Original Article

A study of correlation between preoperative provisional diagnosis and intra operative findings in the patients with non traumatic acute abdominal pain

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Abstract

Introduction: Abdominal pain is one of the most common reasons for an emergency department (ED) visit, accounting to about 5% to 10% of all ED visits. **Aims and Objectives:** To Study Correlation between Preoperative Provisional Diagnosis and Intra Operative Findings in the Patients with Non Traumatic Acute Abdominal Pain. **Material and Methods:** After approval form the Institutional ethical committee a records based, cross-sectional study was carried out in the Department of General Surgery at tertiary health care center during one-year period June 2014-June 2015. All details about clinical history, Clinical diagnosis, Ultrasongraphic findings, CT-Scan findings and Intraoperative findings was extracted from the case records. There were 100 patients were included into the study. 62 pt managed operatively and 38 patients managed conservatively. **Result:** The majority of the Patients were from the age group of 30-40 i.e. 33%. The majority of the patients were Males i.e. 56% and Females were 44% As per Preoperative Provisional Diagnosis the most common diagnosis found was Acute appendicitis in 44% followed by; Urolithiasis in 14%, Gastritis in 13%, Hollow viscus perforation in 12%, Intestinal obstruction in 06%, Acute cholecystitis in 6%, Acute Pancreatitis in 5%. As per Intraoperative findings in patients with preoperative provisional diagnosis of acute Appendicitis intra op finding was inflamed appendicitis in 63.46% followed by Perforated appendicitis in 20.46%, Gangrenous appendicitis in 13.64%, Normal appendicitis in 2.27%. For preoperative diagnosis in 12 patients as Hollow viscus perforation incidence of Duodenal perforation 58.4% followed by Gastric perforation in 33.3%, Ileal perforation in 8.3% . For total 6 patients as preoperative provisional diagnosis as intestinal obstruction the intraop finding were Postoperative adhesive band 50.1%, Sigmoid volvulus 16.7%, Superior mesenteric artery thrombus 16.7%, Obstructed hernia 16.7.The compatibility of intraoperative findings was highest with USG Diagnosis i.e. 89.00% followed by CT-Scan was 81% and of the Clinical diagnosis was 59%. **Conclusion:** As per Preoperative Provisional Diagnosis the most common diagnosis found was Acute appendicitis in followed by Urolithiasis, Gastritis, Hollow viscus perforation, Intestinal obstruction, Acute cholecystitis, Acute Pancreatitis etc . The compatibility of intraoperative findings was highest with USG Diagnosis i.e. 89.00% followed by CT-Scan was 81% and of the Clinical diagnosis was 59%.

Key Words: Acute Abdominal Pain, Acute Appendicitis, Acute Peptic disease, Hollow viscus Perforation, Acute retention of Urine, Acute pancreatitis.

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INTRODUCTION

Abdominal pain is one of the most common reasons for an emergency department (ED) visit, accounting to about 5% to 10% of all ED visits.[1] It poses a diagnostic challenge for the emergency physicians as the causes are numerous, ranging from benign to life-threatening conditions. Causes include gastro-intestinal, urological, and gynecological among others.[2] Despite extensive evaluation, a quarter of patients usually remained with a non-specific cause but now with latest radiological imaging advances that number has decreased. [3]

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Acute abdomen refers to presence of severe abdominal pain developing suddenly or over a period of several hours [4]. The sudden onset of severe abdominal pain requiring emergency medical or surgical treatment and can be a symptom of various disease processes. Some of these processes can be life-threatening and several of these require rapid diagnosis and surgical intervention to avoid significant morbidity and mortality [5]. The diseases generally divided into four subdivisions: Lower abdominal pain: Acute Appendicitis, Mesenteric adenitis, Inflammatory bowel disease Gastroenteritis and Diverticulitis Upper abdominal pain: Cholecystitis, peptic Ulcer perforation, and Pancreatitis. Gynecological emergencies: Ectopic pregnancy, Corpus luteum rupture, Tubo ovarian abscess, Pelvic inflammatory disease, Endometriosis Pelvic, adhesions and Ovarian cyst ICU patient pathology: A calculus cholecystitis, pancreatitis and Mesenteric ischemia[5] Abdominal US has been largely used in clinical practice and in protocol of investigation of acute abdomen pain .It has revolutionized the diagnosis of many intra-abdominal conditions[6]. Inappropriate use of ultrasound in the assessment of acute abdominal pain can lead to an increase in the workload of the personnel involved, prolonged inpatient stay, possible delay in treatment, and increased hospital costs[7] CT scan has been shown to increase the referring physician's level of certainty in the diagnosis, reduce hospital admission rates, and help guide the therapeutic strategy, including surgical intervention[8,9]. The accurate clinical assessment of acute abdominal pain remains one of the more challenging areas of medicine. The variety of conditions that require emergent medical management, and often surgical management, vary widely in clinical presentation and physical examination[7] Diagnosis of many acute abdominal conditions relies on a good history and physical examination and the appropriate use of radiological investigations. [10]

MATERIAL AND METHODS

After approval form the Institutional ethical committee a records based, cross-sectional study was carried out in the Department of General Surgery at tertiary health care center during one-year period June 2014-June 2015. All details about clinical history, Clinical diagnosis, Ultrasongraphic findings, CT-Scan findings and Intraoperative findings was extracted from the case records available in the Medical Records Department of the tertiary health care center. There were 100 patients included into the study. Here the compatibility [13] of the diagnosis i.e. Matching with intraoperative findings was expressed in percentage was used to see the correlation between intraoperative findings and provisional diagnosis. Findings presented in percentages in Tabular form.

RESULT

Table 1: Age wise distribution of the patients

Age group (Yrs.)	No.	Percentage
<10	8	8
10-20	6	6
20-30	24	24
30-40	33	33
40-50	15	15
50-60	11	11
>60	3	3
Total	**100**	**100.00**

The majority of the Patients were from the age group of 30-40 i.e. 33% followed by 20-30 were 24% ; 40-50- 15% ; 50-60 were 11% and <10 were 8% and in 10-20 were 6% and >60 were 3%.

Table 2: Sex wise distribution of the patients

Sex	No.	Percentage
Male	56	56
Female	44	44
Total	**100**	**100.00**

The majority of the patients were Males i.e. 56% and Females were 44%

Table 3: Distribution of the patients as per Preoperative Provisional Diagnosis

Provisional Diagnosis	Number of patients	Percentage (%)
Acute appendicitis	44	44
Urolithiasis	14	14
Gastritis	13	13
Hollow viscus perforation	12	12
Intestinal obstruction	06	06
Acute cholecystitis	06	06
Acute Pancreatitis	05	05
Total	**100**	**100**

As per Preoperative Provisional Diagnosis the most common diagnosis found was Acute appendicitis in 44% followed by; Urolithiasis in 14%, Gastritis in 13%, Hollow viscus perforation in 12%, Intestinal obstruction in 06%, Acute cholecystitis in 6%, Acute Pancreatitis in 5%.

Table 4: Intraoperative findings in patients operated with preoperative provisional diagnosis as Acute appendicitis

Intraoperative finding	Number of patients	Percentage
Acute inflammed appendicitis	28	63.63
Perforated appendicitis	09	20.46
Gangrenous appendicitis	06	13.64
Normal appendix	01	2.27
Total	**44**	**100**

Table 5: Intraoperative findings in patients operated with preoperative provisional diagnosis as Hollow viscus perforation

Intraoperative finding	Number of patients	Percentage
Duodenal perforation	07	58.4
Gastric perforation	04	33.3
Ileal perforation	01	8.3
Total	**12**	**100**

Table 6: Intraoperative findings in patients operated with preoperative provisional diagnosis as intestinal obstruction

Intraoperative finding	Number of patients	Percentage
Postoperative adhesive band	03	50.1
Sigmoid volvulus	01	16.7
Superior mesenteric artery thrombosis	01	16.7
Obstructed hernia	01	16.7
Total	**06**	**100**

Table 7: Distribution of the various Diagnosis with respect to compatibility with Intraoperative findings

Compatibility of Intraoperative findings with	No.	Percentage (%)
Clinical Diagnosis	59	59%
USG Diagnosis	89	89%
CT-Scan Diagnosis	81	81%

The compatibility of intraoperative findings was highest with USG Diagnosis i.e. 89.00% followed by CT-Scan was 81% and of the Clinical diagnosis was 59%.

DISCUSSION

Abdominal pain can be the manifestation of a spectrum of disease processes. Conditions causing acute abdominal pain may vary, from conditions needing immediate intervention, to relatively mild presentations needing careful observation to avoid over investigation and unnecessary interventions. Patients may have acute exacerbations of chronic problems (e.g., peptic ulcer disease, pancreatitis, and inflammatory bowel disease), acute surgical abdomens (e.g., appendicitis, intestinal perforation, and acute volvulus) or non-surgical abdominal emergencies (e.g. ureteric colic, biliary colic, and acute gastroenteritis).

In our study the majority of the Patients were from the age group of 30-40 i.e. 33%. The majority of the patients were Males i.e. 56% and Females were 44% As per Preoperative Provisional Diagnosis the most common diagnosis found was Acute appendicitis in 44% followed by; Urolithiasis in 14%, Gastritis in 13%, Hollow viscus perforation in 12%, Intestinal obstruction in 06%, Acute cholecystitis in 6%, Acute Pancreatitis in 5%. The compatibility of intraoperative findings was highest with USG Diagnosis i.e. 89.00% followed by CT-Scan was 81% and of the Clinical diagnosis was 59%. These findings are similar to Basim R. Gadban *et al* [11,] Lakshay Chanana [12] .

The compatibility of intraoperative findings was highest with USG Diagnosis i.e. 89.00% followed by CT-Scan was 81% and of the Clinical diagnosis was 59% the better compatibility of USG over CT-Scan may be due to fact that USG is live observation findings can be correlated in motion like respiration and peristaltic motion etc. this is not possible in case of CT scan. These findings are similar to Other previous study suggested that the yield of ultrasound diagnosis of abdominal pain is significantly higher in patients with localised abdominal pain and tenderness 13 but these results were controversial to Malone [15] suggested that CT is a very accurate in the diagnosis of common disorders such as acute appendicitis, renal colic, and diverticulitis, Abdul Khair etal [16] Andrew *et al* [14].

CONCLUSION

As per Preoperative Provisional Diagnosis the most common diagnosis found was Acute appendicitis in followed by Urolithiasis, Gastritis, Hollow viscus perforation, Intestinal obstruction, Acute cholecystitis, Acute Pancreatitis etc . The compatibility of intraoperative findings was highest with USG Diagnosis i.e. 89.00% followed by CT-Scan was 81% and of the Clinical diagnosis was 59%.

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