A Case of Young Colon Cancer Presenting as Neck Mass

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Abstract

Colorectal adenocarcinoma, the third most diagnosed cancer in males and the second most diagnosed in females, commonly presents with changes in bowel habits, rectal bleeding, weight loss, fatigue, and abdominal pain. While non-regional lymphatic the involvement in colon primary is an uncommon finding, metastatic mediastinal and supraclavicular lymph node without the involvement of major intermediary organs like liver or lungs is extremely rare. We report the case of a 25-year-old male with colorectal cancer who had an unusual initial presentation as a progressively increasing left-sided neck mass. Early age of onset of colorectal malignancy without any bowel symptoms and presentation as metastasis to left supraclavicular node (Virchow's node) without solid end-organ involvement makes this case novel.

Keywords: Colorectal carcinoma, Contrast enhanced computed tomography, FNAC, Carcinoembryonic antigen.

Introduction

Globally incidence wise, colorectal cancer (CRC) is 2nd most common malignancy among females and 3rd most common in males [1]. Compared to the western world, the age-adjusted incidence rates of colorectal cancer are low in India with incidence of colon cancer is found to be 0.7 to 3.7/100,000 among men and 0.4 to 3/100,000 among women [2]. Patients with colorectal adenocarcinoma commonly present with changes in bowels and/or bloody stools, anemia, and abdominal pain [3]. Typically, the most common sites of colon cancer metastasis are regional lymph nodes, liver, lung, bone and brain [4]. Metastasis of CRC to the left supraclavicular lymph node, also known as Virchow's node, is extremely rare without signs and symptoms of metastatic organ involvement [4,5]. We present a case of a 25-year-old male with sigmoid colon growth who presented with a left-sided neck mass with fine-needle aspiration cytology (FNAC) findings of metastatic adenocarcinoma. Early age of onset of colorectal malignancy without any bowel symptoms and presentation as metastasis to left supraclavicular node without solid end-organ involvement makes this case novel.

Case Report

A 25-year-old male presented with complaints of painless swelling on left side of neck above collar bone which was progressively increasing in size for last 2 months. Patient denied tenderness to palpation of the mass. There were no other complaints of dyspnea, dysphagia, hoarseness, loss of appetite or weight loss. There were no gastrointestinal complaints like abdominal pain, nausea or vomiting, constipation. His

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personnel, family and social history were not significant.

On physical examination, a hard and fixed supraclavicular lymph node of size 3x4 cm was palpated on the left supraclavicular region; it was non-tender with no submandibular and posterior cervical lymphadenopathy. His rest of general physical and systemic examination was normal. His routine investigations including hemogram, liver and renal biochemistries were normal. Ultrasonographic examination of the neck revealed one hypoechoic, peripherally vascularized lymph nodes with the largest diameter of 4 cm. The thyroid gland was normal at ultrasonography. Fine-needle aspiration cytological examination (FNAC) was performed and revealed metastatic mucinous carcinoma. To search for the primary carcinoma, neck and thorax computed tomography was performed initially which revealed no additional pathological findings other than cervical supraclavicular lymphadenopathy (LAP). His esophagogastroduodenoscopy revealed normal esophagus, stomach and duodenum. Abdominal and pelvic computed tomography revealed patchy areas of wall thickening (maximum 10 mm) in sigmoid colon with mild luminal narrowing with fat stranding and few prominent non-necrotic mesenteric lymph nodes with largest measuring 11 mm. At colonoscopy, there was an ulcerated mass lesion in the sigmoid colon [Fig 1a]. The biopsy result for the primary lesion well to revealed findings of invasive moderately differentiated adenocarcinoma with mucinous features [Fig 1b].

His carcinoembryonic antigen (CEA) level was 57.99 ng/ml (normal CEA level <2.5 ng/ml). A final diagnosis of stage IV sigmoid colon cancer was made. Prognoses explained to the patient and patient attached to medical and surgical oncology team.

Discussion

Young-onset CRC (yCRC), defined as CRC diagnosed in individuals younger than age 50 [6]. There is a perception amongst oncologists in India that most cases of CRC in India present at a younger age and with more advanced-stage disease, as seen in our case [7].

Patients with colorectal adenocarcinoma commonly present with changes in bowels and/or bloody stools, anemia, and abdominal pain [3]. Our patient presented with painless swelling on left side of neck without any bowel symptoms.

CRC most commonly spreads to local lymph nodes (50–70%) and liver (35–50%). Other sites of metastatic spread include the lungs (21%), peritoneum (15%), ovaries (13.1%), central nervous system (8.3%), bone (8.7%), kidney (6.6%), testes, penis, uterus and oral cavity. Very rare sites include adrenal glands, hilar lymph nodes, skin and muscles [4, 5]. Supraclavicular lymph node involvement ie, Virchow's node without metastatic organ involvement, is an unusual metastatic site for CRC [4,5]. Our patient presented with involvement of left supraclavicular lymph node involvement ie, Virchow's node as an initial presentation.

Virchow's node is a deep cervical node which lies near the junction of the thoracic duct and the left subclavian vein in the left supraclavicular fossa, above the left clavicle [8,9]. Tumor spread from the thoracic duct usually leads to enlargement of this node and this finding on physical exam is referred to as Troisier's sign [8]. Majority of the gastrointestinal cavity drains to this node [8,9]. This gives important clues to a possible ab-

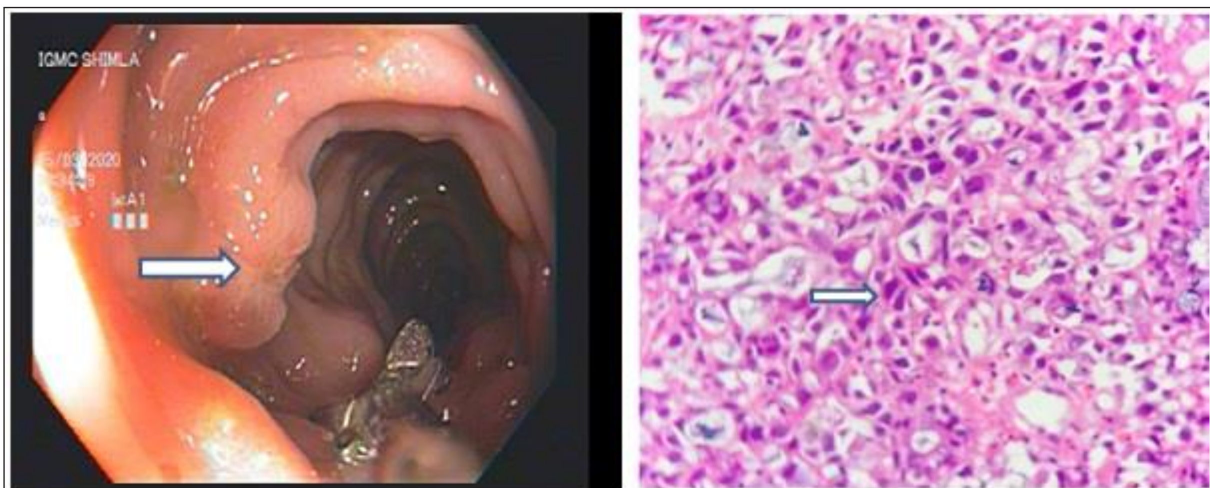

Fig 1 a – colonoscopic image with arrow showing ulcerated tumor mass in sigmoid colon; 1 b – histopathological image with pleomorphic tumor cells showing large irregular nuclei suggestive of adenocarcinoma.

dominal cavity malignancy, and other sites such as breast, esophagus and lymphomas which tends to be a sign of advanced disease, as was the case here for our patient [9].

Statistics vary regarding the primary carcinomas that spread to the supraclavicular lymph node. Currently, the most common carcinoma that spreads primarily to Virchow's node is gastric carcinomas. Distant spread to non-regional lymph nodes is quite low in CRCs, and spread without metastatic organ involvement is also rare with only a handful of cases reported [4,5].

Currently, there is no literature stating the mechanism or process of metastatic spread of tumor cells to distant non-regional lymph nodes in patients with colorectal cancer. According to one theory, the process starts with spread of tumor cells into sequential lymphatic nodes, and studies have demonstrated that skip micrometastasis between regional lymph nodes stations can be seen in 18% of the cases [10]. Primary carcinoma metastatic spread without solid organ involvement is not typical as was presented in our case [10].

Distant metastatic involvement of Virchow's node categorizes our patients of sigmoid colon carcinoma into stage IV malignancy.

Conclusion

This case presents uncommon pattern of metastasis from a sigmoid colonic mass to left supraclavicular lymph node without solid end-organ (liver, lung) metastatic involvement. This case demonstrated an extremely rare pattern of involvement with no root cause or pathophysiologic etiology known for this type of "sparing" metastasis. This case highlights the need for a complete patient workup and imaging when any solid lymphadenopathy is present.

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