FOUR UNCOMMON ABDOMINAL TUMOURS

BY

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Four cases are here reported, each presenting some unusual features:

(1) A male, aged 50, with a large unilocular haemorrhagic cyst of the spleen, causing symptoms of abdominal colic, and presenting a mass palpable to the right of the mid-line.

(2) A woman, aged 20, with a large cystadenocarcinoma of the pancreas, having metastases in the liver known to have been present for nearly three years.

(3) A woman, aged 35, also with a large cystadenocarcinoma of the pancreas, but with a short history, and short survival. Although the large tumour occupied all the region of the head and neck of the pancreas, and grossly displaced the duodenum, there was no obstruction to the bile duct.

(4) A 3-parous woman, aged 22, with a large tumour of the right adrenal gland and metastases in the liver and peritoneum, presenting, with great wasting, masses in the abdomen, and atrophy of the sex organs; eighteen months after a normal pregnancy and delivery.

Case I.—H. E., a farmer, aged 50, was admitted February, 1939, for investigation of a supposed chronic intestinal obstruction, of a few months' duration. He denied any trauma. He had been ill in the country for two weeks, about six months previously, but had not had any recurrences. Soon after he began to get dyspepsia, aching pain in the left hypochondrium, colic and constipation, without vomiting.

Of fair health, he presented an indefinite soft fullness in the left hypochondrium with a more prominent, smooth, rounded, non-tender lump, beneath the right rectus muscle, moving on respiration. Fluctuation was not recognized; there was no visible peristalsis.

After barium meal, screening and barium enema, a provisional diagnosis of pancreatic cyst was made. Pyelograms were not done.

At operation, through a long left paramedian incision, under spinal anaesthesia, a very large thin-walled unilocular cyst was seen occupying the whole left upper abdomen as far as the mid-line, where it was found to arise from the entire left surface of an enlarged spleen, with adhesions to gut and omentum.

The spleen, of normal appearance and consistence, was of about double the normal size. The spleen and cyst were removed without great difficulty. The splenic artery was very large, tortuous, and sclerotic. The cyst when fixed, measured 22 cm. by 8 cm., but was considerably larger before fixation. It was unilocular, the deep wall being formed apparently by splenic tissue covered by fibrin, without a specific lining; the contents were altered blood, with large flakes and sheets of red-brown fibrin.

Microscopically, there was no evidence of malarial or bilharzial infection of the spleen.

Recovery was uneventful.
Cysts of the spleen have been reviewed by Fowler (1940) and by McClure and Altemeier (1942). The latter classify them as:

1. True cysts (lined by a specific membrane).
   a. Epithelial. Dermoids and epidermoids.
   b. Endothelial. Lymphangioma, hæmangioma, polycystic disease.
   Some serous cysts.
   c. Parasitic.

2. False cysts (not lined by a specific membrane).
   d. Hæmorrhagic.
   e. Serous.
   g. Degenerative, liquefaction in infarcted areas.

Fowler collected 137 cases. These were added to by McClure and Altemeier (1942), Deneen (1942), and by Gallagher and Mossberger (1942), bringing the total to 155. Fowler states that parasitic cysts are twice as frequent as all other forms, and that 80 per cent of all false cysts are large and unilocular.

In the aetiology of these unilocular cysts, it is usually considered that trauma, with or without antecedent disease (e.g. malaria), has been a common feature. Others have found these cysts more frequent in women during the child-bearing age, and have related them to menstruation or pregnancy.

Symptoms will be due to the size of the spleen and cyst, and a palpable tumour may be either the spleen in an abnormal situation, displaced by the cyst, or may present as a cyst only, when it arises from the caudal end of the spleen, or as an enlarged spleen, when the cyst is situated at the upper pole, and thus hidden from palpation.

Differential diagnosis will thus usually involve a consideration of:
- Forms of splenomegaly.
- Subphrenic abscess displacing the spleen.
- Cystic swellings of pancreas, kidney, left lobe of liver, omentum, mesentery, or ovary.

and should be made after investigation by barium meal and enema, by pyelograms and by specific tests for hydatid disease.

Case 2.—R. L., a female, aged 20, was admitted February, 1944, complaining of abdominal masses, colic, and steadily increasing abdominal distension.

She had been in hospital in March, 1941, under the care of another surgeon, when she was 16 years old and unmarried. Three years before this (aged 13), she had an attack of fever, loss of weight, jaundice, and constipation, relieved by enema. Later, she noticed a painless lump in the abdomen.

When aged 15, she commenced to get attacks of abdominal colic and enlargement of the abdomen, but without any more jaundice.

During her stay in hospital in 1941 she presented a large tumour in the left side of the abdomen, suspected of being Egyptian splenomegaly. At laparotomy the mass was found to be in the region of the mesocolon with adherence to the stomach, and there were secondary deposits in the liver.

There was no record of a biopsy having been done. Diagnosed as "sarcoma of the mesocolon." She was considered unfit for Roentgen treatment and was discharged.

Her abdomen continued to enlarge, there were mild attacks of colic, but bowels were regular, no changes in the stools, no urinary symptoms, and catamenia were normal.
On re-admission, February, 1944, her abdomen was very distended, with a huge trilobar cystic swelling occupying most of the abdomen, which could not be felt by rectal examination. There was not any jaundice.

Case 2.—Female, aged 20.

Laparotomy, February, 1944. Bloody fluid in the peritoneal cavity. Transverse colon and hepatic flexure pushed down and to the right by an extensive lobulated
Clinical and Other Notes

retraperitoneal swelling, fixed to the vertebral column in the region of the pancreas. Huge venous channels and omental adhesions prevented accurate localization of its origin. The bile ducts were not dilated. There were one large and several smaller deposits felt in the liver. A biopsy was taken from one of many small protrusions from the cystic mass and the abdomen closed. She recovered, was discharged from hospital, and was lost sight of.

Pathological report: Appearances suggesting metastasis from carcinoma of the pancreas. There are masses of epithelial cells, of various shapes and sizes, showing a hydropic degeneration, with a delicate stroma. There are three histological pictures: (1) Solid masses of cuboidal and cylindrical cells; (2) definite glandular formation; (3) cysts, with intracystic papillary projections.

The age of this patient was unusual. Moreover, even if the tumour commenced as a benign cystadenoma, it appears to have been frankly malignant for three years (as evidenced by the presence of secondaries recorded at laparotomy in 1941), during which time she had enjoyed fair health.

Lichenstein (1934) classifies pancreatic cysts associated with malignancy as: (1) Solid adenocarcinoma, with epithelial-lined cysts; (2) epithelial-lined cysts of the pancreas present simultaneously with, but not arising from, adenocarcinoma of the pancreas; (3) papillary adenocarcinoma.

Kennard (1941) reviewed the literature to 1940, and lists 25 "malignant cysts of the pancreas," but all of these do not represent clear-cut examples of cystadenocarcinoma.

Brunschwig (1942) discusses the question whether all apparently benign cystadenomas of the pancreas should be considered precancorous.

If this were established, it follows that all such benign cysts should be radically removed on discovery, even if this involves partial or subtotal pancreatectomy.

In Kennard’s series there was no instance of prolonged survival after the malignancy was established. In 4 cases, patients survived five and a half to ten years after marsupialization for cystic disease of the pancreas, eventually dying of carcinoma, but there was no evidence when the carcinoma arose.

Case 3.—H. K., female, aged 35, admitted December, 1944, with an abdominal swelling. She felt perfectly well till four months previously, when she commenced to complain of a diffuse pain in the back and abdomen, later localizing in both hypochondria. It was never severe, was rather worse after eating, and there had never been any jaundice. No history of trauma.

General condition fair; no icterus. A large oval, smooth, elastic intra-abdominal tumour occupied the epigastrium down to the umbilicus. It did not move on respiration, could be moved somewhat from side to side, but not up and down. Dull on percussion. Barium meal demonstrated that the stomach was displaced down and to the left by a mass which did not involve the stomach wall.

At laparotomy most of the head and body of the pancreas appeared to be replaced by a large oval cystic tumour, which overlapped and hid the duodenum. There were numerous large metastases throughout the liver, but no free fluid in the peritoneal cavity, and no adhesions. The bile ducts were not obstructed.

One metastasis from the margin of the liver was excised for biopsy.

Histology.—"The section showed anaplastic adenocarcinoma (showing degenerate and cystic changes) infiltrating the liver. Primary growth—probably in the pancreas"

Her general condition slowly degenerated, and she died after about four weeks. A local post-mortem only was allowed. Most of the pancreas was occupied by a large oval cyst containing red colloid material or clot. The cyst overlapped the duodenum in all
Clinical and Other Notes

Case 3.—Female, aged 35.

Anterior aspect. Posterior aspect.

directions, but there was no obstruction to the bile duct. The only normal pancreatic tissue appeared to be in the tail. The liver was studded with large and small secondary deposits.

Case 4.—M. R. M., Egyptian female, aged 22. Married with 3 children, the last born eighteen months ago after a normal pregnancy and delivery and, she alleges, a normal lactation.

She complained of weakness, amenorrhoea since the birth of the last child, and of a lump in the abdomen which she had first noticed while pregnant, separate from the uterus.

On admission, in April, 1941, she presented a very distended abdomen, together with extreme wasting of the chest and extremities, which latter appeared like a skeleton covered by skin only. The breasts were represented by nipples on the thoracic cage, mammary tissue not being palpable. She had a very large, fixed, non-tender mass occupying the right side of the abdomen and loin, and two other masses—of the sizes of a grape fruit and orange respectively—in the left hypochondrium and left lower abdomen. On vaginal examination, the cervix could not be felt. On inspection, the vagina was short, wide and lax. The only trace of a cervix was a dimple—completely epithelialized over, with no trace of an orifice. The uterus was very small. The masses were not felt from the pelvis.

Plain X-ray showed a large oval lightly calcified swelling in the renal area. Ascending pyelogram demonstrated that this mass displaced, without involving, the kidney.

Blood-pressure was not raised. No hirsutes. No abnormal pigmentation. No vomiting.

Urine : No sugar, a trace of albumin, no deposit. Stools—no protozoa or cysts.

Blood-pressure 140/80, 135/70, 110/75, 110/80, 110/75, on successive examinations while in hospital.

Blood chemistry : Urea 28 per cent, sugar 0·09 per cent, chlorides 432 (520, 526) mg., and cholesterol 130 (108, 160) mg., on successive examinations.

Laparotomy in July, 1941, showed a large fixed tumour, pushing down the right kidney into the iliac fossa, but not involving the kidney substance, together with a spherical mass in the right and in the left lobes of the liver, and a fourth mass surrounded by...
by adherent gut and omentum in the left iliac fossa. Owing to the great vascularity of the tumour it was considered inadvisable to take tissue for biopsy. The uterus and ovaries were felt to be very much atrophied.

CASE 4.—Female, aged 22.

Her subsequent progress was one of slow steady wasting, without vomiting, diarrhoea, hirsutes, pigmentation or pain.

Unfortunately, her relatives removed her from hospital about five weeks after operation, and she was lost sight of.
The pathology would appear to have been a carcinoma of the cortex of the adrenal gland. In this case, the endocrine symptoms were a loss of femininity, rather than a masculinization, i.e. loss of breast tissue, atrophy of uterus and ovaries, complete atrophy of the vaginal cervix, with epithelialization over the site of the external os, but without alteration of habitus, or alteration of hair distribution—all occurring within twelve to eighteen months.

Cahill (et alia, 1936) in a review of adrenal cortical tumours state that these may present as: (1) Tumour with endocrine symptoms; (2) tumour alone; (3) tumour with metastatic masses; (4) tumour with arterial hypertension (continuous or paroxysmal).

X-ray diagnosis of adrenal tumours is usually made by demonstration of a dense shadow, displacing that of the kidney; by pyelograms, or by air or CO₂ infiltration in the perirenal fascia.

The last procedure is, however, not entirely free from danger of air embolism. Calcification is not common in adrenal tumours, but Bachman (1939) gives several references from the literature of calcification in examples of ganglioneuroma, psammoma, and in bilateral cortical carcinoma of the adrenals.

Roome (1939) describes his technique of air injection as done in 15 cases for investigation of adrenal virilism, while Hyman and Willis (1938), in a discussion of the differential diagnosis of suprarenal tumours, consider that perirenal insufflation is of little value, and has dangers of air embolism. They state that, while an intrinsic tumour of the upper pole of the kidney will usually distort the pelvis or upper calyces, a large tumour of suprarenal origin will dislocate the kidney without causing any deformity of the upper calyces.

Vines (1936) states that cortical carcinomas form the bulk of adrenal neoplasms, and are of two histological types—adenocarcinoma (the more common) and fully developed carcinoma.

He finds that the latter are not associated with any marked effect on the sexual system, and that masculinization of neoplastic origin is found only in relation to the adenocarcinoma type.

REFERENCES.

Spleen.

Pancreas.

Adrenal.
THE TREATMENT OF TROPICAL ULCER.

BY

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DURING my three years as a Prisoner of War in Siam, I personally treated 637 cases of tropical ulcer in our camp hospital. This does not include hundreds of tropical ulcers who were treated as out-patients.

The following is an exact copy of notes I made about his condition while I was still a Prisoner of War.

TROPICAL ULCERS.

These were one of our biggest menaces. At first I was unable to find anything to check their rapid growth and the destruction of tendons and bones. I was forced to amputate above the knee in eight cases. Later, I discovered a very efficient method of treatment. I received the idea from Manson Bahr’s “Tropical Medicine.” This treatment was as follows:

We will assume that a case is admitted to hospital with a tropical ulcer three or more inches in diameter over the anterior surface mid-third of the leg. The edges of the ulcer are raised and the floor is covered by a thick layer of pus. The skin surrounding the ulcer is inflamed.

Treatment.—Six times per day, the pus is washed or syringed off with warm water (preferably containing P.P.). Adherent portions of the pus which are not removed with the washing are gently removed with Kapok or cotton-wool swabs made with bamboo sticks. The floor of the ulcer having been freed of pus a thin layer of pure carbolic acid is applied to the whole surface of the ulcer by means of a Kapok or cotton-wool swab, as already described. The carbolic acid is washed off five minutes later. Pure carbolic acid is harmless to the ulcer but is likely to trickle over the edge and cause nasty ulceration of the surrounding skin. While the skin around the ulcer is inflamed, as many foment as possible are applied in the interval between the carbolic acid treatments. At night, and during the intervals of treatment during the day, an oily dressing is applied. When the condition of the ulcer shows improvement, i.e. raised edges disappear—the floor of the ulcer becomes a red granulating surface free from pus—the treatment is gradually changed as in the following example:

June 1.—6 daily applications of pure carbolic acid.
June 6.—3 applications of pure carbolic acid and 2 applications of 1 in 13 carbolic.
June 10.—2 applications of pure carbolic acid and 3 applications of 1 in 13 carbolic.