CASE REPORT

A Case of Rectal Malignancy Presenting with Paraneoplastic Myopathy and Hyperpigmentation of Skin: An Interesting Case Report

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Abstract

Colorectal cancer manifests usually with a change in bowel habit or a bleeding per rectum. Much less commonly, colorectal cancer may present as part of paraneoplastic syndrome. Paraneoplastic syndromes may help in the timely diagnosis of the case.

The authors describe a case report of a 60-year-old woman with a hyperpigmented skin rash and proximal muscle weakness who was subsequently diagnosed with rectal carcinoma in the setting of progressive muscle weakness.

Keywords: Colorectal cancer, Paraneoplastic syndrome, Proximal myopathy, Skin hyperpigmentation.

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Introduction

Colorectal cancer most often presents with a change in bowel habit, weight loss, or bleeding per rectum. There may be symptoms of anemia and asthenia causing generalized weakness and fatigue. Much less commonly, colorectal cancer may present as part of a paraneoplastic syndrome,[1] which is defined as a symptom that is a consequence of the presence of cancer in the body but is not caused by the local or metastatic effect of neoplastic cells. Paraneoplastic syndromes may help in the early diagnosis of the case.[2]

Simultaneous occurrence of paraneoplastic features are rare and they mimic systemic illness.[3] Early diagnosis of cancer by paraneoplastic manifestations will improve the outcome of the malignancy. So physicians should be aware of the paraneoplastic syndromes and their etiological malignancies.

Case Report

A previously active 60-year-old woman presented to us, complaining of hyperpigmentation of skin that had started on face and then progressed gradually on the front and back of the upper part of the body during the preceding 3 months (Fig. 1). More recently she had developed proximal weakness affecting all four limbs, more on the lower limbs, since last 1 month. She also complained of significant weight loss with decreased appetite and recurrent diarrhea for the last 1 month. She used to pass liquid stool three to four times per day without any alternating episodes of constipation or bleeding per rectum.

There was no history of mucosal pigmentation and no history of fever and night sweats. She had no history of dizziness, nausea, cough, or hemoptysis and did not complains of gastrointestinal (GI) bleed, abdominal pain, or jaundice. She had no history of arthralgia, alopecia, oral ulcer, or hematuria. She had no headache or altered sensorium. She had menopause 12 years back and no history of postmenopausal bleed.

On clinical examination, the patient was hemodynamically stable with pulse 88/minute and BP 110/70 mm Hg without any postural hypotension. General examination revealed mild pallor with macular blackish pigmentation of the face, front and the back of the upper part of the body. There was no evidence of oral mucosal pigmentation (Figs 2 and 3).

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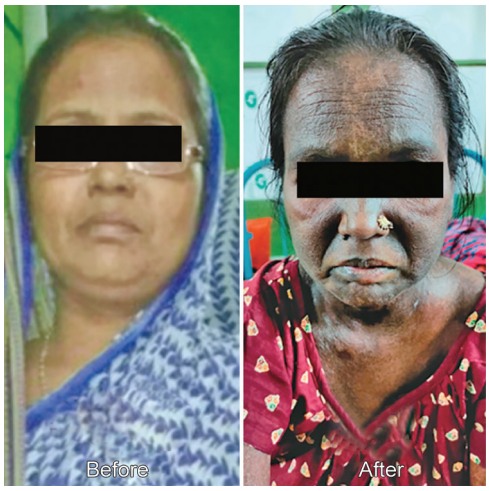

Fig. 1: Skin changes in the face, before and after the disease onset

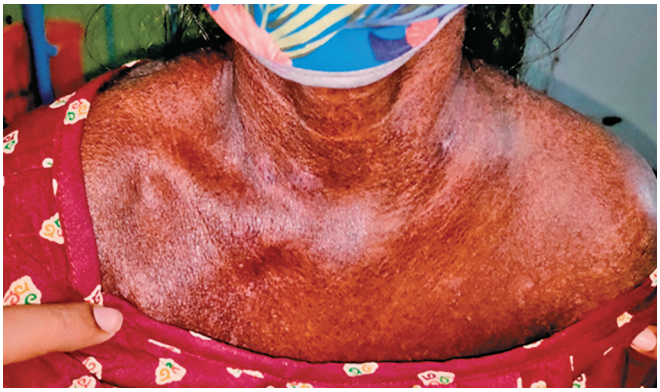

Fig. 2: Front of chest showing macular blackish pigmentation

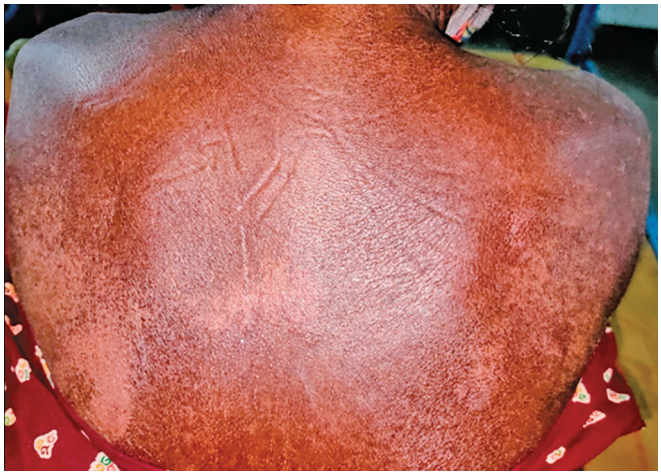

Fig. 3: Back of the body with increased pigmentation with some normal pigmented area in between

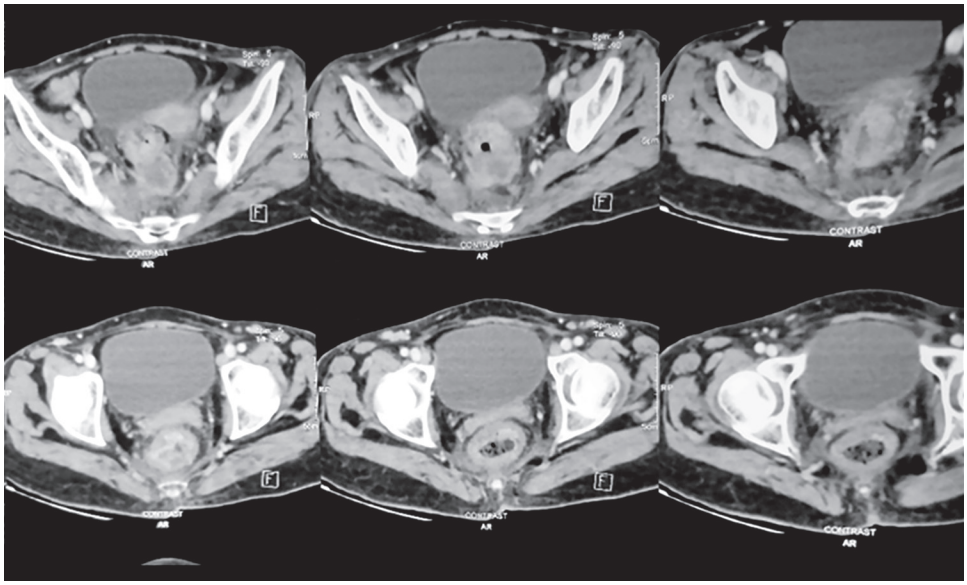

Fig. 4: Diffuse circumferential thickening in the distal and mid-rectum

There was significant left supraclavicular lymphadenopathy which was 3 cm in width, discrete, hard consistency, nontender, and fixed to underlying structures.

On neurological examination, there was weak neck flexion with weakness of proximal muscles of both upper and lower limbs (both upper limb (UL) and lower limb (LL) power in proximal muscle—3/5, distal muscle—5/5). Deep tendon reflexes were reduced in knee and ankle and normal reflex in other joints.

Investigations revealed there was mild anemia (Hb—10.5) with raised ESR (130 mm/hour) and LDH (1200 IU/mL) but there was no elevation in CPK level. Serum ACTH and 8 a.m. Cortisol levels were normal suggesting no evidence of adrenal failure. Rheumatological tests including anti-nuclear antibody (ANA) and myositis profile were negative ruling out the possibility of SLE and dermatomyositis (DM). Chest X-ray was normal and ultrasonography (USG) abdomen showed few intra-abdominal lymphadenopathies, but there was no ascites or hepatosplenomegaly. Bilateral adrenals were normal. Serum paraneoplastic profile was negative.

In her neurological evaluation, EMG revealed—Early recruitment with low amplitude, polyphasic, short-duration motor unit action potentials (MUAPs), suggestive of myopathy but nerve conduction velocity (NCV) was within normal limits (WNL).

Screening to rule out primary malignancy was started and despite the absence of bowel symptoms her contrast-enhanced computed tomography (CECT) abdomen revealed diffuse circumferential thickening in the distal and mid rectum, 33 mm above the anal verge with perirectal fat stranding and multiple enlarged perirectal lymphadenopathies. Multiple enlarged para-aortic and aortocaval lymphadenopathy were also noted (Fig. 4).

Colonoscopy guided biopsy was taken from the mass lesion which came out to be adenocarcinoma of the rectum.

A positron emission tomography and computed tomography (PET-CT) scan was done and it showed lymph node involvement in the abdomen and neck but no extension of malignancy beyond rectum or blood-borne metastasis.

Subsequently, a multidisciplinary team discussion concluded that a primary resection of the tumor followed by an oncology referral for consideration of palliative chemotherapy would be the most appropriate plan.

Discussion

Colorectal cancers are notorious to develop paraneoplastic syndromes most commonly involving the skin, endocrine system, neurological and musculoskeletal systems.[4] Paraneoplastic syndromes may very rarely be present simultaneously and mimic other multisystem disorders. As in our case, it mimicked DM.

DM presents with pigmentation around the eyes (heliotrope rash) over the chest and back (shawl sign) and over joints.[5] Paraneoplastic DM is similar to classical DM. It is associated with malignant neoplasms, including gastrointestinal neoplasms, up to 15 to 40% of cases.[6,7] So our initial impression was that we were dealing with such a case. However, when the myositis profile and CPK came to be noncontributory we began to explore other options. Her diarrhea prompted us to go for a colonoscopy and CECT abdomen. Myopathy was eventually indicated by EMG studies and high LDH and aspartate aminotransferase (AST).

Paraneoplastic syndromes help in early diagnosis of the culprit disease even in absence of the symptoms directly related to the malignancy as they may precede the classical symptoms of the malignancy. In our patient diagnosis was made in absence of advanced disease and early diagnosis favored her prognosis as primary removal of the tumor was feasible.

Conclusion

This case demonstrates the value of knowledge about associated paraneoplastic syndromes, as this may help solve uncommon but serious diagnostic conundrums. Early diagnosis of malignancy is critical in cases of colorectal CA. Any hints we as clinicians can gain to aid a diagnosis are essential and therefore our case intensifies the importance of considering neoplasm as a differential for patients presenting with symptoms of myopathy, as although rare, it can be the first symptom at presentation and can provide a clinician with a vital clue to provide an earlier diagnosis of occult cancer.

We suggest that patients over the age of 45, with a newly diagnosed myopathy/skin changes, should be screened for occult cancer, including a thorough history and extensive examination, and investigations including blood tests for hematological and biochemical screening and assessment of tumor markers (CEA, CA-125, etc.).

Ethical Approval

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

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