

Case Report

Adenosquamous Carcinoma of the Colon: A Case Report and Review of the Literature

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Adenosquamous carcinomas are consisting of both glandular and squamous histologic components. Adenosquamous carcinoma of the colon is rare and has a worse prognosis than adenocarcinoma alone. We present and discuss a case of adenosquamous carcinoma of the proximal transverse colon with hepatic metastasis. A 35-year-old male patient was treated with a hemicolectomy and surgical resection of the hepatic adenosquamous carcinoma.

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Key Words

Adenosquamous carcinoma;

Transverse colon;

Immunohistochemistry

The majority of colon and rectal cancers are adenocarcinomas. Adenosquamous carcinomas with consisting of both glandular and squamous histologic components are a rare malignancy of the colon and rectum. This tumor type was originally described by Herheimer in 1907.¹ Subsequent reports of adenosquamous carcinomas of the rectum and/or colon are limited as the estimated incidence of adenosquamous carcinomas of the colon and rectum is approximately 0.06% of all colorectal malignancies.² Herein, we present and discuss a case of adenosquamous carcinoma of the proximal transverse colon in one patient.

Case report

A 35-year-old male patient presented with a

one-month history of intermittent abdominal pain and a one week history of hematochezia. There was no significant past medical history and no family history of colorectal cancer. Colonoscopy revealed a circular, ulcerated mass 90 cm from the anal verge and biopsy and histological analysis diagnosed an adenosquamous carcinoma. The patient's serum carcinoembryonic antigen level was 5.8 ng/ml. A computed tomography (CT) scan of the abdomen identified the transverse colonic carcinoma in addition to two large, hypodense liver lesions (4.5 cm at S_{4a} and 6.4 cm at S₇). Laparotomy confirmed the presence of the tumor in the proximal transverse colon (without any evidence of peritoneal spread) and the two liver tumors at S_{4a} and S₇. An extended right hemicolectomy and two segmentectomy of the liver were performed uneventfully.

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Pathologic examination of the colon specimen revealed an ulcerative tumor measuring $12 \times 9 \times 4$ cm which extended into the muscularis propria and non-peritonealized pericolic tissue (Fig. 1). The adenosquamous elements were moderately differentiated. Three of the 106 lymph nodes had evidence of metastatic disease and immunohistochemical studies of the colon showed CEA(+), MOC31 (focal weak +), and EGFR(3+) (Fig. 2). A mucin stain showed focal intracytoplasmic positive staining (Fig. 3). Examination of the liver specimens revealed a $4.5 \times 4 \times 2.8$ cm mass at S_{4a} and an $8 \times 8 \times 5$ cm mass at S₇ (Fig. 4). The resection margins of both tumors were free of malignancy. Immunohistochemical studies of liver showed CK7(-), CK20(+), CEA(+), and MOC31(+). The

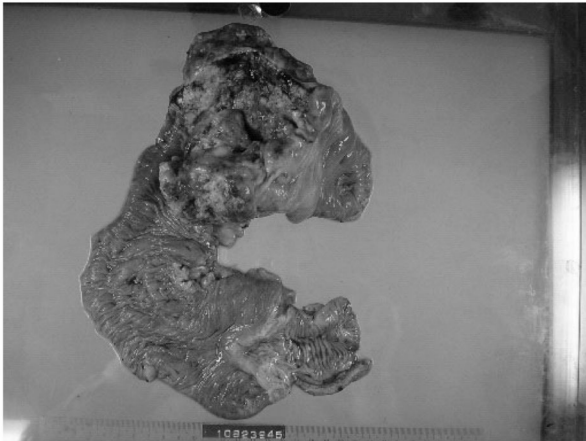


Fig. 1. An ulcerative tumor originated from the transverse colon.

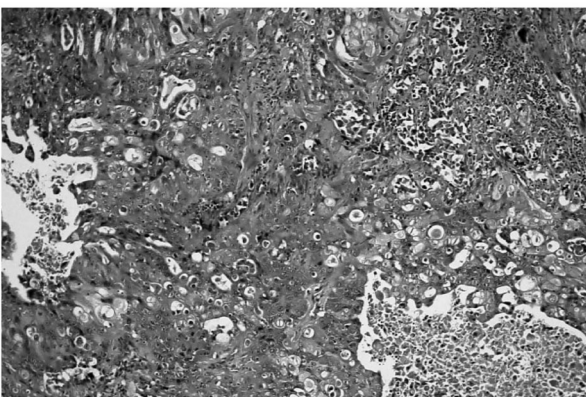


Fig. 2. The tumor was mixture of malignant glands and malignant squamous cells with keratinization. (H & E stain, $\times 400$).

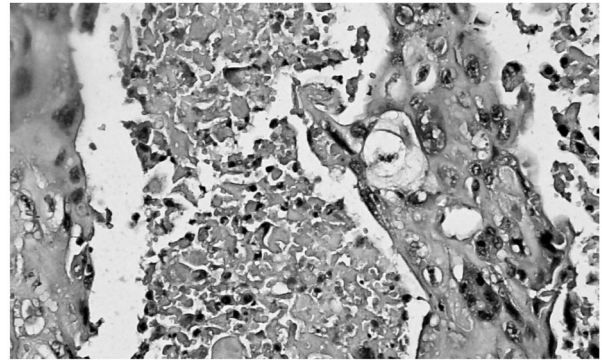


Fig. 3. The tumor was Mucin stain positive ($\times 100$).

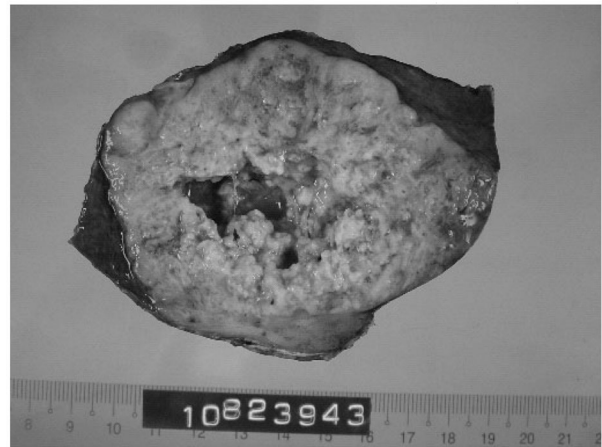


Fig. 4. One of the resected liver specimens with central necrosis.

mucin and DPAS stains showed intracytoplasmic positive staining.

Discussion

In 1971, Comer *et al.* reported 12 cases of adenosquamous carcinomas, three of which were rectal and colonic tumors.³ Later, Petrelli *et al.* described five male and two female patients diagnosed with adenosquamous carcinomas.⁴ In this patient cohort, five rectal and two colonic adenosquamous carcinomas were diagnosed. Ulcerative colitis was present in three patients and sites of distant metastases were the liver, lung, and peritoneum. Cagir *et al.* reported 145 cases of adenosquamous carcinomas in 1999 and cited the incidence of adenosquamous carcinomas as 0.06% of

all colorectal malignancies.² Mean patient age in this patient population was 67 years and adenosquamous carcinomas occurred most commonly in Caucasians (84%) followed by Afro-Americans (15%). Mean patient survival was 12 months (range, 1-209 months) and the overall five-year survival was 30.7%. Patients with distal segment adenosquamous carcinomas (involving the, sigmoid colon, rectum and anus) had a better overall survival. In 2001, Frizelle *et al.* reported 21 cases of adenosquamous carcinomas.⁵ Mean patient age was 62.5 years (range, 35-90 years).

Patients with adenosquamous carcinomas may present with the paraneoplastic syndrome, hypercalcemia.^{6,7} Further, patients with ulcerative colitis may falsely increase the incidence of adenosquamous carcinoma.⁸ There are three main theories for the histogenesis of adenosquamous carcinomas of the colon and rectum. These include: the presence of embryologic nests of ectodermal cells; squamous metaplasia of the intestinal mucosa, and the presence of pluripotent stem cell of endodermal origin capable of multidirectional differentiation. Although both adenomatous and squamous components have a potential for metastasis, the squamous components seem to metastasizes more frequently and more aggressive.⁹⁻¹¹

The treatment of choice for adenosquamous carcinomas is surgical excision. The exact operation that is ultimately performed depends on the location of the tumor. Not only should the entire tumor be removed, but the regional mesenteric draining lymphatics must also be removed. Adjuvant chemotherapy with semustine, 5-fluorouracil, carmustine, or methotrexate have 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

In conclusion, adenosquamous carcinomas of the colon are rare and are comprised of both malignant

glandular and squamous components. The prognosis for patients diagnosed with adenosquamous carcinomas is worse than for those diagnosed with adenocarcinomas. Early detection and radical surgical excision is thought to improve the clinical outcome.

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病例報告

大腸鱗狀腺癌：一個病例報告及文獻回顧

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鱗狀腺癌是由腺體及鱗狀組織所構成。大腸的鱗狀腺癌是一個很罕見以及預後比腺癌還差的疾病。我們發表及討論一個近端橫結腸鱗狀腺癌併伴隨有肝轉移的個案。這位 35 歲的男性病患接受根除性右側大腸切除及轉移性肝腫瘤切除手術治療。

關鍵詞 鱗狀腺癌、橫結腸、免疫組織化學。