CASE REPORTS

SOLITARY CYST OF THE LIVER IN A CHILD AGED FOUR MONTHS

BY

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The literature on the subject of solitary non-parasitic cyst of the liver is now extensive but the occurrence of such a cyst in a child aged four months is sufficiently uncommon to justify the publication of the following case.

J.C., a boy, aged four months, was admitted to the Royal Hospital for Sick Children, Glasgow, in August, 1934, with the diagnosis of 'ascites of unknown origin.' The child weighed $10\frac{1}{2}$ lb. at birth and was fed on the bottle. At the end of a fortnight it was noticed that the abdomen was more prominent than usual although the child was otherwise well. The abdomen continued to increase in size and by the end of eight weeks was greatly distended and tense. At this time vomiting began after every feed and constipation was troublesome, and as treatment gave no relief the child was finally admitted to the hospital at the age of three-and-a-half months. On admission the child appeared somewhat dehydrated but bright and contented, his weight being 25 per cent. over the expected weight. He took his feeds fairly well with occasional vomiting and the stools although infrequent were normal. The abdomen was greatly distended and so tense that accurate palpation was difficult. The percussion note was uniformly dull except in the left iliac fossa and the left hypochondrium. The dullness was continuous with the liver dullness and did not alter with change of position. X-ray photographs showed the presence of a uniform shadow occupying almost the entire abdomen and pelvis, the stomach lying high in the left hypochondrium and the bowel in the left iliac fossa. The abdomen was tapped and 240 c.c. of fluid withdrawn. This fluid was pale, clear, straw-coloured, and was negative to tests for urine and bile. Microscopic examination showed the presence of some red blood corpuscles, and few lymphocytes and epithelial cells. On culture no growth was obtained.

Laparotomy was decided upon and, to lessen the risk of collapse from too sudden release of pressure, fluid was removed from the abdomen for three days prior to operation. The abdomen was opened under ether anaesthesia and an enormous cyst was found filling most of the abdominal cavity and arising from the right lobe of the liver. An attempt to empty the cyst by aspiration failed owing to the presence of numerous loculi. As the cyst wall was continuous with the liver, removal did not seem possible and accordingly the wall was cut through close to the liver and the cut edge sewn with cat-gut to stop the oozing. The liver, gall-bladder and ducts, and other abdominal organs appeared normal and the abdomen was closed without drainage. Recovery was uneventful and the child is now well and thriving.

PATHOLOGICAL INVESTIGATION. The cyst wall and a small piece of liver were sent for examination and the pathologist reported as follows:—
 ‘(1) **CYST WALL.** No epithelial lining can be seen. The wall is composed of fibrous tissue in which numerous dilated bile ducts and some liver cells are present. The cyst is probably of bile-duct origin. (2) **LIVER.** Histologically the liver shows slight interstitial fibrosis.’

Discussion.

Of the cases of solitary non-parasitic cyst of the liver now recorded in the literature, the majority have occurred in adults, less than half a dozen being within the first decade of life. The present case seems to be the youngest living patient recorded. Owing to the lack of histological and other detail in the recorded cases the origin and etiology of these cysts remains as yet obscure though many theories and suggested classifications have been put forward from time to time. There is general agreement that the majority are congenital in origin, the few described as acquired being degeneration or retention cysts associated with cirrhosis of the liver and a few examples of cystadenomata. Of those described as congenital in origin the following deserve recognition: (1) dermoids; (2) cysts lined with ciliated epithelium presumably derived from the original lining of the primitive fore-gut; (3) lymphatic cysts due to congenital dilatation of the ducts or retention cysts following congenital stenosis; (4) bile-duct cysts produced in the same way as the lymphatic cysts; (5) small multiple cysts associated with polycystic disease of the kidneys; (6) cysts of blood-vessel and endothelial origin. The present case seems to have been of bile-duct origin.

REFERENCES.

1. Bristowe, J. S., *Trans. Path. Soc.*, London, 1856, VII, 229.
2. Bland-Sutton, J., *Brit. Med. J.*, London, 1905, ii, 1167.
3. Moschcowitz, E., *Amer. J. Med. Sci.*, Philad., 1906, CXXXI, 674.
4. Shaw, H. L. K., & Elting, A. W., *Arch. Pediat.*, New York, 1909, XXVI, 818.
5. Boyd, S., *Lancet*, London, 1913, i, 951.
6. Jones, J. F. X., *Ann. Surg.*, New York, 1923, LXXVII, 68.
7. Lowenberg, H., *Arch. Pediat.*, New York, 1918, XXXV, 285.
8. Alexander, R. C., *Edin. Med. J.*, Edinburgh, 1925, XXXII, 61.
9. Stevens, T. G., *Brit. Med. J.*, London, 1925, ii, 952.
10. Stoesser, A. V., & Wangenstein, O. H., *Amer. J. Dis. Child.*, Chicago, 1929, XXXVIII, 241.
11. Ackman, F. D., & Rhea, L. J., *Brit. J. Surg.*, London, 1931, XVIII, 241.
12. Wakeley, C. P. G., & MacMyn, D. J., *Lancet*, London, 1931, ii, 675.
13. Beattie, D. A., & Robertson, H. D., *ibid*, 1932, ii, 674.