



Comparison of Clinical Findings With Ct Scan in Cases of Chronic Abdominal Pain

KEYWORDS

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ABSTRACT *Background* : Abdominal pain is a common presentation in the outpatient setting and poses a challenge to diagnose. These difficult patients are frequently seen by many physicians and have to undergo myriad amount of tests without identifying the etiology of pain. Surgical consultation often occurs late after other modalities have failed to provide resolution of the symptoms. The role of CT imaging in the diagnosis and management of chronic abdominal pain is well established, but its utility is limited in a minority of cases. The aim of this study was to evaluate the role clinical findings and C T findings in cases of chronic abdominal pain. **Methodology**: Patient age group between 18 – 65 years with symptoms of acute severe abdominal pain were referred for CT scan as part of their evaluation were included in the study. CT scans performed within a 24-h period of by the duty consultant radiologist with the support of the clinical information provided by the clinician on the request form) and the discharge diagnosis (as stated on the discharge summary) were compared. **Results** Ten patients (13.33%) have findings of chronic appendicitis in CT while six patients were diagnosed with GB pathologies and six patients were also diagnosed with abdominal tuberculosis and there were forty (52%) cases which were diagnosed normal. **Conclusion** : The utility of CT imaging in the diagnosis and management of patients presenting with chronic abdominal pain is confirmed, but is limited in a minority of cases where poor negative inter observer agreement exists. Good communication to the reporting radiologist of the relevant patient history and clinical question becomes important.

INTRODUCTION

Abdominal pain is a common presentation in the outpatient setting and poses a challenge to diagnose. These difficult patients are frequently seen by many physicians and have to undergo myriad amount of tests without identifying the etiology of pain. Surgical consultation often occurs late after other modalities have failed to provide resolution of the symptoms.

Chronic abdominal pain is a significant clinical problem that often leads to laparotomies. The generally accepted definition of the chronic abdominal pain is three or more bouts of pain severe enough to affect activities over a period of not less than three months.¹

Abdominal pain is a common complaint in the emergency department (ED), comprising approximately 5% of total visits. Although not typically serious, abdominal pain often presents many difficult situations for the clinician. Some of the most challenging patients to evaluate are women of reproductive age and elderly individuals. Although there are general diagnostic and clinical principles that apply to the evaluation of all patients, these two groups deserve extra attention because of the broad differential diagnosis and potential for serious complications.²

Misdiagnosis of abdominal pain frequently leads to malpractice litigation. For patients with serious abdominal pathology frequent misdiagnoses include gastroenteritis,

gastritis, urinary tract infection, pelvic inflammatory infection, and constipation. Life-threatening conditions that are sometimes missed in the ED in patients with abdominal pain include ruptured Abdominal Aorta Aneurysm, appendicitis, ectopic pregnancy, diverticulitis, perforated viscous, mesenteric ischemia, and bowel obstruction.³

The role of CT imaging in the diagnosis and management of chronic abdominal pain is well established, but its utility is limited in a minority of cases. The aim of this study was to evaluate the role clinical findings and C T findings in cases of chronic abdominal pain.

MATERIALS AND METHODS

This is a prospective type of study conducted in Dr. D.Y. Patil Medical College and Research Centre, Pimpri, Pune. Institute Ethics Committee clearance had been obtained before the start of study. Written and informed consent of patients was obtained before starting the treatment. Case report forms and data were maintained for each patient. Patient age group between 18 – 65 years was included in the study. Patients with history of abdominal pain for 3 months or more with recurrent abdominal pain and patients with previous history of abdominal surgeries were also included in the study. The patients who presented with acute complain and emergency findings were excluded from the study. Immunocompromised and patients on immunosuppressive therapy and steroids were also excluded from the study.

A detailed history of each patient was obtained starting with history of presenting symptoms and co-existing comorbid conditions like, DM, HTN and TB was ruled out. A thorough general physical examination was done to rule out presence of pallor, icterus and cachexia. All routine laboratory tests were done.

All patients with symptoms of chronic abdominal pain who were referred for CT scan as part of their evaluation were included in the study. CT scans performed within a 24-h period of by the duty consultant radiologist with the support of the clinical information provided by the clinician on the request form and the discharge diagnosis (as stated on the discharge summary) were compared. Discharge diagnosis was based on clinical examination, laboratory data and results of all imaging studies, including CT, patient management and outcome. All cases were done in selective surgeries. All procedures were done under General anesthesia.

Patients were followed up after one month and three months and detail history and thorough clinical examination were done for assessment of any abdominal pain and radiological investigation were done as needed. The statistical analysis was done using parametric and nonparametric test. The findings were ornated by presenting the pattern graphically.

OBSERVATION AND RESULTS

In our study group maximum age group of patients were in the age group of 20-40 years (61.33%). There were 38 (50.67%) males and 37 (49.33%) females in our study which was not generally found in other studies. Generally there were more female patients in other studies but this difference is insignificant in this study group.

Table 1: Findings of CT in study group.

CT finding	No of cases	Percentage
Chronic appendicitis	10	13.3
GB pathologies.	6	8
Abdominal TB (Thickened bowel with ascitis)	6	8
Mesenteric Lymphadenitis	2	2.67
Tubo ovarian Pathology	PCOD	5
	Salphingitis	3
Abdominal Mass	Ileocaecal Tuberculosis	1
	CA Caecum	2
Normal	40	52
Total	75	100

Ten patients (13.33%) have findings of chronic appendicitis in CT while six patients were diagnosed with GB pathologies and six patients were also diagnosed with abdominal tuberculosis and there were forty (52%) cases which were diagnosed normal. There were eight cases of tubo ovarian pathology, out of which five were of PCOD and three were salphingitis. The CT findings also gave two cases of CA caecum and one mass of ileocaecal tuberculosis.

DISCUSSION

The usefulness of CT in the diagnosis and management of abdominal pain is well established, and confirmed by the results of this study, in which the CT diagnosis correlated with the final diagnosis in 87.5%. The interobserver agreement of 93% also compares favourably, although, statistically, agreement was only fair. The reason for this paradox is probably due to an imbalance in the positive and negative agreements, with a result of 96% and 31%, respectively. These results can be interpreted as showing generally good agreement among the radiologists for the majority of scans. However, vast disagreement is seen in a minority of cases where the usefulness of CT becomes limited. In these few cases, the importance of good communication to the reporting radiologist of the relevant patient history and clinical question becomes important. The availability of laboratory data and patient notes, as well as an ability to contact clinicians and to confer with radiology colleagues, are also essential.^{4,5,6}

Chronic abdominal pain is among the most challenging and demanding conditions to treat across the whole age spectrum. Potentially it can be unrewarding for both the patients and the medical team. Abdominal pain is third most common pain complaint of individuals enrolled in a large health organisation.⁷ Diagnostic laparoscopy makes it possible for the surgeon to visualize surface anatomy of intra-abdominal organs with greater details better than any other imaging modalities.⁸

All patients included in this prospective study had chronic abdominal pain and they were subjected to laparoscopy evaluation after exclusion of all organic causes of the pain by radiographic and laboratory test. Our study confirmed that in this study group, laparoscopy could safely identify abnormal findings and can improve the outcome of majority of the cases.

In our study, there were two cases in which we had diagnosis of neoplastic mass on CT but biopsy were not accessible and there were also suspicion regarding their operability.

Many conditions may present with similar imaging features, necessitating the reporting radiologist to provide a broad differential that may be unhelpful to the clinician. Knowledge of the clinical, laboratory and imaging findings help narrow the differential diagnosis, but this relies upon clear communication between clinicians and radiologist. In this study, female patients who presented with right iliac fossa pain, despite the use of imaging, constituted a particular discrepancy between the discharge and final diagnoses. The reason for this is unclear, but may be due to interclinician variability in their interpretation of the CT reports, their correlation with clinical findings and their own clinical experience. However, a prospective study needs to be conducted to confirm these findings.^{9,10}

CT imaging in the diagnosis, management and outcome of patients presenting with acute abdominal pain is well established. In a minority of cases, the usefulness is limited by certain factors; specifically, the use of non-contrast imaging, the inability of CT to define various pathologies, the lack of imaging findings in uncommon conditions and the variability in the interpretation of non-specific imaging findings. Awareness of these limiting factors is vital to both clinicians and radiologists in the diagnosis and management of these patients.

Conclusion

The utility of CT imaging in the diagnosis and management of patients presenting with chronic abdominal pain is confirmed, but is limited in a minority of cases where poor negative inter observer agreement exists. Good communication to the reporting radiologist of the relevant patient history and clinical question becomes important.

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