



## INCIDENCE OF ABDOMINAL MALIGNANCIES PRESENTING IN EMERGENCY DEPARTMENT AS ACUTE ABDOMEN: TERTIARY CARE HOSPITAL BASED OBSERVATIONAL STUDY.

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### ABSTRACT

**Introduction:** Acute abdomen is, by far, one of the most common causes that brings a patient to the emergency department of any health care facility. An abdominal malignancy can be the cause of acute abdomen in a number of cases. This study was conducted to evaluate the incidence of abdominal malignancies presenting in the emergency department as acute abdomen in our tertiary care hospital. **Materials and Methods:** The study was conducted in the Post Graduate Department of Surgery, Government Medical College, Srinagar from April 2018 to May 2020. All the patients presenting as non-traumatic acute abdomen were evaluated in the emergency department; those who required surgery were taken for the study and the incidence of malignancy in these cases were statistically assessed. **Results:** Out of the 250 patients who were operated for non-traumatic acute abdomen, 48 patients i.e. 19.2% were found to have intra-abdominal malignancy. Carcinoma colon was the commonest malignancy and was found in 70.83%. Carcinoma rectum was the next most common malignancy followed by stomach. Intestinal obstruction was the commonest presentation and was present in 81.5%, followed by perforation in 14.6%. **Conclusions:** Even if early detection of abdominal malignancies are on a rise, still a significant portion of these cases present with the symptoms of acute abdomen in emergency department. As the morbidity associated with such a presentation is of importance, the early detection of such patients by screening is the solution.

**KEYWORDS :** Abdominal Malignancies, Incidence, Acute Abdomen.

### INTRODUCTION:

Acute abdominal pain (AAP), conventionally defined as pain of nontraumatic origin with a maximum duration of 5 days (1), is one of the most common complaints leading people to the Emergency Department (ED), accounting for up to 7–10% of all ED visits (2,3). Despite the relatively high frequency, abdominal pain may be a symptom of a serious underlying disease, and the challenging differential diagnosis may generate both medicolegal litigation and unfavorable outcomes (4,5).

Despite substantial improvement in the diagnostic approach to AAP, many diagnostic pitfalls still remain, which can be associated with a substantial number of misdiagnoses and/or avoidable surgery (6-8). The differential diagnosis of AAP in the adult population is rather broad, including appendicitis, peptic ulcer, urinary stones, inflammatory bowel disease, hepatobiliary diseases (e.g., biliary colic, cholecystitis, and pancreatitis), referred pain due to pneumonia as well as several other "mimics" of extra-abdominal origin (9-11). In young women, gynecologic disorders (e.g., ectopic pregnancy, endometriosis, and pelvic inflammatory disease) are additional conditions which should be considered in the differential diagnosis (12-14). Since the underlying cause for AAP can entails many different medical specialties such as gynecology, surgery, internal medicine, and urology, expert assessment is an essential requisite for the proper management and care of these patients.

Malignancies originating from intra-abdominal organs are often considered to be associated with abdominal pain and a good proportion of these patients are diagnosed and/or managed in Emergency department. Acute complications arising in abdominal malignancies represent a unique subset of patients presenting to the emergency department. Management of these complications depend primarily on the extent of the underlying malignancy and the other viscera. These oncological emergencies are potentially life

threatening and can result in rapid deterioration of the clinical course and are associated with significant morbidity and mortality. Malignant tumour, invade surrounding viscera and metastasize to distant sites and can result in obstruction of hollow viscera, vessels and ducts, haemorrhage, thrombosis, rupture or infiltration of solid organs, all of which can present as acute abdomen.

So far only few studies have been done, which focused on acute abdominal pain as a warning symptom preceding the detection of an intra-abdominal malignancy.

### MATERIALS AND METHODS:

The study was conducted in the Post Graduate Department of Surgery, Government Medical College, Srinagar from April 2018 to May 2020. All the patients presenting as non-traumatic acute abdomen were evaluated in the emergency department; those who required surgery were taken for the study and the incidence of malignancy in these cases was statistically assessed. This was an observational study.

### Inclusion criteria:

All the patients aged 16 years or above who visited the emergency department with acute abdominal emergencies, requiring emergency laparotomy during this period, were included in the study.

### Exclusion criteria:

All those who were already diagnosed cases of malignancy and those not willing to give consent were excluded from the study.

Details were collected regarding the onset, type, duration and other characteristics pertaining to the pain, abdominal distension, bleeding per rectum (PR), provisional diagnosis of treating surgeon, as well as follow up histopathology report (HPR) and the final diagnosis and was tabulated.

### RESULTS:

Out of the 250 patients who were operated for non-traumatic acute abdomen 48 patients i.e. 19.2% were found to have intra-abdominal malignancy. Out of the 48 patients with malignancy, 30 (62.5%) were males and 18 (37.5%) were females. The age group most commonly affected was above 50 years with an incidence of 62.5%. The age wise distribution of the malignancy is shown in **Table 1**. Patients who ended up having malignancy, were found to be suffering from low grade pain for longer durations than non-malignant cases. Most of them had previous episodes of abdominal pain. Abdominal distension, bleeding PR and constipation were found to be more associated with malignancy, probably because colonic malignancies were the predominant ones. Most of the carcinoma cases had loss of appetite and loss of weight. Intestinal obstruction was the commonest presentation and was present in 81.5%, followed by perforation in 14.58%. Carcinoma colon was the commonest malignancy and was found in 34 i.e. 70.83% of patients. Carcinoma rectum was the next most common malignancy followed by rectosigmoid and stomach (**Table 2**).

**Table 1: Age wise distribution.**

Age (in years)	Malignancy (%)
16- 20	0
20-30	1 (2.08)
31-40	7 (14.58)
41-50	10 (20.83)
>50	30 (62.5)
Total	48

**Table 2: Distribution as per site involved.**

Site	Number of cases (%)
Carcinoma Colon	34 (70.83)
Carcinoma Rectum	6 (12.5)
Carcinoma Rectosigmoid	2 (4.16)
Carcinoma Stomach	2 (4.16)
Carcinoma Appendix	1 (2.08)
Carcinoma Small bowel	1 (2.08)
Others (hepatobiliary/pancreatic/genitourinary)	2 (4.16)
Total	48

## DISCUSSION:

The incidence of malignancy among patients presenting to emergency department with acute abdominal emergency requiring laparotomy in our study was about 19.2%. The study conducted by Muriche et al, showed that about 20% of the malignancies had an emergency presentation (15). Of the 48 malignancy patients, only 8 patients were below the age of 40 years. Incidence of acute presentations of GI malignancy, especially colorectal carcinoma, were highest among the elderly age group. More than 62% of malignancy diagnosed patients were above the age of 50 years and is in accordance with the study conducted by Waldron et al (16). Obstruction was the most common presentation of malignancy in our study constituting about 81.5%. However, according to the article published in the journal surgical clinics of North America, primary colorectal cancer causes 53% of acute large bowel obstruction requiring surgery (17). Perforation was the 2nd most common presentation for malignancy in our study (14.6%). Among 48 malignancy detected, 2 were carcinoma stomach patients, all of whom presented with perforation. Out of 42 cases of colorectal carcinoma in this study (total 48), only 4 cases i.e. 9.53% presented with perforation and rest of the cases i.e. 90.47% presented with intestinal obstruction. Both the cases of carcinoma stomach presented with perforation peritonitis. This is in agreement with the study conducted by Vijayakumar et al (18). Their study showed 92% obstruction and 8% perforation in colon malignancy and 100% perforation in gastric malignancy. Small bowel tumours

contributed to 2.08% of malignancies, i.e. 1 case and all of them presented with acute intestinal obstruction. The other less common malignancies detected in this study were carcinoma of appendix (2.08%), gallbladder malignancy (2.08%) and a non gastro-intestinal malignancy (Carcinoma ovary) was found in 2.08% with typical acute abdominal features.

## CONCLUSION:

After analyzing this study we conclude that, a substantial proportion of malignancies, intra-abdominal in general and gastrointestinal in particular, are diagnosed through an emergency route, in a tertiary care center. Many patients without any tell-tale features of malignancy in the preoperative period are diagnosed with malignancy intra-operatively. Acute presentations of GI malignancies are especially more in elderly age group. Above all, rising incidence of malignancies needs to be kept in mind while managing acute abdomen in emergency set up, which will enable an attending surgeon to offer the best treatment regimen on oncological lines even for critically ill patients.

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