Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY

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CASE 9451

AN Irish-American letter carrier of sixty-two was sent July 24, 1923, from the Consultation Clinic, where a huge abdominal tumor was found. His own complaint was pain in the left of the abdomen of seven weeks' duration.

F. H. Unimportant.

P. H. He had scarlet fever in childhood. He had sometimes urinated once or twice at night as long as he could remember. He had some dysuria and urgency, especially in winter. For twenty years he had had "sour stomach," gas, and abdominal discomfort about four hours after breakfast, relieved by food. Less frequently this followed other meals. His best weight was 182 pounds ten years ago, his usual weight 155-160, his present weight 140.

P. I. Seven months ago he had a severe attack of bronchitis. After this his usual digestive trouble seemed worse, his voice became husky and had remained so, and he felt that he was losing weight. Seven weeks ago, while working, he was seized with excruciating pain in the left abdomen, causing him to double up and stop working immediately. The left abdomen was very tender, and he noticed a hard swelling there. He had diarrhea for twenty-four hours. Ever since that time he had had the same stabbing left-sided pain except when he was sitting. It was worse when he walked or stood, bad while lying in any position but on his back. As long as he sat he had none at all. Until three days ago the pain seemed to be gradually lessening, and the swelling became less pronounced on the left and more symmetrical. Three days ago while sitting down he was seized with very sharp pain extending from the mass in the abdomen up into the thorax. This lasted perhaps five minutes and stopped for a few minutes after taking aspirin gr. x. Since that time it had decreased markedly. Since the onset his appetite had fallen off and he had lost at least twenty pounds and much strength, though he felt that he had regained some of this during the past two weeks.

P. E. A poorly developed and nourished man neither ill nor in pain, with evidence of considerable recent loss of weight. Mucous membranes pale. Much crown work on teeth. Pyorrhea. Enlarged cervical and inguinal glands. *Lungs.* Right back slightly duller than left. Breath sounds bronchial, voice sounds increased. Apex impulse of the *heart* in the fifth space, midclavicular line. Percussion measurements not recorded. A soft systolic murmur at the apex. *Abdomen.* A huge mass extended from the left costal margin almost to Poupart's, encroaching on the right lower quadrant. It was tense and perfectly flat on percussion, with sharply defined borders. There was no tenderness. It seemed as though a fluid wave was transmitted.

Before operation *T.* 98.1°-100°, *P.* 88-112, *R.* normal; amount of *urine* not recorded, sp. gr. 1.015-1.016, no albumin, rare leucocytes at both of two examinations, many streptococci and staphylococci at the second, no sugar at seven examinations before and after operation; *blood* not recorded. *Wassermann* negative. *Cystoscopy,* July 26. Bladder capacity and bladder findings normal. Catheter introduced into each kidney pelvis. Normal flow of clear urine from each. One c.c. of phenolsulphonephthalein injected intravenously. The dye appeared from the right in four minutes, from the left in five minutes. Fourteen per cent. was obtained from each in twelve minutes. Microscopical examination of specimens negative. *Pyelogram.* A faint shadow was seen suggesting the outline of the left kidney. The injected pelvis was not definitely abnormal, although the calices were rather large and blunt. No shadows were seen suggestive of stone.

July 29 operation was done. The patient was fairly comfortable next day. There was slight drainage, but the catheter tended to plug. August 1 there was no more drainage. The patient was comfortable except for hiccup. August 7 there was little drainage after irrigation with Dakin's solution. The wound was clean. August 10 there was slight swelling and tenderness of the elbows and knees; otherwise he felt well. August 11 he was radiated. He suddenly developed phlebitis of the left leg, with slight tenderness, swelling and fever. August 14 he was worse, very uncomfortable, with slight temperature and considerable drainage. August 16 he was radiated again. The condition of the leg seemed more than a phlebitis. There was very soft edema as high up as the crest of the ilium, none in front, none on the right. August 19 there was beginning edema of the other leg. He went steadily downhill. August 22 the catheter was removed. It plugged when replaced. The drainage saturated the dressings rapidly. There was much distention. August 23 he died.

Discussion

BY DR. RICHARD C. CABOT

NOTES ON THE RECORD

We cannot very well connect those twenty years' symptoms with anything in the nature of tumor of this size, I should suppose.

As far as I can figure out the mechanics of it, he had something that was attached in front and high up. When he stood it would pull; when he lay it would pull. It is hard to see altogether the distinction between standing and sitting, unless that the diaphragm is lower in standing. I can rarely figure out the mechanics of these relations of pain to posture, and I am quite hazy about it here.

NOTES ON THE PHYSICAL EXAMINATION

Cystoscopy is negative so far as I see, as everything else has been in reference to the kidney. Some of the largest tumors do spring from the kidney in men, but all the evidence we have is against that here. The red test showed an equal excretion from each side, showing that one kidney is just as good as the other, both presumably all right.

DIFFERENTIAL DIAGNOSIS

The age, the sex, the fact that so far as he knows the thing has not been coming on very long, that it does not seem to be connected with the kidney—those are the chief facts we have. It is not described in such a way as to make it clear whether or not it is connected with the spleen, but with the blood not examined they must have thought there was good evidence that it was not the spleen. It seems extraordinary, with any such mass, that there should not have been a blood examination. If there were a big spleen there probably would be enlargement of the liver as well, which is not noted, or enlargement of the lymph glands, which also is not noted. What other organs have we from which this tumor could spring? Certainly not the stomach; no such huge tumors are associated with the stomach. Certainly not the intestines, large or small. The bladder is out of the picture. It cannot be connected with any pelvic organ, or with the gastro-intestinal tract or the urinary tract, so far as I see. What have we left? The pancreas and those mysterious retroperitoneal structures which we often cannot identify any more definitely than that.

I say, then, this had to spring from some retroperitoneal organ or structure,—the pancreas or something else. As to the pancreas, I have never heard of a pancreatic tumor of this size. We have cysts and tumors of the pancreas, but in my experience they are always small. We have nothing in the urine to suggest any interference with the pancreatic function. That is not necessary, however. I am influenced chiefly by the size of it. I never knew a pancreatic tumor so big.

Nothing is left except a tumor arising in retroperitoneal structures somewhere or other. The record says, "It seemed as though a fluid wave was transmitted." That, if true, would seem to imply a cyst, although they were not sure of it. I do not know from what such a cyst would start. Yet I do not see how it can be as big as this unless it is cystic. So I think it is cystic, although I do not know of what type.

I have never seen anything that I remember quite like this. If we did not have so much negative kidney evidence the kidney would certainly be our first supposition. But with all we have there I can say nothing more except retroperitoneal, perhaps cyst.

A Physician: In hypernephroma don't you sometimes get very little kidney sign?

Dr. Cabot: I should suppose a hypernephroma of this size would have to distort the pelvis and the phthalein output.

Dr. Young: These x-rays are worth looking at. There is an injected pelvis which is not normal but not grossly abnormal. It is not a tumor pelvis, not a hypernephroma pelvis. The calices are not distorted as we expect them to be. I should hate to call it a normal pelvis, though. If it were not that this looks like the outline of the kidney—

Dr. Cabot: They committed themselves that it was not definitely abnormal, although, as they say, the calices are large and blunt. That is what Dr. Young feels. Dr. Merrill, we are in need of some advice about the pelvis of the kidney. We have an enormous tumor and we have a pyelogram which is now before us. The x-ray report says "not definitely abnormal."

Dr. Merrill: If I had known what was coming I might have brought one or two normal plates to demonstrate. Of course, the success of an examination of this kind depends a great deal upon the injection, and that in turn depends a great deal on the tolerance of the patient to the mixture. Sometimes there is a great deal of pain which will not allow the pelvis to be filled. The kidney pelvis has a rather definite shadow, conventionally the pear shape with the branching into the calices and the bottom of the calices, when it is completely filled, showing normally cupping of the minor calices and the absence of any unusual distention, which could only be illustrated by comparing it with the normal. In this case we do not see all the pelvis of the kidney, and there is no evidence of distention. It looks as though the whole pelvis and its branches were not completely filled. Whether that was due to the intolerance of the patient and the incomplete injection, or to some definite pathological condition preventing its filling, it is

difficult to tell from this plate. But we can see the branchings pretty deeply between the calices, which is contrary to what we expect to see in hydronephrosis, for example, in which the pressure flattens the outlines of the calices, especially after it has endured for some time. The bottom here is not filled quite enough for us to see whether the normal cup-like shape of the minor calices is there or not. I should say that if any there would be very little abnormality in the calices.

DR. CABOT: Can you see anything of the outline of the kidney there?

DR. MERRILL: I cannot make it out on this plate. In the second plate I cannot make out the kidney outline. There is a suggestion of it, but it is not positive enough to be sure. It takes very little motion to spoil these plates. One of the most important things in taking a radiogram of the kidneys is absolute quiescence of the patient, because the kidney outline shows so little by contrast that a very little motion will blend the outline with the rest of the shadow so that we cannot see it.

DR. CABOT: One of the things we have no account of is whether this thing goes into the flank. In trying to feel an abdominal tumor and make out whether it is connected with the kidney, with the hands in the back and loin, we see if we can transmit a definite pulsation through from the front to the back. I think we could do better in diagnosis if we were told about that.

DR. YOUNG: I do not think it is kidney. I have never seen a tumor of this size with a normal function. The only thing I can think of is a cyst of retroperitoneal origin, at his age. I think this is too large for the pancreas.

DR. CABOT'S PRE-OPERATIVE DIAGNOSIS

Retroperitoneal tumor (cyst?).

PRE-OPERATIVE DIAGNOSIS

Abdominal tumor.

OPERATION

Gas-ether. 40 cm. midline incision made high. A tumor the size of a watermelon was encountered lying behind the peritoneum. The transverse colon ran across the tumor like a flat ribbon. Very large veins ran across it and through its substance. The spleen and kidneys were found quite distinct from the tumor, and it seemed too low for the pancreas. It was thought utterly impossible to remove it. A trocar was inserted through a bloodless portion of the cyst and about a liter of dark bloody fluid withdrawn. A catheter was then inserted and sutured to the cyst and to the abdominal wall.

FURTHER DISCUSSION

DR. CABOT: Their pre-operative diagnosis was a very safe one.

DR. RICHARDSON: It smacks of honesty.

DR. CABOT: In effect it is "something swollen in the abdomen." After operation we do not seem to know much more than we did before. I do not see that we are shown wrong in any respect by the operation.

There is nothing more to say except that he got septic in the joints, veins, finally peritoneum, and died.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Carcinoma—retroperitoneal.
Contributing cause—cardiac failure.

DR. RICHARD C. CABOT'S DIAGNOSIS

Retroperitoneal cyst.
Septicemia.
Thrombosed inferior vena cava.
General peritonitis.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesion*

Spindle cell sarcoma of pancreas.

2. *Secondary or terminal lesions*

Fibrinopurulent peritonitis.
Thrombosis of inferior cava and left iliac and femoral veins.

3. *Historical landmarks*

Laparotomy wound.
Small hepatoma.
Slight chronic pleuritis.
Obsolete tuberculosis of a bronchial lymph gland and apex of right lung.
Chronic perihepatitis and perisplenitis.
Sand-like concretions in pelves of kidneys and bladder.

DR. RICHARDSON: This of course is an extraordinary case.

We were not permitted to examine the head.

The left leg and ankle were swollen and pitted, and there was slight swelling and pitting of the right leg and ankle. This condition was more marked on the left side.

There was an old scar of the anterior abdominal wall, a scar about which the suture marks were still visible; and about the level of the umbilicus there was an opening in the scar which led down into the abdominal cavity. The abdomen was not distended; the wall yielded. The peritoneal cavity contained considerable opaque purulent material, and the intestines and peri-

toneum were coated with a fibrinopurulent scum,—a frank fibrinopurulent peritonitis. The appendix was negative, the gastro-intestinal tract out of the picture. There was no definite change in the mesenteric glands and no definite enlargement made out in the retroperitoneal glands.

There was no fluid in the pleural cavities; a few old adhesions on each side. The bronchial glands were slightly enlarged, and one of them showed fibrocalcareous transformation. There was a patch of obsolete tuberculosis in the apex of the right lung; the left negative. There was nothing else in the lungs.

The circulatory system was negative except that at the junction of the common iliac veins the vena cava showed frank thrombosis which extended down more particularly on the left and was the cause of the swelling of that extremity. There was a slight extension into the right iliac veins, and that accounted for the swelling on that side.

The liver weighed 1660 grams and was negative except for one small tumor about the size of the end of a finger. This tumor so far as we could make out was a hepatoma. We find in livers now and then tumors which arise from the liver substance, called hepatomata or adenomata —what you will. Some of them probably go on to malignancy or are malignant from the first, as you may see fit to think of malignant growths. This tumor we think had nothing whatever to do with the tumor of the pancreas.

The gall-bladder was negative. The common bile-duct was dilated up to 2 cm. in circumference. The hepatic and cystic ducts were negative. Why the dilatation I do not see exactly. The duct at its lower end was about the usual size.

In the situation of the pancreas was a mass 24 cm. long by 16 cm. wide by 8 cm. thick, which was simply a mass of new-growth-like tissue, boggy, with an opening in it, I presume where it was tapped. It was a flattened ovoid mass and of course was in close relation to the organs—the kidney, stomach, spleen, and pancreas—but although there was contiguity there was no continuity except with the pancreas. Microscopic examination showed this tumor to be a sarcoma.

The spleen showed a few old adhesions but was otherwise negative. The kidneys were negative except that the pelves contained a small amount of brownish sand-like material. Was that the injection?

DR. YOUNG: The injection is sodium bromide or sodium iodide. It ought not to leave that.

DR. RICHARDSON: The ureters were negative and the bladder negative except that it contained some brownish sand-like material.

DR. CABOT: Was anything left of the pancreas itself?

DR. RICHARDSON: In the region of the head there was some pancreatic tissue still left. The duct of Wirsung came up into that all right, but disappeared along the surface of the tumor. The mucosa of the duct was negative.

DR. YOUNG: Would a cyst of that kind tend to contain any of the ferments of the pancreas, or would a growth like that destroy the pancreas as it progressed?

DR. RICHARDSON: I don't think there would be any ferments in the tumor tissue in this case. The growth destroyed the pancreas as it progressed.

DR. CABOT: It is extraordinary that there should be no sugar in the urine although there is only a little bit of the pancreas left. It shows how little will do to carry on the function.

DR. RICHARDSON: It is a very extraordinary tumor. It was difficult macroscopically to be sure as to its relation with the other organs, and where it was associated with what remains of the pancreas it was difficult macroscopically and microscopically to show just where the invasion began.

DR. CABOT: Was it more obviously cystic in life than it appears to be now?

DR. RICHARDSON: It was not so very obviously cystic at necropsy, but perhaps they had withdrawn what gave it something of that character.

DR. CABOT: Of course a liter of fluid must have come from somewhere. They drained it, I suppose.

A PHYSICIAN: Isn't it rather remarkable not to have any metastases?

DR. RICHARDSON: Yes. At first of course I thought that little tumor in the liver was one, but that had an entirely different structure. It was so different that you would at once see that it could not be a metastasis.

CASE 9452

AN American agent of forty entered through the Emergency Ward June 25, 1923, in so toxic a condition that he could give no history. The following history was obtained the next day from his wife.

F. H. Not given, except that his wife's only two pregnancies had ended in miscarriages.

P. H. Negative.

P. I. For four months the patient had looked worried and emaciated. June 19 he complained of pain in the right lower chest caused he said by an injury to the chest. He breathed rapidly, with grunting expirations, and looked very ill, though he did not complain of malaise. The following day he went to work, but was very soon forced to go home. He looked extremely ill, blue and cold, but would not go to bed. For