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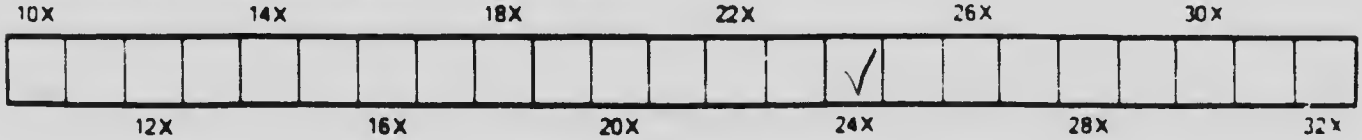

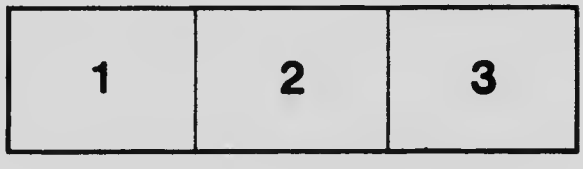

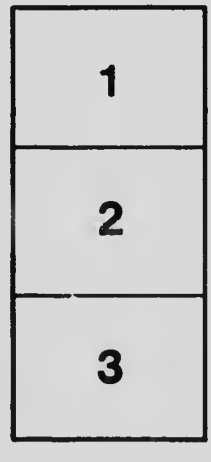

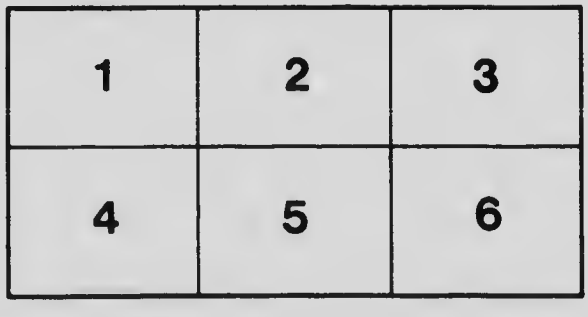

With the Author's Compliments

Hydatid Cyst of the Tail of the Pancreas.

...BY...

GEORGE A. PETERS, M.B., F.R.C.S., Eng.

TORONTO, CANADA.

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HYDATID CYST OF THE TAIL OF THE PANCREAS.*

BY GEORGE A. PETERS, M.B., F.R.C.S., Eng.

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E. I., aged 20, a native of Argentine Republic, South America. Came, in May, 1900, under the care of Dr. McKinnon, of Guelph, who furnishes the following history: For two or three years patient has had attacks of pain, obscurely located in the stomach and bowels. In August he had an attack of appendicitis, and was operated upon with a good result. At that time a tumor could be distinctly made out in the left hypochondriac region. The mass was rounded, tense, and slightly movable. It was somewhat tender, and at times was the seat of intense and persistent pain, probably due to pressure on the coeliac plexis (coeliac neuralgia).

September 20th, 1900, the pain became steadily severe, and the tumor seemed to increase considerably in size. His temperature was very variable, ranging from normal to 102-4, the pulse sometimes running as high as 110 or 120.

October 7th, morning temperature, 102°; evening, 104°: pain and distress very great. Dr. McKinnon aspirated the tumor, which he had correctly judged to be cystic, and removed twenty ounces of limpid fluid, faintly alkaline, odorless, free from albumen, and with specific gravity 1012. No microscopic examination was made. Very considerable relief followed the aspiration for some days, but the cyst slowly filled again, and the temperature and pulse showed a continuation of the disturbed health which was present before the operation of tapping.

October 29th, 1900. First seen by the writer, in consultation with Dr. McKinnon. The condition made out was as follows: Patient rather thin; confined to bed. Suffering from fever, with evening temperature reaching 104. Pulse generally over 100. Some sweating. The urine is normal.

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*Read at meeting of Toronto Clinical Society.

Local Conditions.—A rounded tumor, about as large as a cocoanut, can be felt below the ribs on the left side, with its centre about midway between the nipple and sternal lines. The mass is tense to the feel, and elastic; but no distinct sense of fluctuation can be elicited.

Its relations to the pancreas are determined by the easy detection of stomach resonance above the tumor, and between it and the liver, and of colon resonance below. For the purpose of clearly making out the line of the colon, air was injected into it, per rectum, as recommended by Kocher.

Stomach resonance can also be detected between the tumor and the normal situation of the spleen, while the kidney is excluded as the seat of the disease by the presence of colic resonance in the flank below the last rib, as well as between the normal area of renal dulness and the tumor.

By pressing the tumor very firmly from the front, it can be felt at the back, below the twelfth rib. The mass descends very slightly on deep inspiration, but is clearly attached to the posterior abdominal wall. No pulsation can be felt.

Having, by careful differentiation, decided that the cyst was connected with the tail of the pancreas, we determined to open it, if possible, from behind, according to the advice and practice of Cathcart and Caird, of Edinburgh.

Operation.—An incision, about three inches long, was made from the margin of the erector spinæ forward, about parallel to the twelfth rib, and curving slightly upwards around its end in the direction of the margin of the costal cartilages. On rapidly deepening the wound the lumbar fascia was divided, the colon displaced forwards with the peritoneum, and the kidney, surrounded by its fat, was found lying in its normal position, and obviously quite healthy. The further dissection was done largely by the finger and the handle of the scalpel, keeping in front of the kidney and well clear of its vessels.

On pressing the finger, upwards, forwards and inwards, the cyst could now be reached when very firm pressure was made from the front. A long hypodermic needle was inserted, and a very peculiar, dirty-grey fluid was withdrawn. With the needle as a guide, the cyst was incised, with some difficulty, owing to its depth from the surface and the toughness and resistance of its wall. To one accustomed to dealing with hydatids I have no doubt that this condition of toughness would immediately have suggested the true nature of the cyst, but as hydatid disease is very rare in this country, this being our first experience of it, we did not recognize the parasitic character of the neoplasm until the hooklets were discovered subsequently under the microscope.

On opening the cyst, some three or four ounces of seropurulent fluid escaped, in which were suspended shreds of yellowish-grey matter, which were, as we now know, probably disintegrated daughter cysts.

On passing the finger into the cavity it was found to have a thin but very dense and resistant wall, which was roughened by the presence of broken down material similar to that which escaped. A microscopic examination of the contents showed numerous brood-cysts, with their attached embryos in varying degrees of disintegration, as well as multitudes of the characteristic hooklets. It is highly probable that the process of tapping three weeks previously had resulted in the death of the parasite, as frequently occurs.

Note on November 5th. The patient shows slow but progressive improvement since the operation. The pain has disappeared and the appetite is returning. The wound continues to discharge some pus, and the cyst wall is coming away in shreds. The evening temperature still reaches 102°-103°.

January 1st, 1901. The patient has recovered sufficiently to leave the hospital and resume his work as a student, still, however, with a sinus, which discharges a small amount of fluid.

From his history, it is evident that the patient brought the parasite with him from the Argentine Republic. Nevertheless the disease appears to be quite uncommon in that country. Dogs appear to be almost the only animals in which the sexually mature form of the tænia echinococcus flourishes, while the herbivora and man act as the alternate hosts of the bladder form (the hydatid). However, there is very little sheep-ranching done in the district from which the patient hails, nor are dogs numerous or closely associated with man as they are among the dwellers in the more frigid zones.

Hydatid of the pancreas is extremely rare, though not unknown. In a series of 986 cases of hydatids in man collected by Neisser, the distribution is as follows: Liver, 451; lungs and pleura, 84; kidneys, 80; muscles and subcut. tiss., 72: brain, 68; sp. cord, 13; female organs and mammæ, 44; male organs, 6; pelvis, 36; organs of circulation, 29; spleen and bones, 28: eye, 3; pancreas, *none*.

However, Graham, the Superintendent of Prince Alfred Hospital, Sydney, Australia, who has had a very wide experience of hydatids, says in his excellent monograph on "Hydatid Disease," "The hydatid is sometimes found in the pancreas. I have observed it as a cyst about three inches in diameter, replacing the head of the organ. . . . The diagnosis of a hydatid cyst in the pancreas will depend on the size it has

attained, and on its position in relation to the organ, and whether the organ has become sufficiently involved so as to have its function completely interfered with."*

The diagnosis of hydatid cyst of the pancreas in the case above reported is, of course, open to the criticism that there was no actual dissection to establish its location, but the clinical signs and symptoms seem to me to be sufficiently conclusive.

In regard to treatment of hydatid cysts, the very full discussion of Graham may be briefly summarized thus: Medicinal treatment by kamala, turpentine, iodide and bromide of potash, mercury, etc., is "absolutely without benefit." Practically the same may be said of electricity. Tapping has many advocates, and has scored some reliable cures; but the operation is not free from dangers of shock, peritonitis and hemorrhage, and a number of very sudden deaths are recorded.

By far the best results have followed direct incision with as complete an evacuation of the cyst contents as possible, and efficient drainage. Where it is possible to do so, the cyst wall should be stitched to the edges of the external wound at the time the incision is made, great care being observed to prevent escape of the cyst contents into the peritoneum or pleura. Where a cyst in the abdomen is so situated that its wall cannot be brought up to the anterior abdominal wall, one of two courses may be followed: (1) The operation may be done in two stages, aseptic gauze being packed at the time of the first incision in such a way as to excite adhesions, and thus create a sort of "coffer-dam" approach to the cyst, or (2) the cyst may be opened, as in this case, from behind.

In regard to the treatment of cyst of the pancreas, it seems to me contrary to the principles of surgery to approach it from the front if it can possibly be reached from behind. The pancreas is essentially a retro-peritoneal organ, and since in its enlargement a cyst of that organ almost always approaches the anterior abdominal wall by crowding the stomach upwards and the transverse colon downward, to reach it by a transperitoneal route involves dividing the peritoneum four times, viz., the parietal layer, two layers of the gastro-colic omentum, and the layer covering the cyst.

Moreover, it is easy and safe, by blunt dissection, to raise the peritoneum from the kidney and posterior wall of the abdomen, and I submit that any cyst of the pancreas which can be palpated from behind, or even *from the side*, can be opened and drained more effectively and more safely by that route than by the transperitoneal route. The difficulty would perhaps

* Graham, Hydatid Disease, Clinical Aspects. Young J. Pentland, Edin., 1897.

be greater when the cyst occupied the head of the pancreas, since the duodenum and the portal vessels would require to have due consideration given to their position. However, cysts of the head of the pancreas are rare, and though I know of no data on the matter, anatomical considerations would lead one to expect that the tendency of the cyst would be to crowd these structures aside, so as to allow it to be approached from the loin, as on the left side.