

Isolated Cutaneous Metastasis to Forearm as a Presenting Feature of Colon Adenocarcinoma

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ABSTRACT

Metastasis to skin and subcutaneous tissues is a rare occurrence in colorectal cancer and represents widespread disease. When skin is involved, it is usually postoperatively and at the site of incision. We present here a case of synchronous cutaneous metastasis to forearm in a patient with adenocarcinoma of colon without metastasis to other viscera. Resection of the metastatic lesion and

resection of the primary tumor were performed and the patient underwent chemotherapy. Eventually, the patient developed widespread metastasis and died within 2 years of surgery. This case illustrates that cutaneous metastasis can be the initial presenting feature in colonic adenocarcinoma and can occur even in the absence of visceral metastasis.

Keywords: Colon Adenocarcinoma; Cutaneous Metastasis; Subcutaneous Metastasis; Metastatectomy; Presenting Feature

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INTRODUCTION

Cutaneous and subcutaneous metastasis from colon cancer is an uncommon occurrence, with an incidence of 4 to 6.5% [1]. The most frequent site of cutaneous metastasis in colonic cancer is the previous surgical scar [2]. Metastasis to skin carries a dismal prognosis and usually occurs in the setting of widespread and disseminated disease [1]. However, remote cutaneous metastasis without evidence of other visceral metastasis has also been reported in the literature [3]. Cutaneous metastases are usually metachronous, that is, they are detected after the diagnosis of the primary tumor [4, 5]. Occasionally, synchronous cutaneous metastases develop in colon cancer [6, 7]. We present a case of synchronous cutaneous metastasis to forearm, without evidence of any other visceral metastasis, in a patient subsequently diagnosed with adenocarcinoma of colon.

CASE REPORT

A 65-year-old male presented with a gradually increasing lump in the left forearm for 3 months. Physical examination demonstrated a hard irregular lump measuring 4 cm x 3 cm with a nodular surface and well-defined margins (Figure 1). The lump was fixed to the skin but was freely

mobile on the underlying structures. Overlying skin color was normal. Patient did not have any clinically apparent lymphadenopathy. Fine needle aspiration of the lump was reported as metastatic adenocarcinoma. A detailed evaluation revealed that the patient was anemic and had a history of loss of weight and appetite since 6 months. There was no history of bleeding per rectum. Rest of the physical examination was unremarkable except for the asthenic look of the patient. Fecal occult blood test was positive. An upper gastrointestinal endoscopy was normal; however, on lower gastrointestinal endoscopy, an ulcero-proliferative growth was found in the ascending colon and cecum. Histopathological examination of growth biopsies confirmed the diagnosis of colon adenocarcinoma. Carcinoembryonic antigen (CEA) levels were elevated. Contrast enhanced CT scan of chest, abdomen and pelvis found a T2 disease with no distant metastasis. A bone scintigraphy scan was negative.

In the presence of a solitary cutaneous metastatic lesion and resectable tumor based on radiological and clinical evidence, a decision to proceed with surgery was taken. An extended right hemicolectomy and resection of the cutaneous lesion was performed without any serious complication. Histopathology of the colonic specimen reported T3 N2 poorly differentiated

Figure 1: Solitary irregular well-demarcated lump present on the left forearm



signet cell adenocarcinoma with negative proximal and distal margins. Histopathology of the cutaneous lesion also revealed poorly differentiated signet cell adenocarcinoma with negative margins (Figure 2). On immunohistochemistry, the cutaneous metastasis was positive for cytokeratin (CK) 20 and negative for CK 7 that confirmed its colonic origin (Figure 3, 4). The patient recovered uneventfully from surgery and received 6 cycles of FOLFOX as adjuvant chemotherapy. Seventeen months after the surgery, patient presented with hemoptysis. A

Figure 2: Low power view of the hematoxylin eosin staining of the skin lesion showing poorly differentiated signet cell adenocarcinoma. Same pattern was seen in colonic lesion.

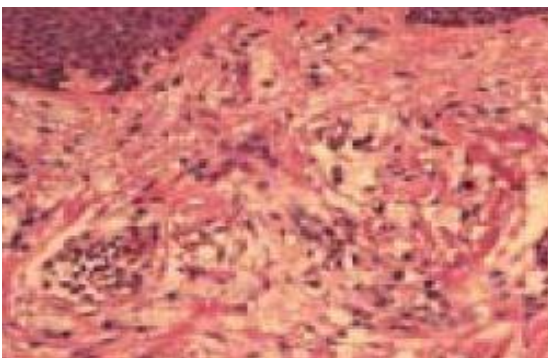


Figure 3: Immunohistochemistry of the skin lesion showing expression of cytokeratin 20. This suggested that the metastasis arose from Adenocarcinoma colon



contrast enhanced chest and abdominal CT scan showed pulmonary and liver metastases that were confirmed by cytology. The patient started on irinotecan-based systemic chemotherapy (FOLFIRI) but he could not tolerate it. Thereafter, patient deteriorated rapidly and succumbed to death.

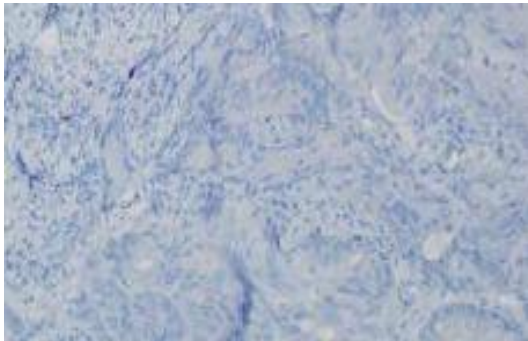
DISCUSSION

Metastatic lesions of the skin are found more frequently in patients with primary tumors of the lungs and breast as compared to the tumors of gastrointestinal tract [1]. Metastases from colonic cancer manifest clinically usually after the diagnosis of the primary tumor has been made. However, it is important to remember (as highlighted in this case report) that cutaneous metastases can be encountered at the initial presentation of colon cancer [5, 7].

Previous surgical scars and abdominal wall skin appear to be the most frequently involved sites of cutaneous metastasis from colorectal cancer. However, remote lesions such as those involving the face, tongue, head, upper extremities and legs have been documented. Most of these are associated with other visceral metastasis [8]. Remote cutaneous metastases, without evidence of other visceral metastases, are rare [9]. Rendi and Damian found that metastatic involvement of skin was the first sign of previously non-evident malignancy in only 0.8% of all cancer patients [6]. Our patient also presented with a skin lesion as the first sign of a hitherto undetected colonic cancer.

Many mechanisms have been proposed to explain the occurrence of cutaneous metastasis in colorectal cancer. Kaufmann et al suggested that metastatic spread to the skin and subcutaneous

Figure 4: Immunohistochemistry of the skin lesion showing lack of expression of cytokeratin 7. This suggested that the metastasis arose from adenocarcinoma colon.



tissue could be either due to lymphatic or hematogenous spread, or by direct extension or by implantation during surgery [10]. Metastases at distant cutaneous sites usually occur due to hematogenous spread whereas at local sites, lymphatic spread is implicated [11].

Typically, the skin lesions present as multiple, firm, non-ulcerating nodules; rarely, solitary forms with varying morphology have been reported [9]. Varying morphological patterns that have been reported include alopecia neoplastica, carcinoma erysipelatoides, cicatricial, and zosteriform metastasis [12]. Our case was unusual as it presented with a solitary, well-demarcated irregular lump. To the best of our knowledge, such occurrence of a well-demarcated cutaneous mass, as a presenting symptom of colorectal cancer, has not been previously reported. Histopathology of the lesion should match that of the primary for it to qualify as metastasis. Poorly differentiated signet cell adenocarcinoma was reported in both specimens (right hemicolon and skin lesion) of our case. Colonic mucosa typically expresses CK 20 but not CK 7 [4]. Skin lesion of our patient was positive for CK 20 and was negative for CK 7. These immunohistochemical features were suggestive of metastatic colonic adenocarcinoma. Skin metastases from colorectal carcinoma carry a dismal prognosis and the median survival after diagnosis is 3.3 months [1]. Survival in cases of head and neck lesions is slightly longer. Lookingbill et al found that patients with skin metastases from carcinoma of colon and rectum had an average survival of 18 months [2]. Our patient succumbed after 23 months of diagnosis. Surgical resection and chemotherapy was most likely responsible for his longer survival.

CONCLUSION

This case illustrates that skin lesions can be the presenting symptom of colorectal cancer and clinicians should maintain a high degree of suspicion in patients with unusual skin lesions. Surgery and chemotherapy may have a role in delaying the progression of this metastatic disease and may confer a survival advantage; however, further randomized controlled clinical studies are required to substantiate this fact.

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