Metastatic Carcinoma of the Appendix: Report of a Case*

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The number of reported cases of metastatic carcinoma of the appendix is small. They are seen less often than cases of primary involvement of the appendix. In 1966, Latchis and Canter took 11 such cases from the literature and added two of their own. Seven of these 13 patients had been operated on for acute appendicitis and perforation was found in five. In addition to carcinoma of the appendix, these patients had evidence of carcinomatous involvement of other abdominal organs, including the ovary, tubes, stomach, and kidney.

The primary tumors were located in the breast (five cases), stomach (two cases), lung and bronchus (two cases), pancreas, colon, kidneys, and ovary (one case each). The same year, Hould and Bonenfant reported eight additional cases, in four of which the primary tumors were in the breast. In 1970, Dieter reported three more cases, with the primary tumors in the lung (two cases) and the stomach. Two patients had generalized carcinomatous involvement of several abdominal organs and the peritoneum. According to pathologists, such appendicular involvement is not uncommon in advanced stages of generalized carcinoma.

Much rarer is metastasis found in an early stage, when the only evidence of metastasis found is in the appendix. According to Hould and Bonenfant, these are true appendicular metastases.

We present such a case. The primary carcinoma was in the gallbladder. Both primary tumor and metastasis were found only by microscopic examination.

*Received for publication July 12, 1971.

Fig. 1 (above). Wall of the gallbladder, showing marked inflammation. Hematoxylin and eosin, ×100.

Fig. 2 (below). Closer view; mitotic cells are easily seen. ×400.

Report of a Case

A 64-year-old Persian man, the father of four children, was admitted to the hospital with fever and slight abdominal pain, located mainly in the right upper quadrant, of two weeks' duration. From time to time diarrhea alternating with vomiting appeared. The patient had lost 4 kg in weight. He had had diabetes mellitus for 27 years; he took one tablet of Diabinese (250) mg a day. In 1956 he had undergone left herniotomy.
The patient was in fair general condition. Blood pressure was 140/80 mm Hg; pulse 90/min and regular. The abdomen was soft; a mass, tender on pressure, was palpable in the right hypochondrium. The spleen was not enlarged. There were no abnormal lymph nodes. The temperature was 38.1°C.

Results of laboratory tests were: erythrocyte sedimentation rate 67/100; hemoglobin 13.2 g/100 ml; hematocrit 38 per cent; leukocyte count 7,600; thrombocytes 322,000; bleeding and clotting times normal; urea 32 mg/100 ml. Electrolytes, bilirubin, cephalin, thymol, alkaline phosphatase, acid phosphatase, prothrombin, transaminase, lactic dehydrogenase, and diastase were in the normal range. Total protein was 8.1 g/100 ml (albumin 2.9 g/100 ml, globulin 5.2 g/100 ml); bromsulphalein was 5.1 per cent. No occult bleeding was found in the stools.

Liver scan did not show any significant findings. X-ray of the gallbladder revealed many stones, with no filling of the organ. Barium-enema studies showed slight displacement of the hepatic flexure of the colon downwards. X-ray of the stomach, intravenous pyelogram, and chest X-ray disclosed no abnormalities. A diagnosis of acute cholecystitis was established and the patient was given antibiotics as well as intravenously-administered fluids. His condition did not improve: the temperature did not fall, and the mass increased in size. It was decided to operate.

At laparotomy we found a typically enlarged, inflamed gallbladder, full of stones, with no macroscopic evidence of malignancy. The liver was normal. There was no evidence of any malignant growth in the abdominal cavity. Peroperative cholangiography disclosed no abnormalities. A cholecystectomy was performed. As a matter of routine we also did an appendectomy, although, as mentioned above, no pathologic changes were evident. The postoperative course was uneventful. The wound healed per primam and two weeks later the patient was sent home in good general condition.

In addition to severe inflammation of the gallbladder, histologic examination showed adenocarcinoma of the mucosa. The growth infiltrated the fatty tissue covering the organ (Figs. 1 and 2). Examination of the serosal layer of the appendix disclosed metastasis of adenocarcinoma of the type found in the gallbladder (Figs. 3 and 4).

Two months later the patient was admitted again because of fever and jaundice. Serum bilirubin was 3.1 mg/100 ml and later increased to 16 mg/100 ml (mainly direct). Alkaline phosphatase was 8 units, transaminase 230 units, and prothrombin 35 per