

COLORECTAL CARCINOMA;

Frequency in adult patients presenting with large bowel obstruction.

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ABSTRACT...Introduction: Large bowel obstruction due to colorectal carcinoma occurs in up to 20% of the patients and usually accompanied by morbidity and mortality²⁻⁴. Almost 25 % deaths occur post-operatively following surgery for colorectal cancers occur in those who initially present with obstruction¹. Usually elderly patients with associated co-morbidities presents with bowel obstruction. **Objective:** Find out the frequency of colorectal cancers in patients presenting with large bowel obstruction. **Design:** Prospective cross sectional study. **Setting:** Shaikh Zayed Hospital Lahore. **Period:** from 31st December 2010 to 31st December 2012. **Materials & Methods:** A total 20 patients were presented with large bowel obstruction with the age ranges between 40 to 70 years. All the 20 patients underwent routine haematological and biochemical tests. In these patients an abdominal x-ray in a supine or standing position was taken and dilated loops of bowel, air-fluid interfaces, or both was observed then Contrast radiography(Barium/gastrograffin) was done to define the site and extent of the obstruction. An abdominal computed tomography scan was done to evaluate the extent of the disease. Colonoscopy was also carried out in the patients with colorectal cancers to find out the size and location of the tumor and biopsy taken by colonoscope. **Results:** 12 patients out of 20 presented with large bowel obstruction were diagnosed to have a colorectal cancers and the age ranges from 60 to 70 years. The 8 patients were diagnosed to have a sigmoid colonic tumour and 4 patients were suffering from a tumour of recto sigmoid junction. Whereas in rest of the 8 patients the large bowel obstruction was due to other benign causes like volvulus and intussusception and age range was 50 – 60 years. 6 patients were suffering from sigmoid volvulus and remaining 2 had colo-colic intussusception. **Conclusions:** It is concluded that the major cause of the large bowel obstruction is the left sided colorectal cancers the tumours of recto sigmoid junction.

Key words: Colorectal carcinoma, large bowel obstruction

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INTRODUCTION

Large bowel obstruction due to colorectal carcinoma occurs in up to 20% of the patients and usually accompanied by morbidity and mortality²⁻⁴. Malignant bowel obstruction is the mechanical or functional obstruction of the progress of food and fluids through the gastrointestinal tract. It may cause nausea, vomiting, and abdominal pain. The presentation usually depends on the site of the cancer. Right sided colon cancers mostly present with weight loss, anaemia, occult bleeding and mass in right iliac fossa. Left sided colon cancers often present with colicky pain, rectal bleeding, bowel obstruction, mass in left iliac fossa, and early change in bowel habit. Most studies shows that Continuous abdominal pain that is usually related to an intra-abdominal mass is present in about 90% of patients whereas superimposed intestinal segmental activity in the large bowel with

intermittent colicky pain occurs in about 75% of patients. With the large bowel obstruction, the pain is generally less severe, deeper, and occurs at longer interval¹¹⁻¹³.

Some of the studies shows that the most common cause of large bowel obstruction are colorectal cancers¹⁰ and it also show that 10%–28% of patients with colorectal cancer will develop large bowel obstruction in the course of their disease⁶.

During our study we observe that Intraluminal obstruction results from tumour growth within the bowel, is the annular adenocarcinoma in the sigmoid colon and Extramural obstruction most commonly occurs in the patients with advanced cancer, and reflects tumour growth within the abdominal cavity that causes external compression of the bowel.

Some of the studies show that the Bowel obstruction in patients with cancer may not always be due to malignancy but up to 50% of bowel obstructions in cancer patients were due to benign causes such as an adhesive band or hernia^{8,9}. So if the colorectal cancer is suspected in the patients with symptoms of bowel obstruction must undergo investigations to determine the cause of obstruction.

Intraluminal	Intramural	Extramural
Concreted bowel motion usually associated with stricture due to other disorder such as diverticular disease	Large bowel malignancy	Adhesions (very rare)
	Diverticular stricture	Incarcerated large hernia incorporating sigmoid or intraperitoneal caecum
	Volvulus (sigmoid volvulus)	Extrinsic compression by tumour
	Ischaemic stricture	
Crohn's disease		

Table-I. Causes of large bowel obstruction (35)

OBJECTIVE

The objective of this study is to see the frequency of colorectal cancers in patients presenting with large bowel obstruction.

MATERIALS & METHODS

It is a prospective cross sectional study carried out in Shaikh Zayed Hospital Lahore from 31st December 2010 to 31st December 2012. All the patients from 16 to 80 years of life presenting with large bowel obstruction due to any cause evident on abdominal X ray erect and supine were included in our study. A total 20 patients were included in our study who presented with large bowel obstruction with the age ranges between 40 to 70 years. All the 20 patients had undergone routine haematological and biochemical tests. An abdominal x-ray in a supine or standing position was taken and dilated loops of bowel, air-fluid interfaces, or both were observed then Contrast radiography (CT scan) was done to define the site and

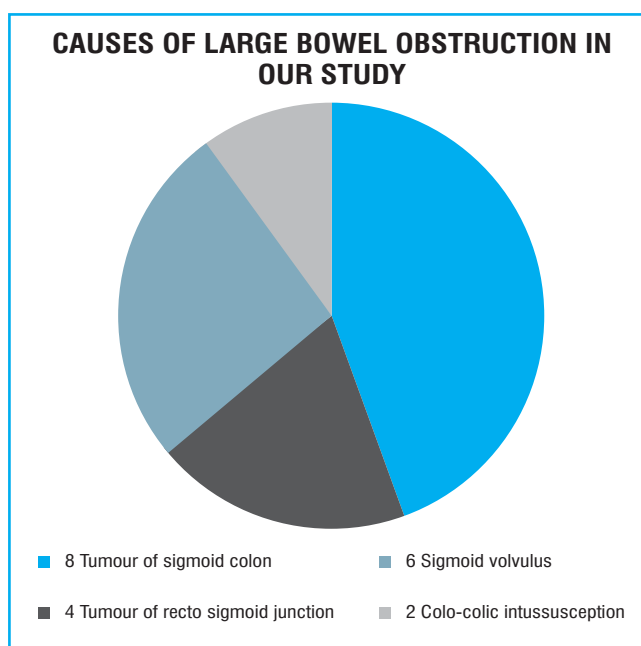
extent of the obstruction. Colonoscopy was also done in the patients with colorectal cancers to find out the size and location of the tumour along with biopsy.

RESULTS

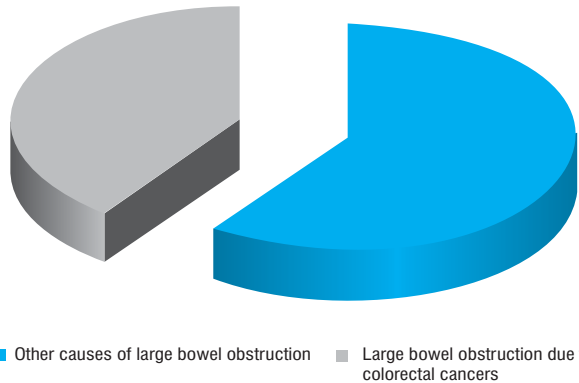
12 patients out of 20 presented with large bowel obstruction were diagnosed to have a colorectal cancers and the age ranges from 60 to 70 years. The 8 patients were diagnosed to have a sigmoid colonic tumour and 4 patients were suffering from a tumour of recto sigmoid junction. Whereas in rest of the 8 patients the large bowel obstruction was due to other benign causes like volvulus and intussusception and age range was 50–60 years. 6 patients were suffering from sigmoid volvulus and remaining 2 had colo-colic intussusception.

Number of patients	Cause of large bowel obstruction	Percentage
8	Tumour of sigmoid colon	40%
4	Tumour of recto sigmoid junction	20%
6	Sigmoid volvulus	30%
2	Colo-colic intussusception	10%

Table-II. Causes of large bowel obstruction in our study



FREQUENCY OF LARGE BOWEL OBSTRUCTION IN COLORECTAL CANCERS



DISCUSSION

Large bowel obstruction is a common complication in patients with colorectal cancers. According to some studies the prevalence of bowel obstruction is 4-25% in colorectal cancer. Bowel obstruction can be partial or complete, single or multiple, due to benign or malignant cause¹¹⁻¹⁵. Sometimes tumours may remain asymptomatic for long periods.

Cancers that arise in the recto sigmoid region usually present with tenesmus (crampy rectal pain from tonic rectal muscle contraction), narrowing of the stool, and hematochezia. Late manifestation of colon cancer is the pelvic pain and it usually occurs due to extension of the tumours into the pelvic nerve plexus³³⁻³⁵.

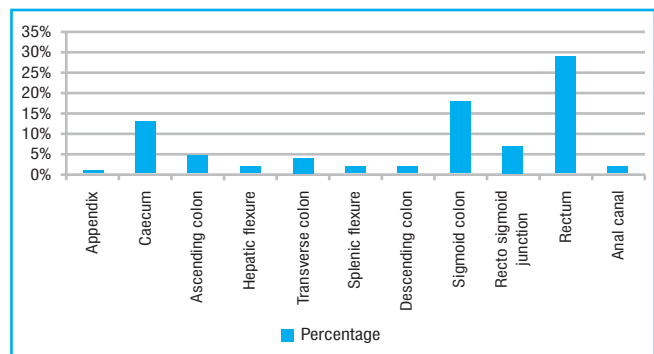
Types of Rt. Sided tumours of large bowel	Types of Lt. Sided tumours of large bowel
Tumours of hepatic flexure	Tumours of descending colon
Tumours of ascending colon	Tumours of rectum
Tumours of cecum	Tumours of splenic flexure of colon
Tumours of ileocolic junction	Tumours of recto sigmoid junction
Appendicular tumours (rare)	Tumours of anal canal

Table-III. Types of colorectal tumours³⁵

Risk factors that are responsible for the large bowel obstruction due to colorectal cancers are.⁵

Site of the tumour	Percentage
Appendix	1%
Caecum	13%
Ascending colon	5%
Hepatic flexure	2%
Transverse colon	4%
Splenic flexure	2%
Descending colon	2%
Sigmoid colon	18%
Recto sigmoid junction	7%
Rectum	29%
Anal canal	2%

Table-IV. Percentage distribution of tumours by site within the large bowel (33, 34)



%AGE DISTRIBUTION OF LARGE BOWEL TUMORS

1. Family history of colorectal carcinoma
2. Past history of colorectal carcinoma or adenoma.
3. Inflammatory bowel disease: ulcerative colitis, Crohn's colitis.
4. Polyposis syndromes: familial adenomatous polyposis (Gardner's syndrome), Turcot's syndrome, attenuated adenomatous polyposis coli, flat adenoma syndrome, hamartomatous polyposis syndromes (Peutz-Jeghers syndrome, juvenile polyposis syndrome, Cowden's syndrome).
5. Hereditary non-polyposis colorectal cancer (HNPCC).
6. Diet: rich in meat and fat; poor in fibre, folate and

calcium.

7. Sedentary lifestyle, obesity, smoking, high alcohol intake.
8. Diabetes mellitus.
9. Previous irradiation, occupational hazards, e.g. asbestos exposure.
10. History of small bowel cancer, endometrial cancer, breast cancer or ovarian cancer.

Sometime colorectal cancers present with surgical emergencies that is usually a obstruction or perforation and it is usually account for 3–21%¹⁶⁻²¹ whereas some of patients that present with large bowel obstruction due to colorectal cancers have a very short duration of symptoms and some have persistent symptoms before the emergency presentation^{21,22}. Early diagnosis of these emergency conditions may reduce the rate of mortality and morbidity in the patients²¹.

Some of the studies shows that Large-bowel obstruction is most commonly caused by colonic adenocarcinoma whereas Less frequently malignant tumours that cause the large bowel obstruction are bladder cancer, ovarian cancer, metastatic pelvic cancer, lymphoma, and sarcoma²³. Patients who diagnosed to have colon cancer will present with obstruction in 8%–29% of the cases²⁴. It has been observed through various studies that Obstruction largely occurs in the left colon and the greatest risk of obstruction is at the splenic flexure almost 50% of cancers in this location will cause obstruction²⁵⁻²⁹. Perforation of the colon that is the complication of the colonic obstruction occurs in almost 1%–11% of the cases²³⁻²⁶.

Patients presenting with large bowel obstruction due to colorectal cancers are at greater risk of treatment failure and have shorter long-term survival rates than those patients whose course is not complicated by obstruction^{25-27,30,31}. Most of the patients with large bowel obstruction from colonic adenocarcinoma,

22%–33% will present with Dukes' stage C disease and 14%–29% will present with Dukes' stage D disease^{28,31,32}.

CONCLUSION

Hence it has been concluded from our study that major cause of the large bowel obstruction is the left sided tumours of the large bowel most commonly sigmoid tumour mainly occurring in patients with age more than 60 years.

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To succeed in business it is necessary to make others see things as you see them.

Aristotle Onassis