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Case Report

Adenosquamous carcinoma of the sigmoid colon: a case report and review of literature

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Abstract: Adenosquamous carcinoma of the colon consisting of both glandular and squamous histopathologic features is a rare colorectal neoplasm. Metastasis commonly occurs in right and transverse colon. A 71-year-old Caucasian man presented with a four-month history of intermittent rectal bleeding. Pathologic analysis of biopsy specimen revealed an adenosquamous carcinoma of sigmoid colon. Sigmoid resection with a proximal and distal resection was performed. Early detection and radical operation with other available therapeutic modalities may improve clinical outcome.

Keywords: Adenosquamous carcinoma, sigmoid colon, colorectal cancer

Introduction

Adenosquamous carcinoma of the colon consisting of both glandular and squamous histopathologic features is a rare colorectal neoplasm. The estimated incidence of adenosquamous carcinomas of the colon and rectum is approximately 0.06% to 0.18% [1-4]. Previously, the rectum was the most common site of the disease with almost half of all reported cases [5], but a recent population-based study showed that the most common location of adenosquamous carcinoma was the right and transverse colon [3] while the sigmoid and left colon have been reported less frequently. In 2001, a review of 21 cases of adenosquamous carcinomas showed that the mean age of patients was 62.5 years [6]. Coexistence of squamous carcinomatous components in carcinoma of the colon usually indicates a poorer prognosis than adenocarcinoma alone [1, 3]. The clinical manifestations are very similar to colon adenocarcinomas, including changes in bowel habits, abdominal pain, hematochezia, or weight loss. We report an old Caucasian patient with sigmoid adenosquamous carcinoma.

Case report

A 71-year-old Caucasian man presented with a four-month history of intermittent rectal bleeding. He did not have any other significant symptoms. His past medical history revealed hypertension and benign prostatic hyperplasia (BPH). His family history was unremarkable. Colonoscopy revealed internal hemorrhoid and an ulcerative lobulated mass 20 cm from anal verge that was biopsied (**Figure 1**). His hemoglobin and serum carcinoembryonic antigen (CEA) levels were 12.8 mg/dl and 4.6 ng/ml, respectively. Other lab data were unremarkable. Abdominal ultrasonography showed no liver metastasis. Pathologic analysis of biopsy specimen revealed an adenosquamous carcinoma (**Figure 2**). Immunohistochemical (IHC) studies showed CK and CK (5/6) (**Figure 3**). The adeno carcinoma component was moderately differentiated. Laparotomy revealed the presence of tumor in sigmoid colon without liver or peritoneal involvement. Sigmoid resection with a proximal and distal resection margins at least 5 cm from the tumor and then primary anastomosis was performed. Pathologic reports showed that muscularis propria was invaded and four regional lymph nodes were involved (T2N2, IIIB, TNM staging AJCC/UICC for CRC), thus adjuvant chemotherapy was recommended.

Discussion

Adenosquamous carcinomas of the colon are uncommon tumors. The pathogenetic mecha-

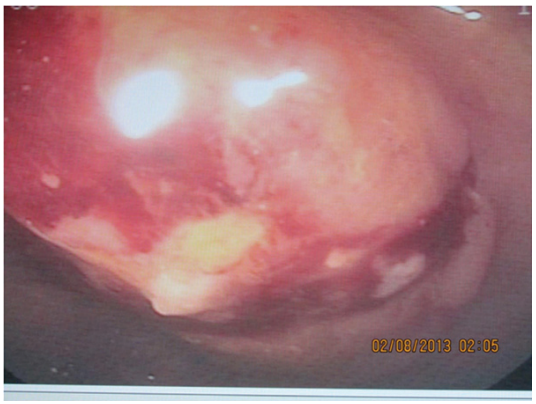

Figure 1. Colonoscopic finding shows bleeding circumferential lobulated mass at the sigmoid colon.

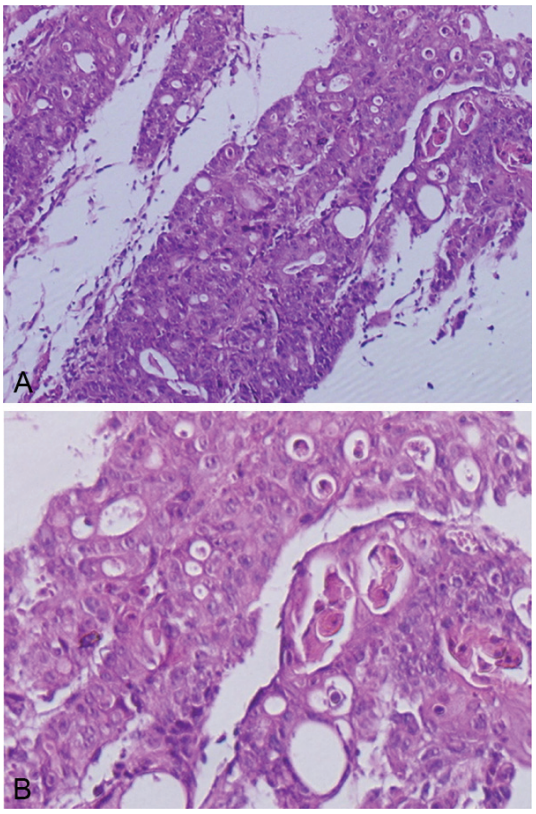

Figure 2. Colonic tumor showing adenosquamous carcinomatous feature (H & E. original magnification. A x 200, B x 400).

nisms of colonic adenosquamous carcinoma are not clearly understood, but several theories have been suggested. Malignant transformation of embryologic colonic ectodermal tissue, multidirectional differentiation of endodermal pluripotent stem cells, squamous metaplasia

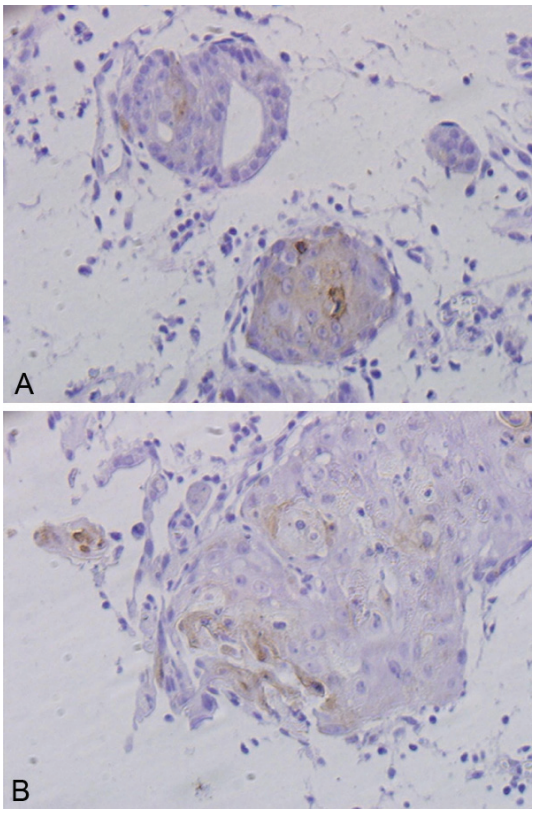

Figure 3. This figure showed malignant glands and malignant squamous cells with keratinization. (A: CK positive x 400, B: CK (5/6) positive x 400).

of the glandular intestinal mucosa, transformation of in situ adenocarcinoma or colonic adenoma into malignant squamous cells, and also repeated destruction of glandular epithelium by deleterious influences (such as radiation) with loss of basal cells ability to redifferentiate normally [6-11].

The clinical signs and symptoms of adenosquamous carcinoma of the colon and rectum are the same as those for an adenocarcinoma but colonic adenosquamous patients may experience a more aggressive clinical course and worse prognosis than colonic adenocarcinoma patients [6-8]. Adenosquamous carcinoma was associated with increased overall mortality (hazard ratio, 1.67) and colorectal-specific mortality (hazard ratio, 1.69) in comparison with adenocarcinoma [3]. Distant metastases most commonly occur in the liver but also occur in other organs such as the lungs, lumbar spine, omentum and adrenal glands [5]. The diagnosis could be made by taking the biopsy from tumoral lesion with the use of some specific

staining techniques. The treatment of choice for adenosquamous carcinoma is surgical excision. The extent of operation depends on the location of the tumor. The entire tumor and regional mesenteric lymph nodes should be removed. Adjuvant chemotherapy has been used in patients with stage C lesions of the colon; however, the exact impact of these drugs on outcome is not known due to the rarity of this tumor type and the lack of clinical trial data [4, 12]. In rectal tumors, preoperative adjuvant chemoradiation should be considered. This recommendation is based on improved control of local disease with preoperative adjuvant therapy in patients with adenocarcinoma and the good response to chemoradiation in patients with squamous cell carcinoma of the anus [6]. No recommendations based on data can be made concerning postoperative adjuvant chemotherapy in patients with these tumors. The prognosis, however, is so poor in patients with nodal disease, as this patient, adjuvant chemotherapy seems a reasonable option. Frizelle et al. reported a 5-year survival rate of 86% for patients with Stage II disease and only 24% for patients with Stage III [6]. Our patient was an old Caucasian man. Cagir et al. described the clinicopathological features and prognosis of 145 patients with adenosquamous carcinoma [1]. Their study revealed a racial difference with a lower incidence in Caucasians in comparison to other races, but a recent large study on 111,263 adenocarcinoma and adenosquamous carcinoma patients, showed no significant difference in sex, age, race, and socioeconomic status between these two subtypes of colorectal cancer [3].

In conclusion, adenosquamous carcinoma of colon especially at the left colon was rare. The prognosis for patients is worse than for those diagnosed with adenocarcinomas. Early detection and radical operation with other available therapeutic modalities may improve clinical outcome.

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