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Uncommon presentations of carcinoma colon – Experience of a tertiary care centre

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ABSTRACT

Colorectal cancer is the third most common malignancy worldwide as of 2020. Unusual presentation of this cancer (abdominal wall abscess / enterocutaneous fistula) and locally advanced disease without metastasis is rare and seen in only 5% to 22% of cases.

We report 3 unusual presentations of colonic carcinoma- 1st case of a 48 year old lady with a transverse colon tumor with direct invasion into anterior abdominal wall. 2nd case of a 28 year old gentleman with carcinoma sigmoid colon with enterocutaneous fistula , and the 3rd case of a 75 year old lady with transverse colon tumor presenting as an abdominal wall abscess.

Because of the uncommon presentations, our purpose with this review is to set forth the proper approach when encountering such cases and point the significance of keeping a high index of suspicion. We also highlight the need for utilizing proper diagnostic imaging modalities prior to invasive intervention.

Keywords : colorectal carcinoma, enterocutaneous fistula, abdominal wall abscess

INTRODUCTION

Colorectal cancer is the third most common malignancy worldwide (1,2).

Colonic carcinoma can mimic any abdominal disease with a wide range of presentation. The usual presenting complaints are altered bowel habits, per-rectal bleeding, and abdominal discomfort. Unusual symptoms may be noted when the cancer is locally advanced like Perforation
(incidence is 2.6 –7.8%).

The formation of an abscess is seen in only 0.3%-4% of all colon cancer cases, and anterior abdominal wall abscesse occur due to malignant tumor invasion and perforation (2). There are only a few case reports of abdominal wall involvement by CRC as the initial presentation (4-6).

We hereby report 3 unusual presentations of colonic carcinoma - 1st case of a 48 year old lady with a transverse colon tumor with direct invasion into anterior abdominal wall. 2nd case of a 28 year old gentleman with carcinoma sigmoid colon with enterocutaneous fistula , and the 3rd case of a 75 year old lady with transverse colon tumor presenting as an abdominal wall abscess.

Because of the infrequency of these type of presentations , our purpose with this review was to set forth the proper approach in such cases to improve the outcome.

PRESENTATION OF 3 CASES

1st case :

A 48 year old lady presented with on and off lower abdominal pain , weight loss, and occasional blood in stool. Physical examination revealed pallor and a 10 × 8 cm firm, non-tender mass in the umbilical and epigastric region. Initial labs revealed anemia and elevated carcinoembryonic antigen (CEA).

Colonoscopy revealed a friable, fungating non-circumferential and non-obstructing large
mass in the transverse colon. Biopsy of the mass was moderately differentiated invasive adenocarcinoma.
Contrast-enhanced CT abdomen and pelvis showed a growth in the transverse colon with enterocutaneous fistula – direct communication with the anterior abdominal wall

The case was discussed in **tumor board** and patient was started on **neo-adjuvant chemotherapy** (NACT) with CAPEOX to make the tumor resectable.

After 3 cycles NACT , she underwent transverse colectomy with enbloc resection of anterior abdominal wall which was then closed primarily.

Surgical pathology showed Grade 2 , moderately differentiated adenocarcinoma of the colon ,
44 lymph nodes were evaluated with none being positive, uninvolved margins, positive focal lymphovascular invasion, no perineural invasion.
The tumor was staged as **ypT4bN0** according to the 8th AJCC classification.

Patient recieved 3 more cycles of CAPEOX .Repeat imaging after 6 cycles of CAPEOX was within normal limits. Patient is on regular follow up and there has been no evidence of disease 1 year postoperatively.

2nd case:
A 28 year-old male presented with the complaints of left sided lower abdominal pain and constipation.

Colonoscopy revealed a circumferential tumor in the sigmoid colon, and histopathological examination revealed moderately differentiated adenocarcinoma . Genetic testing like MSI could not be performed due to insufficient tumor volume in biopsy tissue samples. CEA was found to be elevated.
Contrast-enhanced computed tomography (CT) abdomen and pelvis showed a circumferential tumor in the sigmoid causing luminal obstruction with extensive invasion of the anterior
abdominal wall **.**There was no evidence of distant metastasis.

In view of obstruction , patient underwent upfront surgery. A midline laparotomy was planned . En bloc left hemicolectomy was performed with excision of the abdominal wall fistula, ensuring a sufficient margin.
The post-excision defect of the anterior abdominal wall was 11 × 16 cm of fascia and 6 × 9 cm of skin. A pedicled ALT flap based on descending branch of lateral circumflex femoral artery
was harvested from the left thigh and sutured onto the abdominal wall fascia as inlay fashion to reconstruct the abdominal wall defect **.**
The skin was closed, allowing for a complete tensionless defect cover.

Histopathology revealed moderately differentiated adenocarcinoma of the sigmoid colon with tumor cells in the abdominal wall tissue, Lymphovascular invasion was observed, but no lymph node metastasis was found (out of 47 dissected lymph nodes), all resected margins free.
The tumor was staged as **pT4bN0** according to the 8th AJCC classification.

The patient developed intestinal paralysis postoperatively , but was managed conservatively for the same.
He had received adjuvant chemotherapy in an outside hospital . He is at present disease free 3 years postoperatively.

3rd case:
A 75 year old lady presented with on and off abdominal pain , weight loss, and occasional blood in stool. Physical examination revealed pallor and a 7x5 cms firm, non-tender mass in the umbilical and epigastric region.

Patient was evaluated initially in a outside hospital and diagnosed as anterior abdominal wall abscess – for which incision and drainage was done.

Initial labs revealed anemia and elevated carcinoembryonic antigen (CEA).
Colonoscopy revealed a friable, non-circumferential and non-obstructing growth in the transverse colon. Biopsy of the mass was suggestive of mucinous adenocarcinoma.
Contrast-enhanced CT abdomen and pelvis showed a growth in the transverse colon which had perforated and formed an abscess in the anterior abdominal wall **.**

Patient underwent transverse colectomy with resection of a part of anterior abdominal wall which was then closed primarily.

Surgical pathology showed T4b tumor , mucinous adenocarcinoma of the transverse colon , 37 lymph nodes evaluated with none being positive, uninvolved margins, no lymphovascular invasion, no perineural invasion.
The tumor was staged as **pT4bN0** according to the 8th AJCC classification.
Patient defaulted adjuvant chemotherapy. She is at present disease free for 2 years postoperatively.

DISCUSSION

Abdominal wall abscess / enterocutaneous fistula due to invasion and perforation of the colonic tumor is a rare occurrence. Once abdominal wall involvement with colon cancer forming an abdominal wall abscess is detected, the existence of cancer cells is highly likely in both the fistula and the wall of the abscess (17,18,19)
CT scan is an ideal technique to evaluate suspected abscesses, and colorectal cancer appears as wall thickening of colon. Colonoscopy is advantageous to investigate the features and structure of tumor , which may not be feasible in cases of suspected perforation .

Role of Neoadjuvant Chemotherapy

NACT may be given to cause tumor regression. While NACT is not the standard treatment for colon cancer , FOXTROT trial reported a higher complete resection rate with sufficient margins using NACT compared to adjuvant chemotherapy (96% vs. 80%) without an increase in postoperative complications (8). In case 1 of this series, NAC reduced the extent of abdominal wall resection, which led to a reliable radical resection and primary closure of the abdominal wall defect.
Disadvantages of NAC have also been studied- Wadhwani et al. presented a similar case of locally advanced colon cancer in which post chemotherapy necrosis resulted in tissue fragility and hemorrhage in the tumor that required surgery

as an oncological emergency (9, 10).

Role of Surgery

In locally advanced cases, En bloc resection is the treatment of choice which includes complete resection of the malignant colon tumor and the abscess wall/ fistula.

Radical resection is challenging for surgeons because, in the presence of local invasion, multivisceral resection is required. Complete, microscopic negative margin resection is the most important predictor factor for long-term survival (15,16)

Locally advanced colonic tumors with perforation at the tumor site usually tend to require emergency surgery with a higher 30-day mortality rate .The mortality rate after emergency operation was found to be 23% . (13,14)

It is further noted that a T4 disease which can present as a direct invasion into the anterior abdominal wall/ enterocutaneous fistula/ parietal wall abscess may have no nodal spread as seen in three cases of this study.

Abdominal Wall Reconstruction

Abdominal wall reconstruction is necessary - Primary repair of abdominal wall often fails owing to high tension, and the failure rate may reach up to 50% .

In Case 2 , resection of the entero-cutaneous fistula with a sufficient margin resulted in an extensive full thickness abdominal wall defect. The ALT flap was helpful for securing a sizeable cutaneous paddle and fascia lata with a long vascular pedicle, while ensuring minimal donor site morbidity (12).

While the pedicled ALT flap can cover lower abdominal defect, free ALT flap can cover any level of the abdominal defect.

CONCLUSION

A differential diagnosis of carcinoma colon should be considered when a patient presents with abdominal wall abscess accompanied by bowel symptoms such as altered bowel habits or per rectal bleeding.

A high index of suspicion early on helps early identification of underlying malignancy . A multimodal approach helps in planning the patient's treatment and ultimately survival.

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