Short Reports

305

explanation of this discrepancy may be that the child was hypersensitive to quinine. However, exchange transfusion, which is the logical method of treatment, produced both a dramatic improvement in the child’s clinical condition and a fall in plasma quinine concentrations.

Quinine does not readily cross the blood-brain barrier (Goodman and Gilman, 1970), but in the present case the concentration of quinine in the CSF was about 35% of that in the plasma. It is generally thought that quinine has a direct toxic action on the retina which may take months to recover. In the present case it is of interest that, though the child was initially both deaf and blind, she recovered both faculties within 5 days.

Summary

An 18-month-old child became unconscious and convulsed within 4 hours of taking an unknown number of quinine sulphate tablets. Her clinical condition did not improve, and an exchange blood transfusion was carried out. The plasma quinine concentrations fell, and the child stopped fitting and regained consciousness during the procedure. She made a rapid recovery from the transient deafness and blindness which occurred with quinine intoxication.

The plasma levels of quinine were kindly estimated by the Poisons Centre, Guy's Hospital, London.

REFERENCES


A. W. Burrows, G. Hambleton, M. J. Hardman, and B. D. R. Wilson*

Children's Department, St. Thomas's Hospital, London S.E.1

*A Correspondence to Dr. B. D. R. Wilson, St. Thomas's Hospital, London S.E.1.

A Case of Fetus in Fetu

Meckel (circa 1800) described a condition where a parasitic twin was found included within the abdomen of its partner and called it fetus in fetu. Willis (1958) pointed out the separate natures of fetus in fetu and retroperitoneal teratoma, the difference being that the latter is a true tumour, while the former is not. Since Young reported a detailed study of a case in 1809, only sporadic case reports have appeared from time to time, 14 cases having been traced in the 20th century. Nearly all the cases have been intra-abdominal.

Case Report

A 20-month-old Sinhalese girl was admitted with a history of abdominal distension of 2 months' duration. She had been born normally, with a birthweight of 2-7 kg. She had two elder brothers and a younger sister who were quite normal. There was no history of consanguinity, or of twin pregnancy.

She was 8-2 kg in weight, 77-5 cm tall, and appeared well nourished. She was mildly anaemic but not jaundiced. The abdomen was distended, particularly on the right side, and there were prominent veins in the epigastrium. There was an ill-defined lobulated firm lump extending from the right hypochondrium to the right lumbar region. It did not move with respiration, was slightly mobile laterally, and was not ballotable. The liver was palpable 2-5 cm below the right costal margin, but the lump could be felt apart from the liver.

Hb was 6-6 g/100 ml. Her urine showed a trace of protein and RBC 30/mm³. Liver function tests were normal. ESR 2 mm/1 hr, urea 25 mg/100 ml. Blood group O Rh positive.

The plain x-ray of her abdomen (Fig. 1) showed bony structures within the intra-abdominal lump. An IVP showed that the lump was not connected to the kidneys and both kidneys functioned normally. A preoperative diagnosis of fetus in fetu was made from the x-ray appearances.

At laparotomy (P.R.W.) through a transverse incision, the fetus was found enclosed in a sac between the liver and the right kidney with the structures of the porta hepatitis, spread over it. Its pedicle arose from the posterior abdominal wall, and had blood vessels on the surface, which continued over the wall of the sac. The fetus was

![Fig. 1.—A plain x-ray of the abdomen of patient (oblique view), showing the bony structures within the right upper abdominal region, preoperatively.](http://adc.bmj.com/)
Description of Specimen

The fetus weighed 1.8 kg and the maximum length was about 15 cm. It consisted of two spherical masses joined by a constriction (Fig. 2). The upper spherical mass had rugose skin with hair on the anterior surface. A single limb with 4 digits complete with nails was attached to it. The interior of the spherical mass contained straw-coloured fluid.

The lower segment had somewhat well-formed buttocks with a median raphe. A rugose sac resembling the scrotum was attached to the inferior end with a raw groove on its under surface, ? hypospadias. A blind aperture was situated about 2 cm posterior to the scrotum, ? anus. Superior to the sacral region was the vertebral column with hairy skin covering it. Arising from the buttocks were 2 limbs, the right one resembling a foot with 4 digits with nails (Fig. 3). The left limb was like a flipper with 2 digits. At the superior end of this mass were 2 more limbs. The right limb had 1 digit and the left limb had 3 digits complete with nails. Between the attachment of the 2 upper limbs was a proboscis, the undersurface of which was raw. The area around the proboscis was covered with hair about 15 cm long.

On dissecting, the axial skeleton consisted of an upper
skull and a short vertebral column in the middle, which was connected at its lower end to a pelvic girdle. The lower limb skeletons, which were complete, arose from the pelvic girdle.

Histologically, the specialized tissues found were skin with hair follicles and sweat glands. Sebaceous glands were conspicuous by their absence. Also cartilage, bone marrow, adipose tissue, fibrous tissue, muscle tissue, nerves, and blood vessels were found.

At the base of the sac there was tissue resembling primitive chorionic villi (Fig. 4).

Discussion

A *fetus in fetu* is a parasitic twin within its fellow. In contrast, a teratoma is a true neoplasm which arises from the embryonic pleuropertitoneal cells with benign or malignant properties. The most likely explanation is that it is a monozygotic twin of its bearer.

The criterion for diagnosing *fetus in fetu* was adopted by Willis (1935). He emphasized the presence of an axial skeleton with a vertebral axis with an appropriate arrangement of other limbs and organs, with respect to the axis. This would distinguish *fetus in fetu* from a teratoma. Most of the described cases have been intra-abdominal. Of these, except for 2 cases, all have arisen from the retroperitoneal tissues of the upper abdomen. One case described by Lee (1965) arose from the pelvis. Another reported by Numanoglu, Gokdemir, and Oztop (1970) arose from the mesentery of the ileum. Our case arose from the retroperitoneal tissue of the upper abdomen.

An unusual feature about our case was the presence of well-differentiated limbs with nails but with absence of well-differentiated internal organs. Possibly it consisted of two fused fetuses as suggested by the presence of multiple limbs.

An interesting feature was the presence of tissue resembling chorionic villi, with a central core containing blood vessels, attached to the base of the sac.

While most cases have been in infants, our patient was 1 year 8 months old at time of diagnosis and had had symptoms for only 2 months.

Summary

A case of *fetus in fetu* is described. It was found enclosed in a sac arising from the retroperitoneal tissues of the upper abdomen in a 20-month-old girl. Dissection of the specimen revealed a vertebral spine with a pelvis and well-differentiated limbs complete with nails.

Previously reported cases are reviewed.

We are grateful to Dr. F. L. W. Jayawardena (Professor of Anatomy) for helping in the dissection of the specimen, and the Medical Superintendent, Children's Hospital, Colombo, for permission to publish the case.

References


S. P. Lamabadusuriya, A. W. Atukorale, Priyani E. Soysa, and P. R. Walpita

*Correspondence to Dr. S. P. Lamabadusuriya, 58 Hermiston Avenue, London N8.

Plasma Growth Hormone in Patients with Chromosomal Anomalies*

Since the advent of the radioimmunoassay method for measurement of human growth hormone in peripheral blood, several studies have been performed on individuals with growth retardation. Though many of the known chromosomal anomalies are associated with disorders of growth, only in a few instances have results of growth hormone assays in patients with these disorders been reported (Frasier, 1967; Hillman and Colle, 1969; Lundberg and Wahlsström, 1970).

The purpose of this report is to present results of plasma growth hormone measurements for individuals with chromosomal anomalies.

Method

Twenty-six subjects with chromosomal anomalies were studied. Karyotypes were performed on peripheral blood leucocytes (Moorhead et al., 1960).† The subjects represented two chromosomal categories; 14 had anomalies in the number of X and Y chromosomes, and 12 had autosomal aneuploidy.

The plasma growth hormone (PGH) was measured by the radioimmunoassay method.‡ Individual capacities

---

*This work was supported in part by a Training Grant from the National Institutes of Health (NIAMD Training Grant No. 2TI-AM-5190).
†Performed by The Joint Cytogenetics Service Laboratory, Divisions of Health and Institutions, Department of Social and Health Services, Rainier School, Buckley, Washington, U.S.A.
‡Performed by the Bio-Science Laboratories, Van Nuys, California, U.S.A.