Kaohsiung Journal of Medical Sciences (2013) 29, 460–463

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CASE REPORT

Inflammatory fibroid polyp of rectum mimicking rectal cancer

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Received 10 May 2012; accepted 21 June 2012
Available online 8 February 2013

KEYWORDS
Inflammatory fibroid polyp;
PDGFRA;
Rectum;
Sacrum

Abstract Inflammatory fibroid polyps (IFPs) are rare benign tumors of the rectum. Mutation and activating platelet-derived growth factor receptor alpha (PDGFRA) contribute to tumor development. We present a case of IFPs in the middle rectum that mimic rectal cancer. A 65-year-old woman presented with the symptom of fresh blood in the stool and body weight loss of 6 kg in the preceding 3 weeks. A rectal polypoid tumor was noted upon digital examination. Sigmoidoscopy showed a middle rectal tumor measuring 3 × 2.7 cm with obstruction. Computed tomography (CT) scans of the abdomen showed a rectal tumor that had invaded the sacral bone and was associated with four enlarged lymph nodes greater than 1 cm. The radiological report suggested a diagnosis of rectal cancer with lymph node metastases. To remove the obstruction, the patient was initially treated with excision of the tumor and loop sigmoidal colostomy to the abdomen wall. Total mesorectal resection of rectal and sacral tumor followed 10 days later. Histopathological examination of the rectal and sacral tumor showed proliferation of vessels, fibroblast-like spindle cells, and mixed inflammatory cells, including the plasma cells and eosinophils. The spindle cells were diffusely positive to PDGFRA and were focal positive to CD34 and smooth muscle actin. Based on histopathological and immunohistochemical findings, the diagnosis of IFP is indicated. This was the first reported case of IFPs of the rectum presenting with lymph node enlargement and attachment to the sacrum mimicking rectal cancer.

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http://dx.doi.org/10.1016/j.kjms.2012.12.007

Introduction

An inflammatory fibroid polyp (IFP) is a rare benign polypoid lesion of the gastrointestinal tract. Most IFPs occur in the gastric antrum and small intestine [1—4]. IFPs are extremely rare in the colon and rectum [1—4]. Histologically, an IFP is characterized by a mixture of numerous small vessels, fibroblast-like spindle cells, and edematous connective tissue associated with marked inflammatory infiltration by eosinophils and plasma cells [5]. Recent studies showed that mutation and activating platelet-derived growth factor receptor alpha (PDGFRA) contribute to the development of IFP [6—8]. Therefore, an IFP represents a true benign tumor of a reactive inflammatory lesion [6—8]. The proliferative fibroblast-like spindle cells in IFP have strong immunostains to PDGFRA [6], and these cells are also focal stain to CD34 [9]. Currently, an IFP is considered a benign tumor having no malignant potential as neither recurrence nor metastasis have been observed [10].

Most IFPs arise from the mucosa and submucosa and rarely spread to the muscular layer [7,8]. Clinical symptoms may depend on the macroscopic appearance of the lesion and its location in the gastrointestinal tract. Although no specific symptom can be associated with colorectal IFP, anal bleeding and abdominal pain are the most common symptoms [2,3]. Surgical intervention is usually required for most symptomatic IFPs because of their large size and submucosal involvement [11]. We herein report a very rare case of rectal IFP attached to the sacrum and mimicking rectal cancer with sacral invasion and regional lymph node metastases on computed tomography (CT) scans.

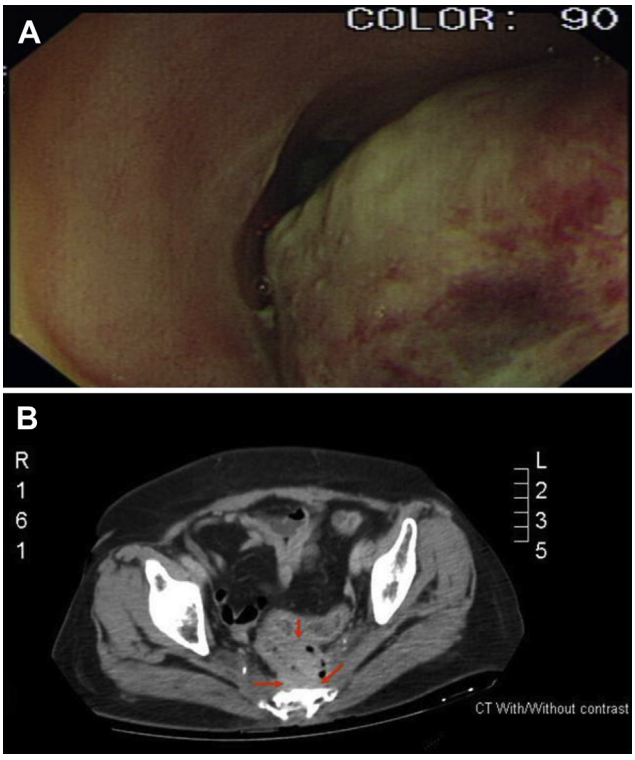

Figure 1. (A) Sigmoidoscopy revealing a polypoid lesion (3 × 2.7 cm) in the middle rectum with lumen obstruction. (B) Abdominal computed tomography scan of the patient revealing a tumor (3 × 2.7 cm, arrow) of rectum attached to the sacral bone.

Case report

A 65-year-old woman presented with symptoms of fresh blood in the stool, constipation, and body weight loss of 6 kg in the preceding 3 weeks. She had a history of cervical cancer and had received hysterectomy and radiotherapy 20 years ago. There was no history of smoking or alcohol consumption. Physical examination revealed the abdomen was soft without tenderness or palpable masses. A rectal polypoid tumor was noted in digital examination.

Laboratory data of the patient revealed a hemoglobin level of 12.2 g/dL, and serum carcinoembryonic antigen, alpha-fetoprotein, and carbohydrate antigen 19-9 were all within normal range. Sigmoidoscopy examination showed a middle rectal tumor measuring 3 × 2.7 cm with mucosal ulceration and near-total obstruction of the rectal lumen that measured less than 1 cm in diameter (Fig. 1A). Tumor biopsy and pathology reports showed an ulcer with chronic inflammation. During her stay in hospital, CT scans of the abdomen showed a rectal tumor attached to the sacral bone (Fig. 1B) with four enlarged lymph nodes of size more than 1 cm. Radiological reports suggested a diagnosis of rectal cancer with lymph node metastases. Therefore, the clinical diagnosis was rectal cancer with tumor/node/metastasis (TNM) stage IIIB. From our assessment, curative resection was impossible. Conservative excision of the tumor with loop sigmoidal colostomy was initially performed to prevent obstruction. The operative findings included a fixed tumor at the posterior wall of the rectum with almost complete obstruction of the lumen narrowing it to less than 1 cm.

Gross examination of the lesion revealed a 3 × 2.7 cm polypoid tumor (Fig. 2A). Histopathological examination of the tumor suggested IFP with ulcer of the rectum. The tumor was characterized by a myxoid stroma with proliferation of fibroblast-like spindle cells and infiltration of inflammatory cells including the plasma cells and eosinophils (Fig. 2B). Immunohistochemical staining of the lesion showed strong cytoplasmic stains to PDGFRA in spindle cells (Fig. 3A) and focal staining to CD34 (Fig. 3B). A gastrointestinal stromal tumor was ruled out by negative staining to CD117 (c-kit) and DOG1, and an inflammatory myofibroblast tumor was ruled out by negative staining to anaplastic lymphoma kinase and smooth muscle actin. These findings are consistent with a histopathological diagnosis of IFP.

Although this was a case of benign IFP, a combined discussion with a radiologist and an oncologist predicted malignancy. Therefore, total mesorectal resection of the rectal and sacral tumor followed 10 days later. The pathological report was sacral tumor as IFP and with similar immunohistochemical profiles as a rectal tumor. Four regional lymph nodes showed reactive hyperplasia and were free of tumor.

This was the first reported case of IFP of the rectum with lymph node enlargement and attachment to sacrum mimicking rectal cancer with sacral invasion and lymph node metastasis on CT scans.