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A Case of Colonic Metastasis of Breast Cancer Positive for Estrogen Receptor

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ABSTRACT

This is the first report of a metastatic colon cancer of breast cancer positive for estrogen receptor. A 56-year-old woman who had undergone standard radical mastectomy due to right breast cancer was suffered from left lower abdominal pain. Barium enema and proctoscopy revealed a narrowing at the rectum and the descending colon. Needle biopsy of the rectum revealed Group 5. The resection of the left colon, the rectum and the ovaries were performed. Foci were macroscopically present at the rectum, the sigmoid colon and the descending colon. Histological examination revealed that colonic foci were metastases from the breast cancer of lobular carcinoma. The colonic preparation was positive for estrogen receptor.

Scirrhous carcinoma is said to form 0.1 to 1% of colon cancers[6]. These carcinoma can be classified into primary and metastatic ones, and gastric cancers are predominant as primary cancers in the case of metastases[8]. However, metastases from breast cancer and gall-bladder cancer have been reported[2,4,8,11], though they occur very rarely.

We are reporting a case of a colon cancer of the scirrhous type, which was positive for estrogen receptor and diagnosed as metastasis of breast cancer.

CASE REPORT

Patient: 56-year-old female

Chief complaint: Pain in the left lower quadrant.

Past history: The patient underwent standard radical mastectomy due to right breast cancer in 1976.

Family history: Nothing particular

Present illness: The patient has sometimes suffered from abdominal pain in the left lower quadrant since the end of 1983 and the symptom gradually progressed and she visited her family doctor. Barium enema and proctoscopy revealed a narrowing at the rectum and the descending colon. No abnormality was found at biopsy. Needle biopsy of the rectum revealed Group V, and she was referred and admitted to our department.

Physical examination on admission: The patient was moderately developed and nourished, and an operation scar of about 20 cm in length was found on the right anterior chest. There were no abnormalities in the heart and lungs, and neither the cervical, axillary nor the inguinal nodes were palpable. The abdominal region was flat, and palpation revealed an elastic soft mass with tenderness in the left lower quadrant. The mass was ill-defined and had the shape like a pipe, 15 × 3 cm in size. The liver and spleen were not palpable. On digital examination of the rectum, circumferential stenosis was found 7 cm from the anal verge, but ulceration was not palpable on the mucosal surface.

Laboratory studies on admission: Although CEA was high with a value of 15.1 ng/dl, there was no abnormality in the other items of blood analysis and blood chemistry. Furthermore, the

occult blood test of the stool specimen (guaiac test) was also negative.

Findings on barium enema: There were narrowing and wall stiffness at the rectum and the descending colon, and a circumferential narrowing over a long range of about 12 cm was seen in the descending colon. Although unevenness due to nodular elevation was found at the mucosa of the narrowed region, no findings suggestive of an evident ulcer were obtained (Fig. 1).

Endoscopic findings of the rectum: A circumferential narrowing was seen 7 cm from the anal

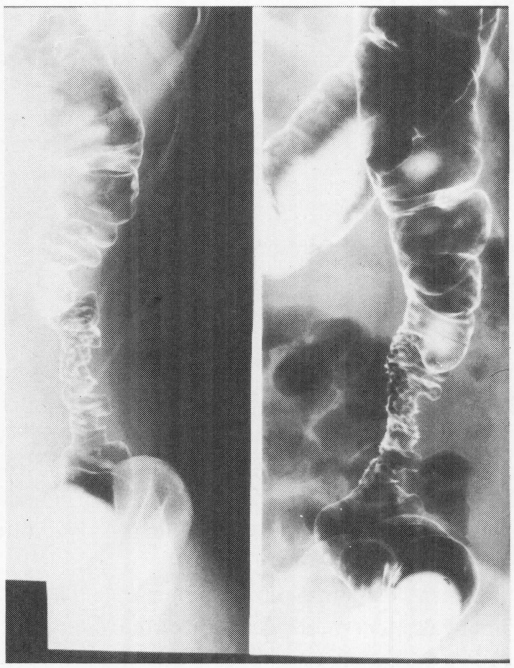


Fig. 1

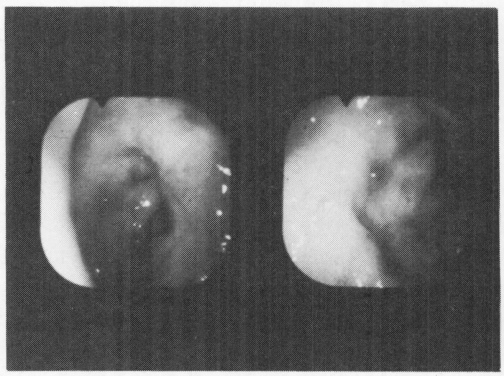
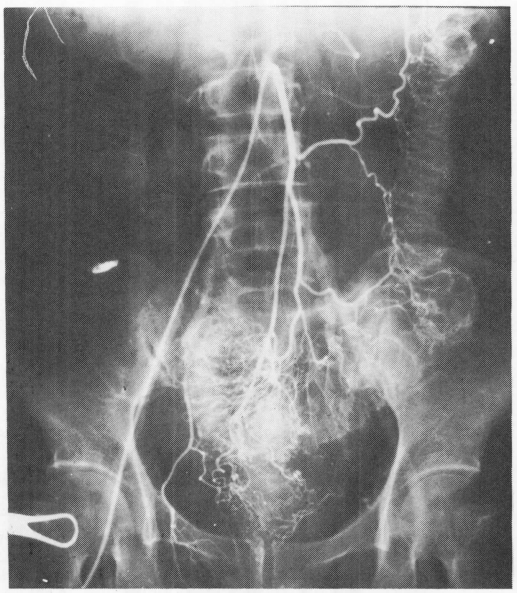


Fig. 2



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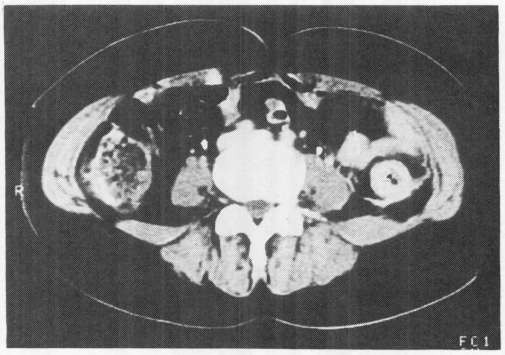


Fig. 4

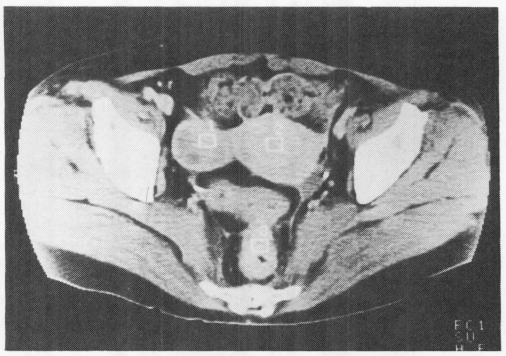


Fig. 5

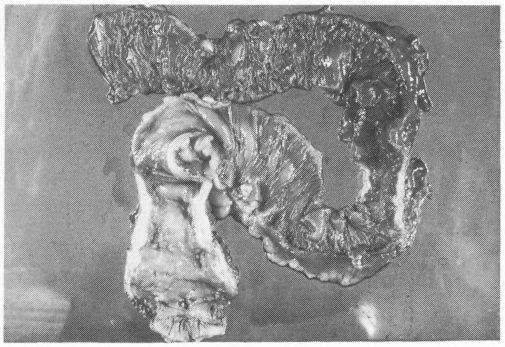


Fig. 6

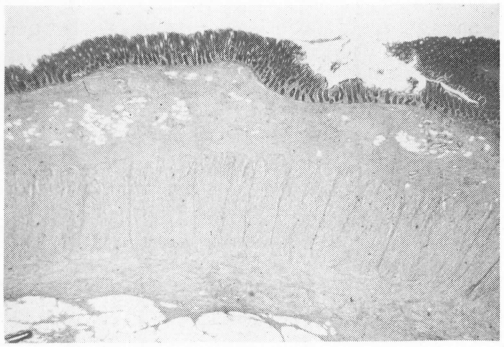


Fig. 7

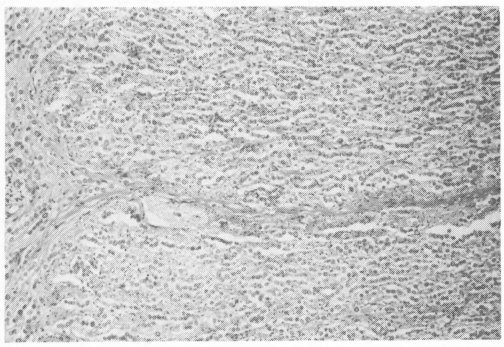
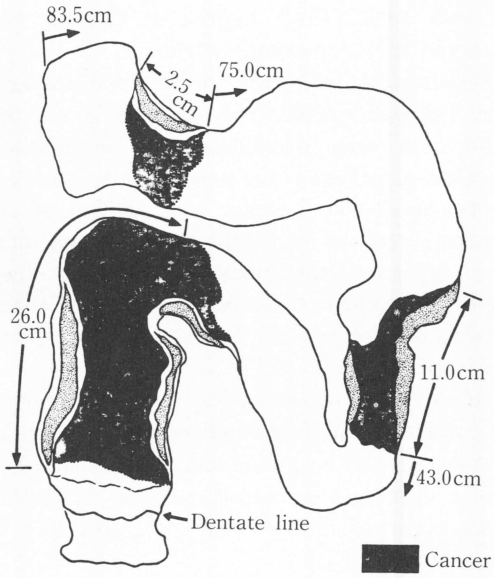


Fig. 8

verge. However, no noteworthy findings were obtained, except for a redness and a slight unevenness on the mucosal surface. Observation of the oral side of the narrowed region was difficult (Fig. 2).

Findings in inferior mesenteric arteriography: A tumor stain corresponding to the narrowed region of the descending colon was observed (Fig. 3).



SCHEME

CT findings: Thickening of the rectal wall and enlargement of the bilateral ovaries were seen. A marked thickening of the wall and hypertrophy of the neighboring peritoneum were observed in the area of the descending colon (Fig. 4, 5).

Preoperative diagnosis: As a scirrhous carcinoma of the descending colon and rectum accompanied by ovarian metastasis was suspected, an operation was performed.

Findings at operation: The left mesocolon was plate-like and stiff, and stiffening and thickening of the colonic wall were observed at the sigmoid and descending colons.

The bilateral ovaries were found to be swollen and thickened. There was no abnormality in the liver, spleen, stomach and small intestine. The surgical procedures included resection of the left colon and the rectum with bilateral oophorectomy.

Macroscopic findings on the resected preparation: Foci were present in 3 places, at the rectum, sigmoid colon and at the descending colon, and stiffening and thickening of the wall were remarkable in all regions. However, there was no ulcer on the mucosal surface, except of a slight nodular elevation at the descending colon and rectum (Fig. 6).

The ovaries were bilaterally swollen and elastic soft, and a high degree of fibrosis was observed at the cleavage surface.

Pathological findings of the resected preparation: The wall was thickened as a whole, and the submucosa was edematous and a marked increase of collagen was seen. Neatly homogeneous, small round tumor cells lacking of endoplasmic reticuli had infiltrated into the muscular layer and the submucosal one, but they were not exposed on the lamina propria. Neither production of mucus nor formation of lumen was observed.

Moreover, as shown in Fig. 7, 8 and scheme, no continuity was found between the foci at the rectum, sigmoid colon and descending colon. The tumor cells and increased collagen similar to those observed in the colon were also seen in the ovaries.

Hormone receptors: The preparation was positive for estrogen receptors with a value of 15.8 f mol/mg. It was negative for progesterone receptors.

From the above, these lesions were considered to be metastatic and not a primary tumor of the colon. Therefore, a resection preparation of the breast cancer (performed 7 years ago) was examined (Fig. 9).

Pathohistological findings of resected preparations from the breast cancer: Small polygonal cells with a small round to oval nucleus had proliferated lobularly, and infiltrated into the mass partly with a significant fibrosis. The cells showed no variability in size, and there was no formation of lumen. The cancer was lobular carcinoma with a partly scirrhous pattern.

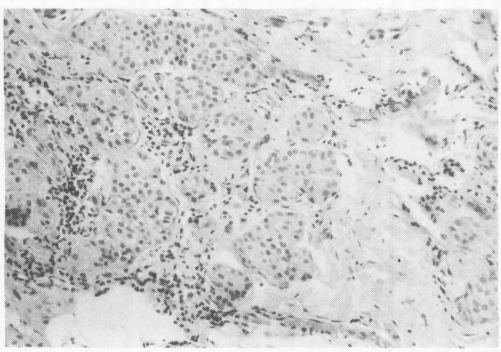


Fig.9

Final diagnosis: A diagnosis of scirrhous carcinoma due to metastasis from breast cancer was made with respect to the lesion at the colon from the above findings. Moreover, the lesion at the ovaries was diagnosed to be metastasis from the breast cancer.

Postoperative course: The patient is receiving an antiestrogen (Nolvadex) and Mitomycin C. She is in good health now, 6 months postoperative.

DISCUSSION

A report on the scirrhous circinoma of the colon was made firstly by David in 1931[5]. However, it is unknown whether the case was primary or metastatic (secondary). Of scirrhous carcinomata of the colon only 32 cases of the primary type have been reported, according to Koos[8]. Most of them belong to the metastatic type and about 90% are gastric in origin. Breast cancer, gall bladder cancer, pancreatic and hepatic cancers are included in the remaining 10%[6,8]. According to Graham and Goldman, 25 cases of gastrointestinal metastases were found at laparatomy or autopsy among 75 cases of breast cancer and the colon was involved in 12 thereof: 7 out of 25 cases showed foci of the scirrhous type[7]. Lobular carcinoma and mucinous carcinoma among tissue types of breast cancer tend, according to Cormier, Koos, Fayemi and others, to cause gastro-intestinal metastasis[4,6,8].

Our patient suffered from scirrhous carbinoma which had metastasized from the breast cancer that was resected 7 years ago and was positive for estrogen receptor. Diagnosing such a metastatic scirrhous carcinoma is very difficult, because the disease is characterized by normal colonic mucosa[6], as pointed out by Fayemi and others.

This disease is asymptomatic in the early stage and symptoms due to stenosis occur only in the advanced stage[6], which makes early detection difficult. Furthermore, as Chang has indicated, it takes a fairly long time after the operation for breast cancer for the disease to occur and detected, which makes a diagnosis more difficult[3]. In fact, the onset in our patient was found 7 years after the operation for breast cancer.

Pictures of narrowing and stiffness with some

length can be mentioned as features of barium enema as in the case of primary scirrhous carcinoma. In the differentiation of primary and metastatic types, the fact that multiple lesions are often observed and that the shelving margin, intraluminal mass, mucosal ulceration, unilateral defect and so on are not seen in the latter is helpful, according to Vigh, McQueeney and others[10,12,13].

It is essential in biopsy to perform sampling from the depth as in our case.

With the treatment of this disease, resection is necessary first of all, and examination of other organs, especially the stomach and small intestine is important. Moreover, since the ovaries tend to be affected as it was in our case, hysterosalpingooophorectomy should be considered, as Fayemi has proposed[6].

Many reports on the detection and application to treatment of estrogen receptor in primary colonic tumors can be found[1,9]. However, this report is the first one describing detection of an estrogen receptor in metastatic scirrhous carcinoma of the colon. Although prognosis of this disease is very unfavorable, the future course of the present patient is interesting, for antiestrogen have been developed and an improvement in the prognosis of breast cancer is being anticipated at present.

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