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A CASE OF CARCINOMA OF THE ILEUM WITH UNUSUAL SYMPTOMS.

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According to reliable statistics, cancer of the large and small intestine occurs in about fourteen per cent. of all carcinoma cases. In these about eighty per cent. are primary in the rectum, fifteen per cent. in the large intestine, and five per cent. in the small. Of the latter, those of the ileum occur about twice as often as in the duodenum, while carcinoma of the jejunum is most rare.

The report of a recent case under our observation is of interest for the following reasons: 1. Whether an attack of typhoid fever (the ulceration in which is mostly in the ileum) may have had to do with the development of carcinoma at some local site of cicatrix formation of the healed typhoid ulcer; 2, the fact that there had been no vomiting in the course of the cancer growth, same being of possibly eighteen months' duration, this being particularly of interest when the degree of peristalsis present in the case so strongly suggested a marked stenosis in the small intestine, and the fact that the first vomiting spell was fæcal in type; 3, the marked degree of visible peristalsis which could be traced from the ileum up and which required the addi-

tional force of the stomach to drive the contents in the small intestine through the strictured ileum; the good condition of the general body, considering that the cancer was far advanced; and, 4, the operation of lateral anastomosis of the middle ileum (which is very movable) with the ascending colon (which is fixed) in such a way as to have an anchored receiving part of the union to which a very movable viscus (ileum) could accommodate itself as may be called for in its function, rather than to have joined the ileum to the sigmoid and have had two long mesenteries to the both parts of the union, which would have increased the danger of twists or kinks at the site of union and would have brought about an abnormal lay of the parts.

CASE. H. G.; fifty-four years old; salesman; single. Patient first came under observation October 2, 1910. His father died of typhoid at forty-five; mother, as a result of a fracture of the neck of the femur which kept her in bed for three years, died at seventy-nine; had two brothers, one was an inmate of a home for incurables suffering from locomotor ataxia, the other was well; had one sister who died at forty-seven from cancer of the breast.

Patient was temperate in his habits, drank very little alcohol, smoked moderately, habits otherwise negative. During childhood patient had had pertussis, measles, and minor illnesses. At seventeen years of age he had typhoid fever and was very ill for six weeks. Ten years later had a two weeks illness which was diagnosticated as typhoid at the time. Nine years afterward had pneumonia, was in bed for three weeks when there were aspirated from his right chest sixteen ounces of purulent fluid, and one week later seventy-two ounces of purulent fluid and a portion of one rib were removed. Patient left the hospital three weeks after the operation and had a drainage tube in the wound for thirteen weeks, when the opening closed. In 1899 he had a cough of a chronic type, lost in weight, and went to the Adirondack Mountains for nine weeks, an annual custom he persisted in up to the present time. About two years ago had pains in the stomach and intestines of an indefinite type. Treatment at the time was for indigestion and diabetes. Two months following the onset of the

pains, he passed a large portion of a tape worm while at stool one day. (Further sections were passed for six months, when, on taking medicine therefor, no further sections were noticed.) Since then (one and one half years ago), patient had more or less disturbance in the abdomen all of the time. This consisted of pains, rather irregular in type and location, and not referable to meals or quantity or quality of foods he ate although most of the times they were gastric in location. These pains had been getting more severe as time went on, and were somewhat of a colicky nature in the last months. Had much gas in the stomach and bowels. Went to stool daily, and the simplest purgative gave him diarrhœa. Began to lose weight one and one half years ago, lost slowly for the first year, and much faster in the last six months, until now was reduced from 172 to 129 pounds. Was on a diet of only a few foods since meats and the heavy vegetables distressed him in the way of increasing his abdominal pains.

Examination. Patient was pale in countenance and appearance of mucous membranes; somewhat emaciated and dullness in right lung at base and voice sounds muffled in the same area (the empyema scar was just below it). Hæmic blows at the base of the heart were transmitted into the vessels of the neck. Abdomen distended and very tympanitic; loud stomach splash; percussion of the liver and spleen showed these to be normal in size; no mass or visible peristalsis noted. Patient said that he had no pain that morning, and that there was no tenderness on pressure in the different areas of the abdomen. Blood pressure, 124 millimetres of Hg.

Test meal (the following morning): Mixed meal at 6 a. m. and Ewald at 12 m.; extraction one hour after the ingestion of the latter. Amount, 130 c.c.; looked well digested; no evidence of remnants from the first meal on macroscopical examination but some meat fibres when examined by the microscope; free hydrochloric acid, 34 degrees, combined 16 degrees, total 50 degrees; total acidity 54 degrees; starch digestion, normal; enzymes, normal; mucus markedly increased; no blood, bile, or pus noted; fermentation gas result and the amounts of bacteria, low. Stool (the same morning): Hard masses of scybala; surface reaction, slightly acid; fermentation and putrefaction tests most positive; Gram positive bacteria increased; occult blood present in marked reactions. Urine, normal, excepting that the indican was increased, the sulphate partition

being 3 conjugate to 10 preformed; a few casts were noted in the examination of the sediment.

Patient was requested to report again the next morning for x ray examination, but did not return. On inquiry Dr.

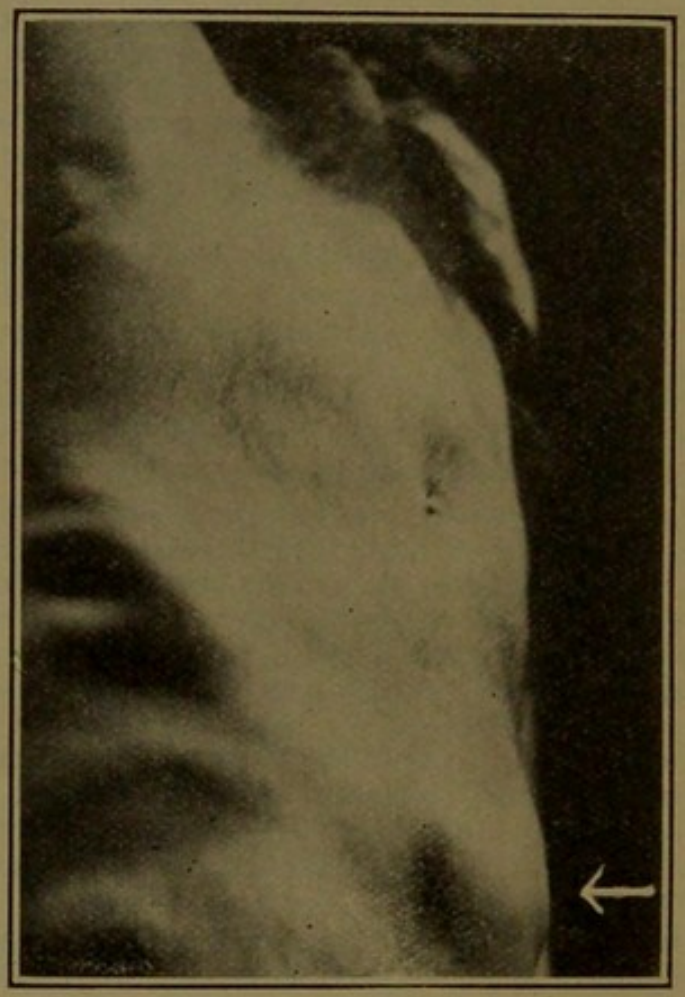

FIG. 1.—Visible peristaltic movements of the stomach occurring at the end of peristalsis of the small intestine. The onset of the movements began in the right iliac fossa in a small elevation. This traveled upward on the right side of the abdomen for a short distance, coursed transversely and slightly upward in the ileum, then disappeared in the jejunum, deep and higher on the left side, the whole movement finally terminating in a peristalsis involving the entire stomach. Tracing the stomach movement, the slant from the left costal margin is seen with a peristaltic wave in the upper part of the body of the stomach just below it. Below this is a concave sulcus terminating in the peristaltic wave below, which wave can be traced around the umbilicus in the corresponding pyloric region. At the very height of gastric movement a loud gurgling was audible from the fluid coursing through the stricture in the ileum, and a severe pain was present. Arrow points to the right costal margin.

Bassler learned that he had left the city and had gone on the road to sell some goods for his firm. On November 8th he came in for the x ray examination, and reported that he had been as far West as San Francisco selling goods but that the pains had become so severe that he had to give up his intended trip and come back. When he was placed on the table stripped to have the x ray taken, I noticed for the first time the visible peristalsis noted in the following picture, and which movements he said came on in intervals of about one or two hours, but which he had paid but little attention to.

After having been given twenty-five grammes of bismuth subcarbonate in buttermilk a plate of the stomach was made, which showed a slightly prolapsed and markedly dilated organ and a bismuth shadow at the pylorus strongly suggesting stenosis due to carcinoma. An x ray plate of the colon, taken after the instillation of seventy-five grammes of bismuth given per rectum, showed the colon half way up between the iliocæcal region and the hepatic flexure to be normal. But instead of the bismuth, which had been given the day before to map out the stomach, having reached the colon it was still in the coils of the small intestine—giving a diffuse area of lightness to the plate mostly on the left side of the median line of the abdomen—thereby strongly suggesting that the bismuth was meeting with some obstruction near the ileocæcal region preventing its entrance into the colon and demanding its retention in the small intestine. Another specimen of stool sent the same night showed the presence of occult blood as before. Patient was remanded for operation. A specimen of blood examined the same morning the x ray plates were made showed hæmoglobin, seventy-four per cent.; color index, 0.85; erythrocytes, 3,900,000; leucocytes, 7,200; morphology of the reds and the differential count of the whites normal.

(*Dr. Grant.*) The operation which was to have been performed at 3 p. m. the next day, was on account of fæcal vomiting performed at 11.30 in the evening. Although the operation was done at this time as an emergency, yet the patient had the benefit of two days preparatory treatment, such as sterilized food, sterilized eating utensils, having the teeth brushed and mouth cleansed every two hours with an antiseptic solution.

The field of operation was thoroughly cleansed, and an antiseptic dressing was applied some hours before operation. Under ether anæsthesia the abdomen was opened in

the middle line below the umbilicus. Distended coils of small intestine at once presented themselves. The stomach was palpated and found to be greatly distended. The cæcum was collapsed. As Dr. Bassler's diagnosis was a tumor of the ileum, the ileum was next examined, and within two feet of the cæcum we came upon a mass in the intestine. This mass was about two inches in length, very hard, and not more than one inch in diameter. At this point the

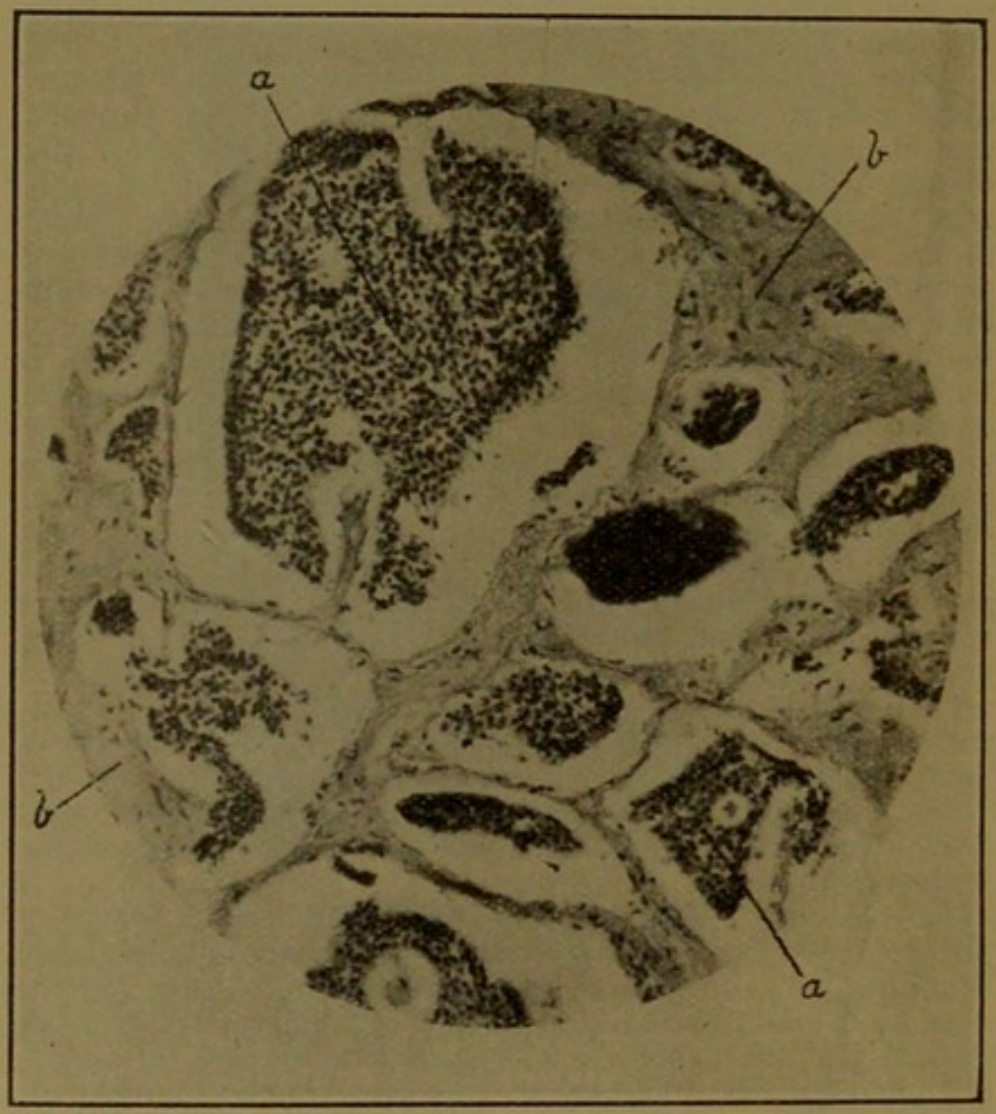

FIG. 2.—Photomicrograph of gland situated at the root of the mesentery, showing hyperplasia of gland substance with carcinoma infiltration at the hylum. Cortex showed proliferation of lymph cells, and there was a general proliferation of lymphoid tissue throughout the gland. *a*, masses of carcinoma cells; *b*, hyperplasia of gland substance. ×200.

mesentery was short, and the growth pulled backward to within about one and one half inches of the vertebral column.

Immediately behind the growth was a mass of glands, hard and firmly matted together. This mass extended to, and seemed to be attached to the vertebral column. It was quite immovable. One of these glands was removed for microscopical examination. The mesentery was studded throughout with hard glands about the size of pigeon eggs. A chain of lumbar glands ran up the vertebral column to the pancreas. These were also hard and adherent.

It was at once obvious that the disease could not be completely eradicated. The patient's general condition was good, and he had only vomited once. Instead of simply relieving his condition by performing an enterostomy, we decided that we might safely do a lateral anastomosis. Accordingly, the ileum, about two feet above the growth, was united to the ascending colon. In the performance of the anastomosis, clamps were used, and a double row of continuous sutures of Pagenstecher linen were inserted. On removing the clamps the ileum almost at once poured some of its contents into the colon. The abdomen was then closed.

The entire operation occupied about fifty-five minutes. The patient was returned to bed, placed in the Fowler position, and Murphy proctoclysis commenced.

Subsequent course: At 3 a. m. patient's bowels moved freely, which also occurred several times during the next day. Thirty-six hours after the operation he informed us that his only inconvenience was hunger, and that he was not getting nearly enough nourishment. From this time on he was allowed a fairly liberal supply of liquid nourishment, and on the fourth day was put on a full soft diet. His highest temperature after operation was 99.8° F., and highest pulse rate 90.

The first dressing was done on the eighth day after operation, primary union throughout. Patient left the hospital the fifteenth day after operation. At this time he was quite strong, had been walking about his room and through the corridors of the hospital for several days. His nutrition had greatly improved since operation, and he was experiencing a general feeling of well being and freedom from the pains he had had before.

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