



A RARE CASE OF RECURRENCE AT STOMA REVERSAL SITE FOLLOWING SURGICAL MANAGEMENT OF COLORECTAL CANCER

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ABSTRACT Cutaneous and subcutaneous metastasis from colorectal adenocarcinoma are extremely rare. Cutaneous metastasis usually occur in less than 4% of colorectal carcinoma. The commonest site of cutaneous metastasis in colorectal cancer is the abdominal wall skin. The patient was a 61-year-old man who presented with complaints of bleeding per rectum and with history of constipation. On further evaluation for the same he was diagnosed to have carcinoma rectosigmoid. A Hartman's procedure was performed. Histopathology was well differentiated mucinous adenocarcinoma with resected margins free of tumour. Postoperatively patient received 1 cycle of chemo and 28 cycles of radiation. Prior to Hartmann reversal distal stump and proximal colon was evaluated with flexible sigmoidoscopy and colonoscopy. And being normal Hartmann's reversal was done. On regular follow up patient complained of a swelling near the previous stoma site. FNAC was taken from the swelling suggestive of metastatic adenocarcinoma. Wide local excision was done and the defect was reinforced with a polypropylene mesh and closed. The histopathological report was metastasis from adenocarcinoma with mucinous differentiation with all the resected margins and overlying skin free of tumor. It is uncommon to have metastatic adenocarcinoma at the colostomy stoma site from colorectal cancer without local recurrence or distant metastases.

KEYWORDS : Colorectal adenocarcinoma, stoma reversal, Cutaneous recurrence

INTRODUCTION

Colorectal cancer refers to a slowly developing cancer that begins as a tumor or tissue growth on the inner lining of the rectum or colon.(1) If this abnormal growth, known as a polyp, eventually becomes cancerous, it can form a tumor on the wall of the rectum or colon, and subsequently grow into blood vessels or lymph vessels, increasing the chance of metastasis to other anatomical sites. (1) The choice of first-line treatment in colorectal cancer follows a multimodal approach based on tumour-related characteristics and this usually comprises surgical resection like Hartmann's and APR followed by chemotherapy either combined with monoclonal antibodies or proteins against vascular endothelial growth factor (VEGF) and epidermal growth receptor (EGFR).(2)

Colorectal cancer is currently on a rise, especially in developing countries like India and is the third most common cancer and the fourth most common cause of cancer-related death worldwide.(2) Just within a span of a decade from 2004 to 2014, CRC incidence rates in India has increased by 20%.(3) This rising rates pose a huge problem in rising cancer related morbidity and mortality and all these could be attributed to changing lifestyles that include consumption of low fiber calorie rich diet, processed foods and physical inactivity.(4)

Studies have shown that 20% of all newly diagnosed colorectal carcinoma patients have metastatic disease at presentation and another 25% who present with localized disease are likely to develop metastasis.(5)These metastases usually occur within 2-3 years after primary colorectal cancer resection and the common organs involved are liver,peritoneum,pelvis,lung and bone in decreasing frequency.(6)

Most commonly these metastasis occurs via five means : by direct extension, via lymphatic route, portal venous spread to liver, peritoneal dissemination, and vascular spread to distant organs including lung, bone, and brain. Majority of the reported case of metastasis from colorectal carcinoma is to liver and carries with it poor prognosis to the patient.(6)

Cutaneous and subcutaneous metastasis from colorectal adenocarcinoma are extremely rare with a very few cases reported worldwide. These cutaneous and subcutaneous metastasis from CRC are interesting condition not only because of its rarity but also because it implies a poor prognosis.(7)Cutaneous metastasis usually occur in less than 4% of colorectal carcinoma. (7) The commonest site of cutaneous metastasis in colorectal cancer is the abdominal wall skin.(8) They can also occur in the skins of the lower limbs, face or back and rarely arise in previous surgical scars (abdominal or perineal) including colostomy reversal scar.(8) The clinicopathological risk factors for skin metastasis are primary tumours that extend

transmurally through the wall of the colon or rectum, lymph node metastases at presentation and perforated primary tumour.(8)

About 19 cases were reported in the world literature making stomal site metastasis from primary rectal adenocarcinoma an extremely interesting and rare entity.(3)Most of these reported patients had already undergone abdomino-perineal resection(APR) with end colostomy or Hartmann's. It is also noted that the interval to metastasis is highly variable in these cases of post surgical metastasis at the colostomy site and not much idea about the etiopathogenesis for the same exists.(3)

Here in this case report we are discussing about a patient, who presented with this rare metastasis at the stoma reversal site after he underwent surgery for carcinoma rectosigmoid.

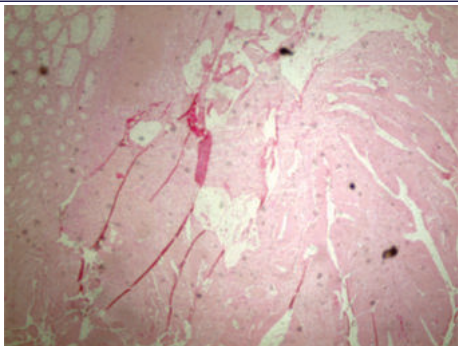
CASE REPORT

61-year-old male, presented with complaints of bleeding per rectum, vomiting and constipation. Computed tomography was in favour of carcinoma rectosigmoid with features of intestinal obstruction.

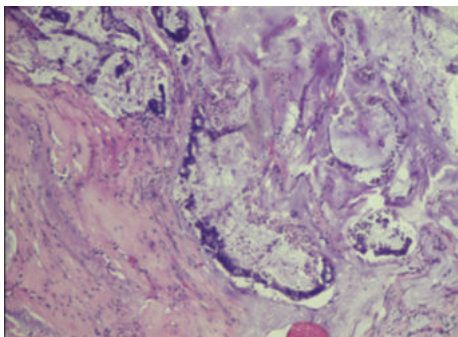
He underwent Emergency exploratory laparotomy and Hartmann's procedure on 14 May 2019.The final pathologic diagnosis was well differentiated mucinous adenocarcinoma with resected margins free of tumour. Following the procedure patient received 1 cycle of chemo and 28 cycles of radiation, last cycle of radiation was on 27 August 2019. After colonoscopic evaluation of the stoma and evaluation of distal stump with flexible sigmoidoscopy, Hartmann reversal was done on February 2020. Following the surgery patient was kept on follow-up.



CECT Abdomen Showing Short Segment Circumferential Enhancing Wall Thickening With Luminal Narrowing At Rectosigmoid Junction.

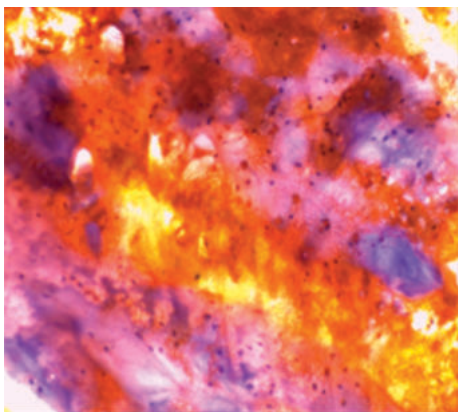


H & E Section Showing Well Differentiated Adenocarcinoma

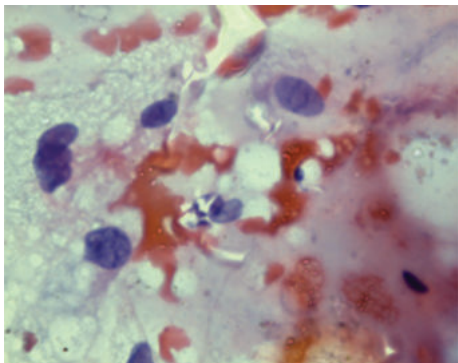


H & E Section Showing Tumour Arranged In Pool Of Mucin

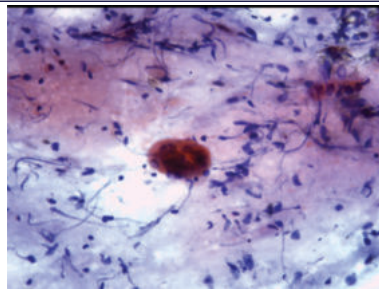
Patient then visited the out-patient unit in 2022 with a complaints of a swelling near the previous stoma site which he noticed since 3 months. It was a painless swelling and was gradually increased in size. Initially an FNAC was taken from the swelling which was suggestive of metastatic adenocarcinoma. A PET-CT was taken on December 1st 2022 which was reported as a mild FDG avid soft tissue density mass measuring approximately 2.9(AP)x3.4(TR)x2.4(CC)cm, SUVmax-1.6 is noted involving the anterior abdominal wall muscles near the colostomy closure site likely metastatic deposit.



FNAC from skin swelling showing Mucinous Materials In Background Of Blood

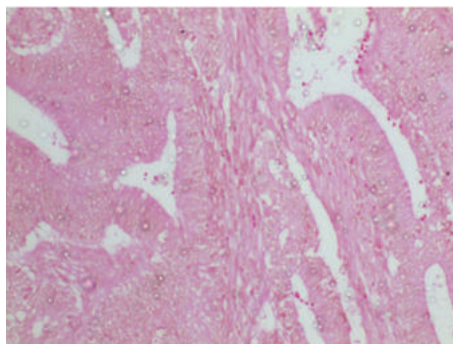


FNAC from skin swelling showing Atypical cells

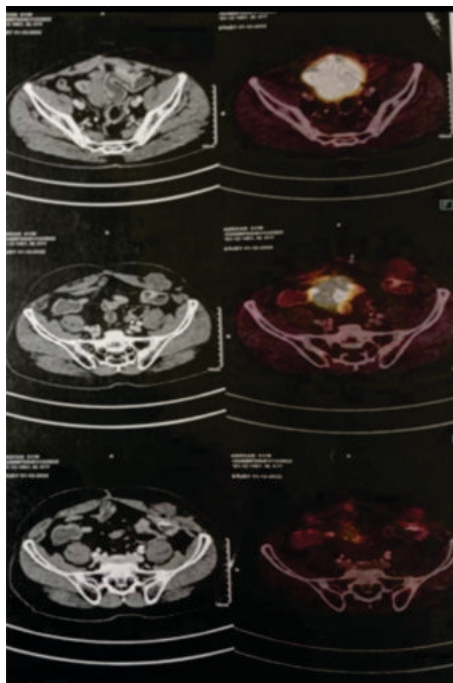


Tumor Giant Cells In A Background Of Necrosis And Inflammation

Patient was posted for wide local excision which was done on 16 January 2023. On exploration a 2*2 cm mass was seen in the subcutaneous plane over External oblique aponeurosis. Wide local excision was done and the defect was closed primarily with No.1 prolene suture and reinforced with a polypropylene mesh and the specimen was sent for HPE. The report came as metastasis from adenocarcinoma with mucinous differentiation with all the resected margins and overlying skin free of tumor.



H & E of Wide local excision Specimen Showing Adenocarcinoma



FDG PET Scan Images Showing Metabolically Active Soft Tissue Density Mass Involving Anterior Abdominal Wall

DISCUSSION

It is uncommon to have metastatic adenocarcinoma at the colostomy stoma site from colorectal cancer without local recurrence or distant metastases. Metastasis at the stoma site has been reported as a complication of surgery for laryngeal squamous cell carcinoma, but rarely reported as a complication of surgery for gastrointestinal cancer

.On doing literature review we could note that there were many years interval between the previous cancer surgery and diagnosis of stoma site metastases.(8)

Numerous causal processes have been proposed, and its probable that the mechanisms involved in the recurrence at the site of the colostomy are similar to those involved in the recurrence of cancer in a scar from a prior operation.

There may be a direct extension of the disease, hematogenous spread, lymphatic spread or implantation of exfoliated tumor cells if the specimen had been retrieved through the incision.(9,10) The various aetiological factors such as adenoma-cancer sequence, bile acids, recurrent and persistent physical damage at the colostomy site by faecal matter due to associated stoma stenosis have also been considered responsible.(11)

In our case one of the possible mechanisms of spread of the tumour from the rectum to the colostomy site could be via the lymphatic channels in continuity with the loop colostomy that was constructed prior to the patient undergoing the abdomino-perineal excision. The second possibility is for micro-metastasis left behind in lymph nodes along the inferior mesenteric artery pedicle at the time of the abdomino-perineal resection.(8)

CONCLUSION

The likelihood of colostomy site metastases following treatment for obstructive colorectal cancer is still unknown. If there are no liver,peritoneal, or distant metastases, surgery with a curative intent (R0 resection) is usually associated with a good outcome. The exact ethiopathogenesis of these rare metastasis still remains a matter of speculations waiting for it to be unraveled in the near future.

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