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Rare cutaneous metastases in advanced colon cancer: A case report

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Abstract: Cutaneous metastases derived from colorectal tumors are rare, occurring in only 4% of cases of metastatic colorectal cancer. They are most often located on the abdominal skin. A 36-year-old male presented with lumps in his lower right quadrant abdomen two months ago. A previous abdominal CT scan revealed a mass in the ascending colon, but he rejected any medication and returned with total obstruction one month later, willing to take any action. We found an intraluminal cecal mass and a metastatic liver nodule, so we performed a right hemicolectomy and ostomy. One month after discharge, multiple nodules appeared on the patient's face, chest, and abdominal skin, which were confirmed by FNAB to be metastatic adenocarcinoma. We planned an adjuvant chemotherapy FOLFIRI regimen. Commonly, advanced colorectal cancers have the highest rate of metastases to the liver, lungs, and bones. Cutaneous metastases derived from colorectal tumors are rare, occurring in only 4% of cases of metastatic colorectal cancer. Generally, cutaneous metastases appear several years after resection or diagnosis. In this case, the interval between definitive hemicolectomy and cutaneous metastases was two months, indicating a poor prognosis. Cutaneous metastases are a very rare manifestation of advanced colorectal cancer and indicate poor prognosis.

Keywords: *Colorectal cancer, Cutaneous metastases.*

1. Introduction

Colorectal cancer (CRC) is the most common malignancy of the digestive tract. More than 10% of cases are already metastatic at the time of diagnosis, with the most common sites being internal organs such as the liver, lungs, and central nervous system. Cutaneous metastasis in CRC is very rare, occurring in only about 4% of metastatic CRC cases. The most common site of cutaneous metastasis in CRC is the abdominal skin [1].

The incidence of colorectal cancer (CRC) varies widely worldwide and is the fourth most common cancer in the United States, following lung, prostate, and breast cancers. Colorectal cancer is the most frequent malignancy of the digestive tract. The incidence of colorectal cancer has increased in recent years, with males accounting for 51.4% of cases [1].

2. Case Presentation

A 36-year-old male with a history of a lump in the lower right abdomen since May 2023 presented to the hospital with complaints of pain throughout the abdominal area, with a VAS pain scale of 6. However, diagnostic examinations and definitive surgical intervention were only performed in July 2023 due to the patient's initial refusal. Abdominal ultrasound revealed a colon tumor in the RLQ (right lower quadrant) of the abdomen with intussusception and metastasis to the right liver (Figure 1). An abdominal CT scan showed a suspected GIST mass in the ascending colon, measuring approximately 10

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cm, multiple right mesenteric lymphadenopathies, liver metastasis, and minimal ascites (Figure 2). The patient was diagnosed with Ca Caecum T4N1M1 with complications of liver metastasis and subsequently underwent a right hemicolectomy with ileocolostomy and stoma creation.

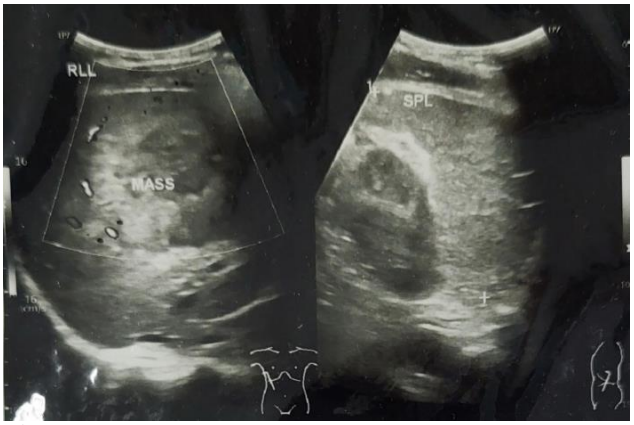

Figure 1.
USG Abdomen July 2023.

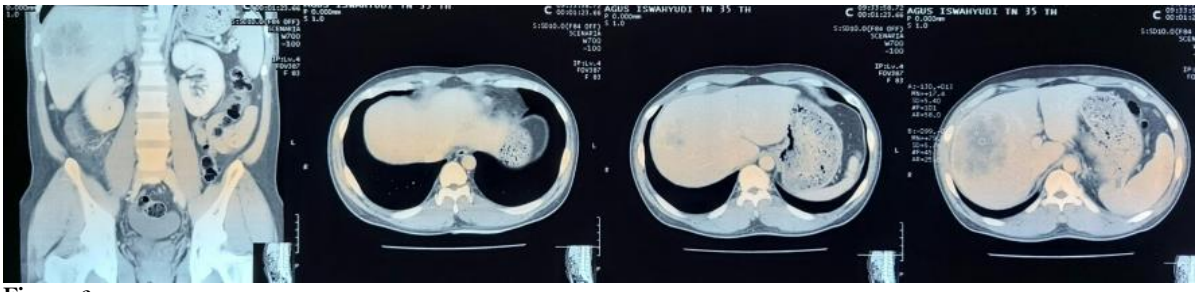

Figure 2.
CT Scan Abdomen July 2023.

One month after surgery, the patient developed multiple lumps on the face. The lumps on the facial skin were asymmetric, with well-defined borders, red in color, and varying in size. The average size was approximately 1-2 cm, but some lumps were larger, with a diameter of around 5 cm. Some of the lumps were red, with necrosis and ulceration. Similar masses were also found on the chest and abdomen, but they were smaller in size. The patient reported that the first mass appeared on the skin at the right corner of the mouth, which was the largest mass. Figure 3 shows the clinical symptoms of the patient in September 2023. Other symptoms included nausea, vomiting, and dark urine. Histopathological examination of the resected bowel tissue and facial lumps revealed adenocarcinoma, indicating that the lumps on the face were metastases from the colon tumor.

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Figure 3.
Clinical feature of patient.

With the addition of the current condition, the patient's staging was updated to Ca Caecum T4aN2bM1 with complications involving the liver and facial skin region. The patient was scheduled for palliative care and chemotherapy with the regimen of Irinotecan 309.6mg, Leucovorin 688mg, 5FU 688mg, and 5FU 2x 2064mg. During treatment, the patient's condition deteriorated, and he passed away.

3. Discussion

Colorectal cancer metastasis is closely related to the classification of its lesions. Colorectal lesions can be classified as benign, potentially malignant, or malignant based on their pathological features [1]. Due to the lack of family history information and the absence of pathological examination, the type of colorectal cancer in this case cannot yet be determined. However, adenocarcinoma is the dominant histopathology and accounts for 90-95% of all colorectal malignancies. Additionally, sporadic presentation is the most common form, with no positive family history [1, 2].

The most common locations for metastasis in advanced-stage colorectal cancer are the liver, lungs, and central nervous system [3]. In this case, liver metastasis was first found one month after the patient's clinical symptoms appeared. An abdominal CT scan (Figure 3) revealed a mass in the ascending colon suspected to be a GIST, approximately 10 cm in size, with signs of liver metastasis. Most colorectal tumors originate from epithelial tissue and emerge from the mucosal surface, where they are commonly described as polyps. Benign polyps include non-neoplastic polyps (such as hyperplastic, hamartomatous, or inflammatory polyps); the potentially malignant group consists of adenomatous polyps. Once dysplastic cells in the polyp surpass the boundaries of the mucosa (basement membrane and muscularis mucosa) and begin to invade the submucosa and muscularis propria, they start to progress [1].

Most cases of colorectal cancer (more than 70%) have a history of previous malignant neoplasia, and the average time between the diagnosis of the primary tumor and the occurrence of skin metastasis is about two years. Skin metastasis is a rare first sign of internal cancer [3, 4]. In this case, liver

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metastasis was found one month after the patient complained of abdominal pain with a high pain scale (VAS 6). The patient's previous history of pain is unknown, as the patient frequently refused treatment.

Skin metastasis in internal malignant neoplasms is rare, occurring in about 0.7% to 9% of all malignancies. The most common neoplasms that metastasize to the skin from internal organs are melanoma, breast cancer, and upper respiratory tract cancers (oral cavity, nose, and larynx). Due to the high incidence of colorectal cancer (CRC) in the general population, this disease is an important source of skin metastasis. However, the tendency of CRC to cause skin metastasis is low, with only about 4% of patients with this disease showing these clinical findings [3, 4]. Metastasis is more likely to occur at skin locations near the primary tumor, which, in the case of CRC, is the abdominal wall. In this case, skin lesions were also found on the face, though in fewer numbers. This spread can be explained by the direct extension of the primary tumor to the skin above it or through hematogenous or lymphatic dissemination.

Skin locations that are rarely affected by metastasis include the pelvis, torso, chest, upper extremities, head, neck, and upper lip. In contrast, in this case, numerous skin lesions were found on the face, and the first manifestation occurred on the skin near the right corner of the mouth. Although resembling a primary tumor, the metastasis is more anaplastic and, when located in the integument, tends to spread deeply, involving the dermis and subcutaneous cellular tissue, without continuity with the epidermis above it [3, 5]. This is consistent with this case, where the mass on the facial skin is multiple and asymmetric.

Treatment for skin metastasis is palliative, with surgical resection performed only for solitary lesions. In this patient, chemotherapy and palliative care became the treatment options due to the multiple lesions, making surgical resection impossible. Once diagnosed, skin metastasis is associated with a poor prognosis, with more than two-thirds of patients dying within the first six months. Some literature suggests that early detection and recognition of metastatic disease on the skin can alter treatment and prognosis in these cases [3, 5].

4. Conclusion

Colorectal cancer has a very low tendency to cause metastasis (4%). Metastasis is more likely to occur in skin areas near the primary tumor (abdominal wall), making the facial skin a rarer location. Treatment for colorectal cancer with skin metastasis is palliative, with surgical resection performed only for solitary lesions. Early detection and appropriate management of colorectal cancer can alter treatment and prognosis in these cases before skin metastasis occurs

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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