CASE OF MULTIPLE PRIMARY CARCINOMA INVOLVING THE RECTUM AND OVARY

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The occurrence of primary carcinoma involving both the rectum and ovary has been found to be extremely rare. The record of only one such case has been published. This was by Rau (1) who, in 1922, reported a case in which both of these organs were the site of a primary carcinoma. The age of the patient and the types of carcinoma present were not recorded. In the case to be reported here a papillary cystic adenocarcinoma was found in a patient aged thirty-two, one year after resection of the rectum for adenocarcinoma. The incidence of multiple primary malignant tumors involving the colon and the ovary has been somewhat greater. In a very complete survey of the literature recently made by Warren and Gates (2), 6 cases were listed. The age in one was twenty-eight, and in the remainder ranged from forty to fifty-four. This age group, as in the present case, is considerably lower than the average age at which multiple primary malignant tumors usually have been found (3, 4).

In the establishment of a diagnosis in the present case, the recognized criteria for multiple primary tumors were applied. The two important postulates of the three laid down by Billroth are believed to be adequately fulfilled. First, each growth showed distinct histologic differences which were sufficiently pronounced to exclude their interpretation as merely different stages of development. Second, each tumor sprang from its parent epithelium in different situations. The fulfillment of the third requirement, that each tumor must produce its own metastasis, could not be expected, in view of the clinical history of the case. The possibility that the second tumor may have been metastatic has been ruled out by the histologic differences and the fact that the ovary is not a common site for metastasis from rectal carcinoma.

Mrs. E. B., aged thirty-two, was admitted to Jefferson Hospital, March 7, 1929, complaining of an aching pain deep in the rectum, blood-streaked stools, and progressive constipation. Symptoms had been first noticed about six months previously and had gradually become more pronounced. For several weeks the chief complaint had been inability to have a bowel movement without laxatives. There had been no loss of weight or strength. The family and personal history had no bearing on the present illness.

Examination of the rectum disclosed, three inches above the anus, an irregular, nodular mass, involving almost the entire circumference of the bowel. A deep, crater-like ulceration in the center of the mass bled readily and contained a thick, foul discharge. The diagnosis of adenocarcinoma was confirmed by biopsy. A secondary anemia was present: hemoglobin, 50 per cent; red blood cells, 3,850,000 per cu. mm. The blood Wassermann test was negative; the urine was practically normal.

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On March 9, a Mayo-Rankin colostomy was performed in the left lateral abdominal wall, after exploration of the abdominal viscera, which were negative. Twelve days later, posterior resection of the rectum was carried out, with the removal of a portion of healthy bowel above the growth, and of adjacent lymph nodes. The peritoneum was closed and the proximal stump of bowel was sutured to the base of the wound. Blood transfusions were given two days before and after the operation. The patient made an uneventful recovery and was discharged from the hospital April 15, to return for x-ray therapy.

The pathologic report by Dr. Baxter L. Crawford follows. "Specimen consists of a rectum and anus which measure 15 cm. in length. Seven centimeters above the anal orifice is a large ulcerated lesion, the margins of which are sharply defined, indurated, and elevated. The floor of the ulcer is nodular and blood-stained. On section through the ulcerated lesion, it seems to involve the entire thickness of the colon. There is a portion of normal mucosa above and below the ulcerated area. Attached to the outer surface of the specimen is a small amount of fat which includes several firm gray lymph nodes, the largest of which measures 2 cm. in diameter.

"Examination of sections from the ulcerated area reveals extensive infiltration of the wall of the intestine by masses of columnar epithelial cells which are fairly well differentiated, being columnar in type and forming indefinite acini. These cells are infiltrating the entire thickness of the wall of the intestine. At the margin the lesion is sharply defined.

"Sections from the enlarged lymph node reveal extensive replacement of the lymphoid tissue by masses of columnar epithelial cells.

"**Diagnosis:** Adenocarcinoma of the rectum, with metastasis to the regional lymph nodes."

After leaving the hospital in April, the patient felt well and gained weight steadily. Nine months later, in January 1930, she began to complain of pain in the right lower abdomen, pain across the back and down the legs, and a "bearing-down" sensation in the perineum. On examination at this time, a rather firm mass was palpable in the abdomen, below the umbilicus, to the right of the midline. The mass extended downward and to the left across the abdomen. It was smooth, and on its right aspect quite tender. It was thought to be a myoma uteri. X-ray examination of the pelvis showed no evidence of metastasis to any of the bones of the pelvis or to the lumbar and four lower thoracic vertebrae. A marked secondary anemia was present: hemoglobin, 24 per cent; red blood cells, 2,100,000 per cu. mm. The urine showed a persistent trace of albumen and an occasional hyaline cast. Two blood transfusions were given prior to operative intervention. At operation, March 11, a large cyst of the right ovary was found and removed. The ovarian tumor was covered by a firm capsule, not adherent at any point to the adjacent tissues. Careful examination of the previous operative site in the rectal fossa, of the segment of bowel distal to the colostomy, and of the adjacent pelvis, disclosed no evidence of recurrence of the rectal carcinoma.

The pathological report follows. "Specimen consists of a large, irregularly shaped, cystic mass, which weighs 660 gm. and measures 14 × 11 × 7 cm. The surface is smooth and glistening. On section, the mass is composed of numerous cysts and solid nodules which vary much in size. Some of the cysts contain a thick mucoid-like fluid, and many of the nodules are soft and necrotic. No normal structure is recognized.

"Examination of sections from the mass reveals that it possesses a rather thick, fibrous capsule and numerous fibrous trabeculae which separate the cysts and nodules. The cysts are lined by columnar epithelium and contain numerous small papillae. The lining epithelium is columnar in type and for the most part is several layers thick, the nuclei of the cells being hyperchromatic. The solid nodules are composed of masses of proliferating epithelial cells which form numerous acini and papillae. In the larger nodules there is extensive necrosis. Small masses of hyperchromatic epithelial cells can be observed scattered throughout the connective-tissue stroma and capsule which are evidently infiltrating, not being confined to the cyst.

"From the presence of the numerous small cysts throughout the growth and the type of epithelial lining, with many papillae, the neoplasm is considered to be primary in the ovary rather than metastatic."
**Fig. 1. Section from lesion in rectum, showing infiltration of deeper portions of intestinal wall by masses of columnar epithelial cells**

A portion of normal mucosa can be observed at the upper right margin.

**Fig. 2. Section of tumor of ovary, showing small cyst with papilla covered by columnar epithelial cells, characteristic of primary ovarian tumor**

In other portions of the tumor definite malignant characteristics were present.
"Diagnosis: Papillary cystic adenocarcinoma of the ovary."

Convalescence was slow, but the patient was discharged from the hospital in fair condition two weeks after operation. She improved slowly for about three months, and was free from discomfort. After this period, however, she became progressively weaker. There was evidence of metastatic involvement of the peritoneum, progressive kidney impairment, and myocardial failure. Death occurred in October 1930. No autopsy was obtained.

BIBLIOGRAPHY