. One hour later he became very restless and had several clonic spasms. He passed one loose motion. Temperature was 37.4°C, respiration rate 80/minute, heart rate 180/minute.

He had a continual high-pitched cry, moderately dilated pupils, bilateral ankle clonus, and a peculiar musty odour. Hb, WBC, blood glucose, plasma calcium, and urine and stool culture were all normal. He was treated with phenobarbital 5 mg. 8-hourly and also had morphine 3 mg. intramuscularly. This had no appreciable effect, and he was given a further 3 mg. morphine after 10 minutes and 4 hours. The second dose of morphine had little effect. The third dose rendered him stuporous. A fourth dose of morphine 3 mg. was given at 96 hours, and at 6 days chlorpromazine 2 mg. 8-hourly was substituted for the phenobarbital. The child then became alert and was able to take feeds normally. He required no further narcotics and at 4½ months, when last seen, was developing normally.

Comment

The diagnosis of congenital morphinism is not difficult if the mother is known to be an addict. The clinical features are fever, tachycardia, tachypnoea, sweating, vomiting, diarrhoea, irritability, and fits. The cry is said to be peculiarly high-pitched and persistent. The vomiting and diarrhoea may lead to dehydration, electrolyte loss, and collapse. The mortality in untreated cases is as high as 90% (Goodfriend, Shey, and Klein, 1956). The differential diagnosis includes the causes of fits, especially hypoglycaemia, hypocalcaemia, and meningsitis, and the causes of diarrhoea and vomiting. The offspring of addicted mothers are usually small for dates and tend to suffer from the complications of dysmaturity (Perlmuter, 1967). Pneumonia seems to have been a frequent finding in those who have come to necropsy (Goodfriend et al., 1956). It is important to remember these symptoms of withdrawal are rarely present at birth and may begin as late as 96 hours (Semonoff, 1967).

Treatment consists essentially of maintenance of nutrition and fluid and electrolyte balance combined with small doses of morphine analogues. There has been much discussion regarding the relative merits of paregoric, methadone, and morphine, but no one seems to have exclusive
merit. Most authors have used paregoric or methadone in doses equivalent to morphine 0·13-0·5 mg. 6- to 8-hourly. There has been no mention of the use of such large doses as appeared to be necessary in our case. Sedatives such as phenobarbitone, chloral, and chlorpromazine have generally been used in addition to a narcotic. Chlorpromazine in particular seems to have a morphine-sparing effect and has been used by some on its own (L. Neumann and S. Krugman, 1963, personal communication, quoted by Hill and Desmond (1963)). In our case it appeared to improve the infant's general condition, and enabled us to withdraw narcotics altogether. The dosage recommended is 0·7-1·1 mg./kg. 6- to 8-hourly.

Summary

A case of congenital narcotic addiction is reported.

REFERENCES


G. P. McMULLIN and A. N. MOBARAK

The Department of Paediatrics, Royal Free Hospital,
Gray's Inn Road, London W.C.1.

Bilateral Renal Cell Carcinoma

Renal cell carcinoma or hypernephroma is very uncommon within the paediatric age range, especially in infancy. This report describes a 3-month-old infant with bilateral renal cell carcinoma associated with imperforate anus and recto-urethral fistula.

Case Report

The patient was Japanese, a 3-month-old male infant, the second child of a 21-year-old mother and a 28-year-old father. There was no consanguinity. There were no known teratogenic exposures in utero, and pregnancy was normal, resulting in an infant born normally at term and weighing 2950 g. At birth he was noticed to have an imperforate anus and recto-urethral fistula, and on the 3rd day of life a sigmoid-colostomy was performed. The post-operative course was uneventful and the patient was discharged on the 19th day weighing 2650 g. Thereafter, he vomited 3 to 4 times a day, and at 13 weeks of age was readmitted to hospital with fever, vomiting, anaemia, and malnutrition and dehydration. Temperature was 39·4 °C., pulse rate 195 per minute, weight 3550 g., and length 57 cm. In the left lower abdomen, a nodular, ellipsoidal, non-tender but firm mass of egg size was palpable just above the sigmoid-colostomy.

Laboratory tests showed Hb 8·2 g./100 ml. and white cell count 15,400/cu. mm., with 41% band cells, 25% polymorphs, and 32% lymphocytes. Urinalysis showed 3 plus protein, rare RBC, and many WBC. Blood chemistry showed sodium 153 mEq/litre; potassium 4·8 mEq/l.; chloride 124 mEq/l.; calcium 5·1 mEq/l.; and urea nitrogen 12·2 mg./100 ml. Urine cultures grew candida and pseudomonas with a count of about 1500 per ml. Chest and bone x-rays were normal. An intravenous pyelogram showed poor visualization of the calyces and pelvis, without deformity.

At first the patient was diagnosed as having acute pyelonephritis in association with the sigmoid-colostomy and recto-urethral fistula. Antibiotic therapy and blood transfusions were given without improvement. High fever up to 39·5 °C., pyuria, and vomiting persisted. The abdominal mass, which was first suspected as granulation tissue around the artificial anus, increased gradually in size. Laparotomy at the age of 5 months showed a left renal tumour. The left kidney was removed and the regional lymph nodes were resected. After operation the patient's condition worsened, and he died on the 7th post-operative day.

Pathology. At necropsy a right renal tumour was also found. No metastases were seen. The left kidney, a surgical specimen, measured approximately 7 x 6 x 3·5 cm. and weighed 90 g. (Fig. 1). The right one, a necropsy specimen, 6 x 4 x 3 cm., weighed 81 g. Both kidneys had an irregular or nodular surface and were easily decapsulated. Section showed the renal tissue occupied by varying sized masses, which were mostly irregularly globular in shape and of a rich yellow with interspersed areas of necrosis. Deposits of calcium salts within the masses were not seen. The pelves and the fibrous capsule were not invaded by the growth.

The histological findings were similar in both kidneys (Fig. 2 and 3). The tumour was medullary and formed of polyhedral epithelial cells of medium to large size, which were closely packed together. The cytoplasm was abundant, eosinophilic, and granular, and contained PAS-positive granules, which were not digested by saliva. The cytoplasm of the large cells had a tendency to stain paler than those of the medium-sized cells. The cell nuclei were ovoid or round. Mitotic figures, and in some areas, tubular structures lined by cuboidal epithelium, were present. Necrosis of the tumour...