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


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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, ellipsoid, 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 pelves, without deformity.

At first the patient was diagnosed as having acute pylonephritis 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 × 6 × 3·5 cm. and weighed 90 g. (Fig. 1). The right one, a necropsy specimen, 6 × 4 × 3·5 cm. weighed 81 g. Both kidneys had an irregular or nodular surface and were easily capsulated. 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
FIG. 1.—Surgical specimen, the left kidney. Both kidneys were occupied by tumour nodules of varying size. The tumour was invasive and involved the surrounding renal parenchyma.

Fig. 2.—Photomicrograph showing the tumour composed of polyhedral epithelial cells of medium to large size. (H. and E. x 235.)

FIG. 3.—The cytoplasm contains PAS-positive granules, which are not digested by saliva. (PAS. x 235.)
cells was observed in places with neutrophil infiltration. The tumour was invasive and involved the surrounding renal parenchyma.

**Discussion**

Renal cell carcinoma is uncommon in childhood, and Scruggs and Ainsworth (1961) were able to find only 51 reports of such cases. The youngest case reported previously was in a 6-month-old infant (Scotti, 1939).

Other unusual features of the present case were the finding of bilateral tumours, the presence of multiple nodules in each, and the presence in the tumour cells of PAS-positive granules which were not digested by saliva. PAS-positive granules have been reported previously in renal carcinoma cells, but they have been digested by saliva and were thought to contain glycogen. The association of renal cell carcinoma with congenital anomalies is rare. It is not known whether congenital abnormalities of the urinary or urogenital tract may be of aetiological importance in renal cell carcinoma, but in the review of Abeshouse and Weinberg (1945) two neoplasms were found in congenital anomalous kidneys, i.e. in the right half of a horseshoe kidney and in the lower half of a double kidney.

**Summary**

Bilateral renal cell carcinoma in an infant of 3 months of age is reported. The infant is the youngest in the reported series. The tumour was associated with imperforate anus and recto-urethral fistula, which is a hitherto unrecognized combination.

**References**


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**Tracheal Agenesis**

During the attempted resuscitation of a newborn twin the endotracheal tube appeared to be unusually prominent in the neck. Necropsy later revealed complete absence of a trachea: the tube had passed from the larynx into the oesophagus from which the main bronchi arose.

The mother was a healthy 27-year-old African Kenyan, with a history of two previous uneventful pregnancies. Polyhydramnios was noted at 28 weeks and twins were diagnosed. Premature labour occurred at 34 weeks and a normal male twin was born spontaneously weighing 2140 g. A large amount of liquor was released on rupturing the second sac and the second male twin was delivered by forceps. This baby was smaller and marasmic: he gasped immediately but required periodic intermittent positive pressure respiration until he died 2½ hours later. There was no clinical evidence of a twin transfusion syndrome. At necropsy this second twin was wasted, weighing 1475 g. The epiglottis, laryngeal sinuses, arytenoid, and thyroid cartilages were identified, but the cricoid cartilage was absent posteriorly, so that the lower part of the larynx opened into the oesophagus. No trachea was identified. Both main bronchi with rings of cartilage in their walls arose independently at the same level directly from the oesophagus (Fig.). The right lung was bilobar and collapsed while the left was partly expanded. The heart showed a common truncus...