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ISOLATED SCAPULAR METASTASIS IN A PATIENT WITH RECTAL CARCINOMA: A CASE REPORT

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ABSTRACT: Colorectal cancer is the third most common diagnosed cancer in the world and it is the third leading cause of cancer-related deaths in both sexes combined [1]. Skeletal metastases in primary colorectal cancer is an uncommon event and mostly occurs in combination with lung, liver or brain metastases. In the present case report, isolated scapular metastasis from Carcinoma rectum in a 55 year old male patient is reported, for the first time in our knowledge.

KEY WORDS: Scapular metastasis, Carcinoma rectum, Adenocarcinoma, Te99m labeled scan.

INTRODUCTION: Colorectal cancer (CRC) is the third most common diagnosed cancer in the world and is the third leading cause of cancer related deaths in both sexes combined [1]. Environmental factors (Diet) play a major role in the etiology of the disease. Metastatic spread of adenocarcinoma to the skin and subcutaneous tissue can occur via lymphatics and blood vessels. Spread can also be by direct extension or by implantation during surgery [2]. Though liver and lung are the commonest sites of metastatic spread from colorectal carcinoma, others sites of metastasis including cutaneous [3], skeletal [4], muscle [5], penile [6], brain [7] and thyroid gland [8] has been reported. We report a case of primary rectal adenocarcinoma in a 55 year old male patient developing distant bone metastasis to the left scapula following appropriate treatment.

CASE REPORT: A 55 year old male patient was suffering from lower abdominal pain and bleeding per rectum for past six months. USG finding at the time was – A lower pelvic mass measuring 5 x 4 x 3.5 cms located 5-7 cms proximal to the anal verge. USG did not mention the extent of the lesion. Liver, gall bladder, spleen, urinary bladder and both kidneys were normal. Pathological blood reports were as follows: SGPT- 32 U/mL, SGOT - 47 U/mL, Serum electrolytes - within normal range, Serum Creatinine-1.3 mg/dl, CEA- 35ng/mL, Chest X-ray - PA view was within normal limits. The patient could not afford colonoscopy and C-T scan. Abdominoperineal Resection surgery was done for rectal adenocarcinoma. The Histopathological report of rectal mass came out to be moderately differentiated adenocarcinoma with invasion of the muscularis propria (Figure- 3). There was no metastasis to the adjacent lymph nodes or other organs, however, the number of lymph nodes was not mentioned. TNM stage was pT2N0M0. Thereafter, the patient was planned for concurrent chemo-radiation. FOLFOX-4 regimen was given at every two weeks (BSA 1.5 ms²) and radiation ERBT 5 days in a week (Total dose 5000 CGy/25#/5 weeks). Total 6 cycles CT was given. Patient tolerated the treatment very well. All necessary investigations were done during the treatment. Adjuvant therapy was uneventful. Patient came for regular follow-up every three month for one year without any significant complains. All necessary investigations were done during this follow-up period and all the findings were within normal limits. CEA was 15, 10 and 10ng/ml at 3 months interval.

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After 18 months of treatment the patient complained of painful swelling and restricted movement of left arm for last one month. The patient was on symptomatic treatment at his residential place by local doctors. As no improvement was seen he reported in our RCC OPD. There was no history of trauma in that particular region. X-ray revealed a large osteolytic lesion in the distal scapula (figure - 1). After looking at the above findings the patient was advised for whole body scan for secondaries anywhere else. The finding of whole body scan was – focal avid tracer uptake demonstrated in the distal part of left scapula (figure - 2); rest of the skeletal system revealed normal physiological tracer localization & both the kidneys were well demonstrated. The scintigraphic feature of the present study, when correlated with the clinical history and radiological features was highly suggestive of metastatic osteolytic lesion in the distal scapula caused by secondary from adenocarcinoma of rectum. The diagnosis of metastatic adenocarcinoma was confirmed by fine needle aspiration cytology from the scapular mass (figure - 4). CEA was 40 ng/ml. Palliative radiotherapy 3000CGry/10#/2 weeks was given to the patient.

DISCUSSION: Colorectal cancer is the third most common diagnosed cancer in the world [9]. More than one million new cases are reported every year worldwide, with a mortality rate of nearly 8.1 per 100,000 population. There is significant variation in its incidence around the globe, with the highest rates occurring in developed countries like Australia and the United States. However, recent reports have demonstrated that several newly developed nations like Japan are presenting higher incidence rates, probably due to the adoption of known environmental risk factors, in the process of so called “Westernization” [10]. There is close correlation between meat and alcohol consumption with incidence of CRC. On the other hand foods with vegetable fiber may be protective. Death rates have declined progressively in many Western countries, mainly due to early detection of CRC enabled by more effective screening programs followed by surgery and use of treatments incorporating biological agents such as bevacizumab and cetuximab. Metastatic carcinoma is present in approximately 19 % of the patients with colorectal adenocarcinoma, with survival rates of only 8.1 % at five years [11]. In this setting, the use of systemic chemotherapy along with targeted therapy has become the first-line treatment, yielding a median survival time of almost 25 months [12, 13]. An exception occurs in patients who are considered to have resectable metastatic disease, who can potentially be cured after local and systemic therapy [14]. Histologically, more than 97 % of all CRCs are adenocarcinomas, and approximately 10 % of them present with focal neuroendocrine differentiation, with some reports suggesting that this finding is an independent prognostic factor in stages III and IV [15, 16]. The remaining CRCs are rare histologic types, among which, according to the literature, between 0.3 and 3.9 % are NEC [17–19].

Osseous metastatic lesion from carcinoma rectum is relatively infrequent. The most likely route for skeletal metastasis seeding is through Batson’s plexus, a valveless system of veins draining to the vertebral column making it the most common site for skeletal metastasis. Unusual sites have been reported in the literature but to our knowledge this is the first case report of an isolated scapular metastasis. Though radiograph & bone scan were suggestive of the nature of lesion; the diagnosis of metastasis was confirmed by fine needle aspiration cytology from the mass. A review of literature have revealed that cases of extra abdominal spread of carcinoma rectum to the skull, vertebral column, iliac crest, femur, orbit, skin, CNS, and heart have been reported in the past in cases of unresectable rectal carcinoma.

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Figure 1. X-Ray - A large expansile mass in the distal scapula.

Figure 2. Bone scan - Focal avid tracer uptake in the distal scapular region

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Figure 3 – The section shows irregular glands lined by dysplastic cells with crowded pleomorphic nuclei and prominent nucleoli. These glands are invading the muscularis propria of rectum.

Figure 4 - FNAC of scapular mass showing fragments from adenocarcinoma comprising of clusters of crowded cells with large pleomorphic nuclei, irregular nuclear margins and prominent nucleoli.

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