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CASE REPORT

Alpha-fetoprotein-producing colon cancer with atypical bulky lymph node metastasis

Kuangi Fu, Akihiro Kobayashi, Norio Saito, Yasushi Sano, Shigeharu Kato, Hiroaki Ikematsu, Takahiro Fujimori, Yasushi Kaji, Shigeaki Yoshida

Kuangi Fu, Yasushi Kaji, Department of Radiology, Dokkyo University School of Medicine, 880 Kitakobaysashi, Mibu, Shimotuga, Tochigi 321-0293, Japan
Kuangi Fu, Yasushi Sano, Shigeharu Kato, Hiroaki Ikematsu, Shigeaki Yoshida, Department of Gastrointestinal Oncology and Digestive Endoscopy, National Cancer Center Hospital East, Kashiwa, Chiba 277-8577, Japan
Akihiro Kobayashi, Norio Saito, Department of Surgery, National Cancer Center Hospital East, Kashiwa, Chiba 277-8577, Japan
Takahiro Fujimori, Department of Surgical and Molecular Pathology, Dokkyo University School of Medicine, 880 Kitakobaysashi, Mibu, Shimotuga, Tochigi 321-0293, Japan
Correspondence to: Kuangi Fu, MD, PhD, Department of Radiology, Dokkyo University School of Medicine, 880 Kitakobaysashi, Mibu, Shimotuga, Tochigi 321-0293, Japan. fukuangi@hotmail.com
Telephone: +81-282-861111 Fax: +81-282-865678,
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Abstract

Alpha-fetoprotein (AFP)-producing colorectal cancer is extremely rarely reported until now. All of the reported cases harboring synchronous hematogenous spread including liver and/or lung metastasis had a poor prognosis and died within 12 mo. We here describe a 71-year old man with AFP-producing colon cancer who presented with an unusual bulky lymph node metastasis instead of hematogenous spread. He underwent adjuvant chemotherapy in addition to curative surgical resection, which prolonged his survival.

Key words: Alpha-fetoprotein; Colon cancer; Bulky lymph node metastasis; Computed tomography; Colonoscopy

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INTRODUCTION

Alpha-fetoprotein (AFP)-producing colorectal cancer is extremely rare, and only ten cases have been described in the English literature[1]. All reported cases presented with lung and/or liver metastasis and had a very poor prognosis. We here report the first case of AFP-producing colon cancer with bulky lymph node metastasis. This patient had characteristics such as harboring synchronous bulky nodal involvement but not hematogenous spread. Interestingly, he could be curatively operated and survived a long time after adjuvant chemotherapy in addition to surgical resection.

CASE REPORT

A 71-year old man visited our hospital for positive fecal occult blood and mild anemia. Physical examination disclosed a painless abdominal mass, approximately 50 mm in diameter, in the right lower quadrant of abdomen. Colonoscopy revealed an ulcerative lesion suggestive of an advanced colon cancer in the cecum (Figure 1). Biopsy specimens revealed a moderately-differentiated adenocarcinoma. Additionally, preoperative computed tomography of the abdomen and pelvis showed a bulky mass around the cecal cancer, which suggested nodal involvement corresponding to the palpated abdominal mass on physical examination (Figure 2). However, no distant hematogenous spread, including liver or lung metastasis, was detected. The serum AFP level was high (318.9 μg/L before operation). Right hemicolectomy including lymph node dissection was performed uneventfully, and histological examination of the surgical specimen revealed a subserosally invasive poorly-differentiated adenocarcinoma with nodal involvement. Immunohistochemically, both the primary tumor and the bulky lymph node metastasis showed strong expression of AFP. The serum AFP level became normal after adjuvant chemotherapy in addition to surgery. The patient was in good condition at the time of our report and had no sign of recurrence in the past 5 years.

DISCUSSION

Elevated levels of AFP, commonly associated with hepatocellular carcinoma or embryonic cell carcinoma, have been reported in neoplasms of several other organs, such as pancreas, gallbladder and gastrointestinal tract. However, AFP-producing colorectal carcinomas are extremely rare. The reported colorectal carcinomas have generally occurred in middle-aged to older men with the

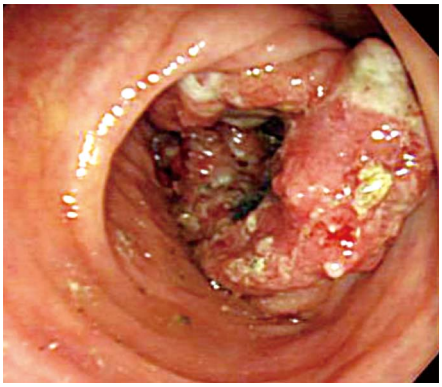

Figure 1 Colonoscopy showing a circumferentially advanced colon cancer in the cecum.

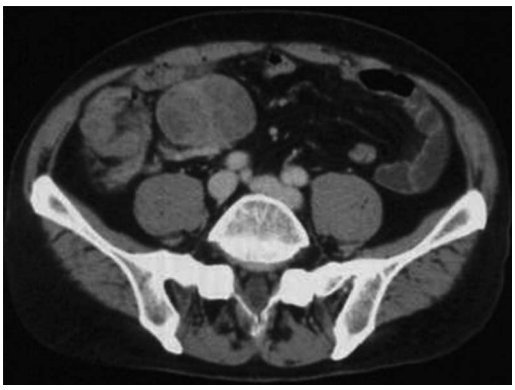

Figure 2 Abdominal computed tomography showing a bulky mass approximately 50 mm in diameter, suggestive of nodal involvement around the primary cecal cancer.

rectum most commonly affected, the serum AFP level is usually as high as several-thousand nanograms per milliliter[1-5]. Moreover, AFP appears to be a potential marker for tumor activity, as the serum level of AFP is higher in patients with liver metastasis than in those without liver metastasis[6]. AFP-producing colorectal carcinoma generally has a poor prognosis because of the frequent occurrence of blood-borne metastases. All the reported cases have extensive liver and/or lung metastases at the time of diagnosis and a very poor prognosis[1]. Our patient was unusual in comparison with the reported cases, as his AFP-producing colon cancer was located in the cecum, and showed only synchronous lymphogenous spread but not synchronous or metachronous blood-borne metastasis during a long time of follow-up. Furthermore, he was a long-time survivor, and was able to undergo curative surgical resection in addition to adjuvant chemotherapy. Clinical evaluation of a large number of patients is necessary to clarify whether systemic adjuvant chemotherapy is associated with a favorable prognosis for this kind of patients.

In summary, patients with AFP-producing colon cancer and synchronous bulky lymph node metastasis can survive a long time after adjuvant chemotherapy in addition to surgical resection.

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