Case Report

A Case Report of Signet Ring Cell carcinoma of Descending Colon in 24 Years Young Male

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Abstract

Signet ring cell carcinoma (SRCC) of the colon and rectum are uncommon but highly malignant tumors which may even first present as metastasis to other organs and adjacent peritoneum. The SRCC usually occurs in the adults; however, it is generally diagnosed at a younger age than the other colorectal carcinomas. The incidence of SRCC in young adults is less common and hence it is more difficult to diagnose and the prognosis is also less favorable. A case of a Signet Ring Cell Carcinoma occurring in a young, male patient of 24 years is presented here.

Key words

Signet ring cell carcinoma (SRCC), Histopathological examination.

Introduction

Signet ring cell carcinoma (SRCC) of the colon and rectum are uncommon but highly malignant tumors which may even first present as metastasis to other organs and adjacent peritoneum. According to one report, colo-rectal carcinomas account for around 0.7% of all surgical patients [1]. SRCC occurs more frequently in males than in females (M:F ratio 1.1:1) [2].

The SRCC usually occurs in the adults; however, it is generally diagnosed at a younger age than the other colorectal carcinomas. The incidence of SRCC in young adults is less common and hence it is more difficult to diagnose and the prognosis is also less favorable.

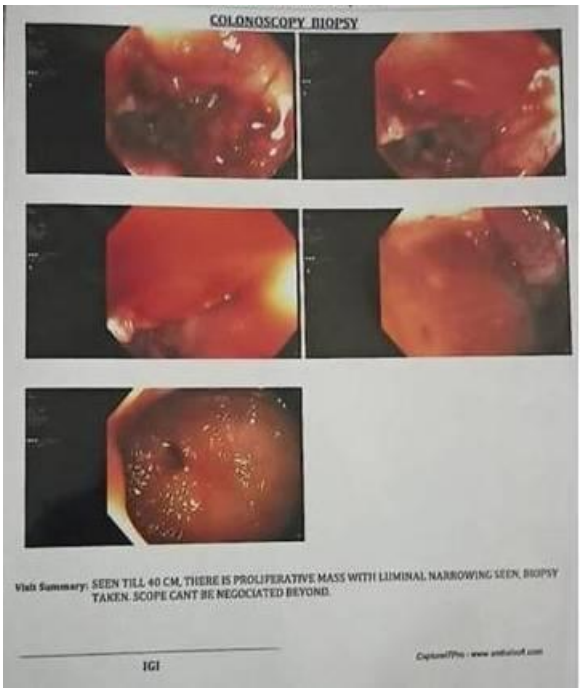
A case of a Signet Ring Cell Carcinoma occurring in a young, male patient of 24 years is presented here.

Case report

A 24 year male presented with complaints of abdominal pain and abdominal lump since 4 months. No history of fever and vomiting was present. History of weight loss was present. He was admitted and on ultrasonography, left terminal colon inflammation was reported. Colonoscopy was done and which showed a proliferative growth 40 cm from anal verge.

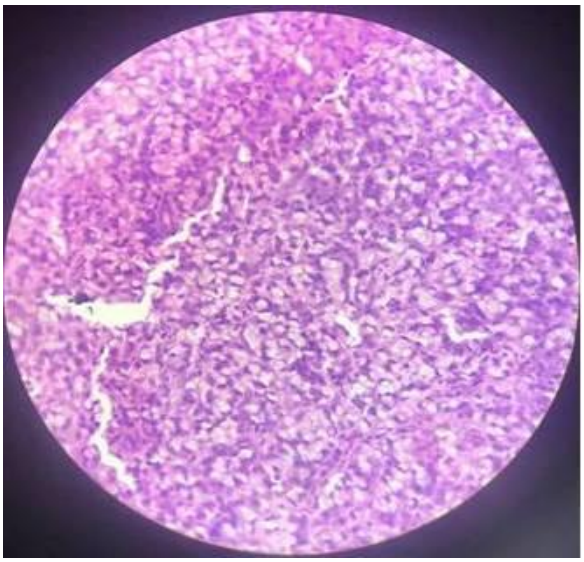
Colonoscopic biopsy revealed a poorly differentiated signet ring cell adenocarcinoma (**Photograph – 1**). Patient underwent exploratory laparotomy with descending colon and sigmoid colon resection, followed by transverse colo-rectal anastomosis. The descending colon with sigmoid colon and retroperitoneal fat stranding were subjected to histopathological examination (**Photograph – 2**).

Photograph – 1: Colonoscopy biopsy report showing SRCC.

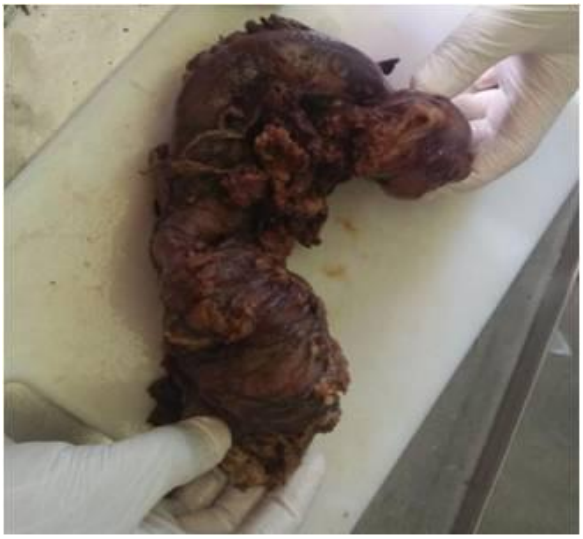


We received a large intestinal segment of descending colon with sigmoid colon measuring 40x7x6 cm. On gross examination, there was presence of a hard area measuring 14x3.5x3.5 cm. On cutting open the intestines, loss of mucosal rugosity was seen in the hard area (**Photograph – 3**).

Photograph – 2: Microscopy showing lymph node invasion of signet ring cells.



Photograph – 3: Gross image of descending colon and sigmoid colon.



Microscopy showed mucin secreting signet ring cells floating in pools of mucin and infiltrating through muscularis mucosa and involving the serosa. Areas of necrosis and hemorrhage were also seen. Resection margins, perineural involvement were not seen. Lympho-vascular infiltration was present and 5 out of 12 identified lymph nodes showed evidence of metastasis. The

presence of mesenteric deposits was noted. Retroperitoneal fat was also involved.

According to the TNM staging system, the tumor was of stage III (T4aN2aMx). Histopathological examination confirmed Poorly Differentiated Signet Ring Cell Carcinoma reported on biopsy.

Discussion

Signet ring cell carcinoma (SRCC) usually arises in the stomach. Other less common sites for SRCC are gall-bladder, pancreas, colon, rectum, bladder, and breast [3, 4]. Hence, it is important to confirm the origin of tumor via histopathological examination of biopsies and radiological imaging.

In our case, the primary site of SRCC was the colon. Signet ring cell carcinoma of the colon is a subtype of colon carcinoma which is rare. In SRCC, the nucleus is pushed to the periphery by intracytoplasmic mucin giving the cell, a signet ring appearance. The literature reports that the incidence of signet ring cell carcinoma is increasing [2] and presently it is 0.7% of the colorectal cancer. In younger patients, signet ring cell carcinoma is more common than non-signet cell cancers of the colon [1]. In our case also, the cancer presented at a young age.

In colonic carcinoma, abdominal pain is the most common complaint and symptoms like rectal bleeding, change in bowel habits and weight loss is also seen.

The Rectum and Colon account for nearly 50% of all the Signet ring Cell carcinomas. The incidence rate of the carcinoma in the right colon, left colon and transverse colon was found to be 29%, 15% and 9% respectively [6].

In our case, left colon was involved and presented with clinical features of abdominal pain and abdominal lump and weight loss.

Most of the patients of signet cell carcinomas present with higher stage. Presentation in children and adults is same [7]. Retroperitoneal fat was also involved in our case.

Colo-rectal cancers of stages I, II, III are managed surgically. Some of the selected stage IV patients undergo surgery. The adjuvant therapy for stage III is chemotherapy in colon cancer and for rectal cancer stage II and III is chemo-radiotherapy.

Only Chemotherapy alone is given in Colo-rectal cancers of stages IV, while palliative surgery or radiotherapy is given in cases where the tumour is bulky.

The median survival period of patients with SRCC is about 9 months. The five year survival rates signet ring cell carcinoma and the high-grade non-signet cell rectal carcinoma's is almost the same. The survival rates of Signet Ring Colonic Carcinoma is poor since they are usually/mostly diagnosed at a late stage [8].

Conclusion

Signet ring cell carcinoma of the colon is a rare tumour. It can occur in young adults. It can present for the first time in stage III (late stage).

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