Case Report

Rare presentation of the cutaneous metastasis of colon cancer imitating herpes zoster

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Abstract

The cutaneous metastasis of colon cancer is rare, and most commonly manifests as nodules or masses. In the case of our patient, a rarely described vesiculomaculopapular rash resembling herpes zoster was observed and treated as such; however, biopsy later revealed metastatic colonic adenocarcinoma. Metastasis of colon cancer to the skin typically confers a poor prognosis, however, early identification may allow for quicker intervention and more aggressive treatments, that may extend survival. Given the immunocompromised state of cancer patients undergoing antineoplastic therapy, a herpes zoster eruption would not be unexpected, but an astute primary care provider should keep metastatic disease in their differential.

Keywords: Adenocarcinoma, colon cancer, cutaneous metastasis, herpes zoster, Koebner phenomenon, stage IV colon cancer, zosteriform lesion

Introduction

Primary care providers (PCPs) and family medicine providers (FMPs) play crucial roles in the first-line detection, prevention, and treatment of many diseases. Staying abreast with the newest developments in novel pathophysiologies is the best way for PCPs and FMPs to protect their patients, especially through early detection and identification, which may lead to more timely and appropriate treatment. Unfortunately, some diseases may present atypically and are far more severe than initially suspected. Colorectal cancer ranks third in incidence and mortality among men and women in the United States.[1] Most commonly, metastatic disease is known to spread through the lymphatics but may also occur by peritoneal seeding, intraluminal spread, or hematogenously.[1] Primary sites of colon cancer metastasis include the liver, lungs, and central nervous system, whereas metastasis to the skin is rare, occurring in approximately 4% of cases.[2] The skin is a rare location for malignant metastasis, occurring in 0.7% to 10% of all internal malignant neoplasm cases.[3,4] In the case of colorectal cancer, skin metastasis is most commonly present as nodules and masses.[4] Other rare presentations include erythematous patches, inflammatory lesions, telangiectatic lesions, and annular lesions.[2,3] We present a patient with Stage IV colon cancer presenting to the hospital with a dermatomal vesiculomaculopapular rash initially thought to be herpes zoster, though a biopsy revealed metastatic colonic adenocarcinoma.

Case Report

A 64-year-old male presented to the hospital as a trauma case after a fall. He was afebrile, vitally stable, and appeared elderly and emaciated. His abdomen was soft and nontender without palpable masses. He had decreased range of motion in his right lower extremity, and ecchymosis was present on all extremities,

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with a tender vesiculomaculopapular lesion on the medial aspect of his left upper thigh following a dermatomal distribution extending to the left inguinal fold, 10–15 cm in length [Figure 1].

Imaging showed several pelvic fractures and a right intertrochanteric femur fracture. Of note, this patient had a past medical history significant for Stage IV colon adenocarcinoma (KRAS mutated), which was diagnosed 1 year prior, with known metastasis to the lung, liver, and bone. Imaging was consistent with this history, revealing abdominal adenopathy, a coccygeal mass, and extensive pulmonary and liver metastasis. Head computed tomography (CT) and magnetic resonance imaging (MRI) showed new brain metastases. The patient had previously undergone multiple courses of chemotherapy, including FOLFOX, FOLFIRI with Avastin, and Lonsurf. He had recently started Stivarga and had received pelvic radiation 2 weeks before admission to our hospital.

Before admission to our facility, the rash had been present for approximately 2 months and was biopsied at an outside facility not affiliated with our institution. Upon initial presentation at the unaffiliated facility, the patient was treated with valacyclovir for suspected herpes zoster, but the lesion showed no improvement and thus was biopsied for further evaluation. The biopsy report described the lesion as metastatic adenocarcinoma with features consistent with colonic origin. The patient's histological slide could not be obtained from the unaffiliated facility. The patient was discharged to hospice from our facility and died 1 month later. The patient's family consented to the publication of this case report, including photographs.

Discussion

Zosteriform cutaneous metastasis of colon cancer (ZCMCC) is rare, with few reported cases in the literature. It often occurs 2 years after diagnosis of the primary tumor.[5] The pathogenesis of cutaneous metastasis is not fully understood; however, many mechanisms have been previously proposed. It is theorized that cutaneous metastasis may arise from hematogenous or lymphatic spread, direct metastasis, and direct tumor cell implantation.[6] Another possible explanation is the Koebner phenomenon, which describes the predilection for malignant cells to implant on sites of previous trauma, surgery, or infection.[2] Evidence bolstering this theory demonstrates that in 50% of cases with skin involvement, the most frequent site of colonic cutaneous metastasis occurs at the abdominal resection scar or on the skin closest to the location of the primary tumor.[5-7] Previous evidence has demonstrated that once cutaneous metastasis is diagnosed, the prognosis is poor and the average length of survival is 18 months.[2,6] One study reported that only one-third of patients with cutaneous metastasis survived the past 6 months.[3] With such poor outcomes, it is imperative that zosteriform cutaneous metastasis of colon cancer is correctly diagnosed and appropriate treatment is initiated immediately.

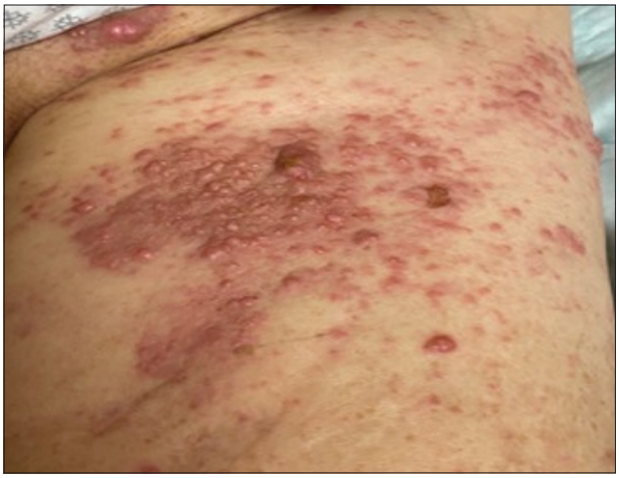

Figure 1: Zosteriform lesions on the patient's left medial thigh

Conclusion

Typically, patients with herpes zoster eruptions present to their PCPs' office with specific signs and symptoms and are clinically diagnosed and appropriately treated by their PCPs. Although metastatic colon malignancy to the skin is rare, PCPs who are aware of this rare presentation would be astute to include ZCMCC as part of their differential diagnosis in patients presenting with atypical vesicular lesions. A biopsy should be performed to avoid further delays in diagnosis, especially when the lesion evolves quickly and does not respond to appropriate antibiotic therapy. Given the immunocompromised condition of our patient, and considering the lesions that were consistent with herpes zoster, he was initially treated as such, until a biopsy revealed metastatic cancer. Patients and primary care providers should remain vigilant for rapidly progressing skin changes, nodules, and rashes, as these should be approached with an increased index of suspicion, especially for patients with a previously diagnosed malignancy, as this may indicate further metastasis or recurrence of the disease. Though the presence of cutaneous metastasis confers a poor prognosis, earlier diagnosis may lead to earlier intervention, which could improve overall survival and allow patients to get their affairs in order.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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