SHORT NOTES OF RARE OR OBSCURE CASES

PRIMARY RETROPERITONEAL HYDATID CYST

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SUMMARY

A case of a primary retroperitoneal hydatid cyst in an Indian adult which was treated by marsupialization is described. Attention is drawn to the rarity of the lesion, the probable mode of spread, and the difficulties encountered in its diagnosis.

The word *Echinococcus* is of Greek origin and means hedgehog berries because the multiple cysts resembling berries and hooklets seen on laboratory examination present a bristling appearance. The word ‘hydatid’ is also of Greek origin and means a drop of water. It was first applied by Rudolphi in 1810.

Redi in 1664 first suspected the animal origin of hydatid cysts. The course of these cysts was not known until 1782, when Goeze and later Batsch (1786) recognized under the microscope the small taenias armed with a crown of hooklets in the granulated cyst fluid. They proposed the name of *Echinococcus granulosus*. In 1821 Bremser from Vienna first reported a case of hydatid disease in a human patient who was operated upon by Kern. In 1853 Von Siebold proved that *Taenia echinococcus* was the producer of this disease. The life history of the parasite was first described by Naunyn in 1863. At the end of the past century and at the beginning of the present one Deve made a complete study of hydatidoses.

*Echinococcus granulosus* lives attached to the villi of the small intestine of the dog and other definitive hosts, such as wolves and foxes. When an ovum is swallowed by an intermediate host such as a pig, sheep, cow, or human the protective membrane is dissolved and the embryo penetrates the mucosa of the duodenum and the first part of the jejunum and...
enters the venous channels of the portal system, thus reaching the liver. Some, however, may pass through the liver and enter the inferior vena cava, thereby gaining access to other organs and tissues. The ova cysts at other sites, 2.5 per cent are primary cardiac cysts, 2 per cent occur in bones, 1 per cent in muscles, 0.5 per cent in the brain, and 1.5 per cent in other organs such as the spleen. Several cases of

![Figure 3](image3.png) - Retrograde pyelogram of the left side showing the left kidney to be pushed downwards by a mass.

![Figure 4](image4.png) - Barium-meal film showing the stomach to be displaced anteriorly by a mass.

![Figure 5](image5.png) - Cyst exposed at operation. Clear fluid is aspirated in the syringe.

![Figure 6](image6.png) - Daughter cysts evacuated from the hydatid cyst.

then forms a hydatid cyst of the liver or other viscera. Some investigators believe that the embryo may gain access to the lymphatics of the intestine, thus explaining the occurrence of hydatid cysts at sites other than the liver (Jidejian, 1957).

According to Barret and Thomas (1952) 55-60 per cent of the cysts are formed in the liver, 30 per cent in the lungs, and 2.5 per cent in the kidneys. Of the cysts of the pancreas (Anderson and Peebles, 1959) have been reported. Cysts of the omentum (Maccagno, 1955), ovary, parametrium, and pelvis (Morris, 1952), thyroid and orbit (Dew, 1928), mediastinum (Rakower and Milwidsky, 1960), and different muscles have also been observed.

Primary retroperitoneal hydatid cysts, however, are very rare while peritoneal and secondary
retroperitoneal cysts are not uncommon. Only 8 cases of primary retroperitoneal hydatid cyst have been recorded in the literature. A case of primary retroperitoneal hydatid cyst in an Indian adult is described here. Attention is drawn to the difficulty in diagnosis and management of such a lesion.

**CASE REPORT**

B. B., a 45-year-old woman, was admitted on 4 Aug., 1971, to Willingdon Hospital, Delhi, with a 3-month history of a lump in her abdomen. This had gradually increased in size. There was no tenderness, vomiting, diarrhoea, urinary complaint, fever, or loss of weight.

On examination the patient was a middle-aged female of average build. There was no anaemia, cyanosis, jaundice, oedema, or lymphadenopathy. On abdominal examination a swelling, measuring $15 \times 15$ cm., was felt in the left hypochondrium. The lower margin was well defined, while the upper limit could also be felt although not distinctly. The swelling did not move with respiration. It was a firm, mobile mass which was dull to percussion. The liver and spleen were not felt. There was no tenderness in the abdomen. The respiratory, cardiovascular, and central nervous systems were normal on examination.

On investigation the haemoglobin was 12 g. per cent, and the total leucocyte count was 8,000 per c.mm., with polymorphs 58 per cent, lymphocytes 30 per cent, eosinophils 10 per cent, and monocytes 2 per cent. The blood urea was 40 mg. per cent and the blood-sugar 76 mg. per cent. Albumin and sugar were absent on routine urine examination. However, on microscopic examination 10–12 pus cells and red-blood cells per c.mm were seen. Urine culture was sterile. A plain radiograph of the abdomen showed a circular soft-tissue shadow in the left hypochondrium and left loin (Fig. 1). An intravenous pyelogram showed a non-functioning left kidney (Fig. 2).

On a retrograde pyelogram the left-kidney pelvis was seen to be of normal calibre but the left ureter was kinked and the kidney appeared to be pushed downwards (Fig. 3). Barium-meal examination showed the stomach to be displaced anteriorly and to the right side (Fig. 4). From this it was concluded that the swelling was most probably a hydatid cyst of the spleen. Casoni's test could not be done because there was no free hydatid fluid available. A chest radiograph was normal.

An exploratory laparotomy was done via a right paramedian incision. The stomach was displaced anteriorly. The gastrocolic omentum was opened and a large cyst was found occupying the lesser sac (Fig. 5). The stomach and the pancreas were adherent to the anterior surface of the cyst. Clear fluid was aspirated with a syringe. Ten per cent formalin was injected into the cyst. Posteriorly the cyst was adherent to the aorta and the inferior vena cava. The splenic vessels were also adherent to it. Excision of the cyst en masse was not feasible in view of the dense adhesions of the cyst to major blood-vessels. The cyst was opened and fluid was aspirated. Daughter cysts were evacuated and the laminated membrane was removed (Fig. 6). A large Malecot catheter was left in the cyst and brought outside the skin via a stab incision in the left loin. The liver lobes were normal.

The postoperative course was uneventful and the catheter was removed 3 weeks after operation. The patient regu-

**DISCUSSION**

Lockhart and Sapinza (1958), on the basis of 2 cases of hydatid cysts of the lumbar fossa and after careful study of the clinical, radiological, and operative findings, confirmed the existence of an anatomico-clinical entity of retroperitoneal hydatid cyst. Razdan, Grewal, and Rai (1963) described a case of hydatid cyst in the retroperitoneal tissues presenting clinically as an iliocostal lesion. Ghooli and Sikdar (1963) encountered a case of hydatid cyst arising from the sheath of the psoas major muscle and which was intimately adherent to the uterus, bladder, common iliac vessels, inferior vena cava, and lower part of the ureter. The patient succumbed to anaphylactic shock during closure of the wound. In another case of retroperitoneal hydatid cyst, described by Mathur, Bhattacharya, and Sharma (1969), a biopsy was taken at the first operation in the mistaken diagnosis of renal neoplasm. This patient also died of anaphylactic shock during the second operation aimed at removal of the retroperitoneal hydatid cyst.

An echinococcal cyst of the retroperitoneal cellular tissue infiltrating the inguinal and femoral areas was described by Thackuk (1967). Similar lesions of the retroperitoneal space have been described by Assonad (1964), Bernard (1965), Brardino (1969), and Uraberski (1969).

The probable mode of spread of the hydatid embryo to the retroperitoneal space is either via the lymphatics from the gastro-intestinal tract or via the portal system of the liver.

**REFERENCES**


Maccagno, V. (1955), Rivista Viermes med., 6, 158.


