

# Assessment of clinical outcomes among CT scan in the diagnosis of chronic abdominal pain

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## Abstract

**Background:** Chronic abdominal pain might be caused by a numerous of diagnoses, including acute appendicitis, diverticulitis, and cholecystitis. Imaging plays an significant role in the management of patients because clinical assessment results can be inaccurate. The function of CT imaging in the identification and treatment of chronic abdominal pain is well-known, but its usefulness is inadequate in minority of cases. The aim of this study was to assess the function clinical outcome and C T result in cases of acute abdominal pain. **Methodology:** We enrolled 102 consecutive patients presenting with the symptoms of acute severe abdominal pain was referred for CT scan as part of their assessment were integrated in the study. CT scans performed within a 24-h period of by the duty professional radiologist with the support of the clinical information provided by the clinician on the request form) and the discharge identification (as stated on the discharge summary) were compared. **Results:** In our study there were 58% males and 42% females in our study which. 14.7% have findings of chronic appendicitis in CT while 8.8% were diagnosed with GB pathologies and 8.8% were also diagnosed with abdominal tuberculosis and there were 46% cases which were diagnosed normal. There were 11.76% of tubo ovarian pathology, out of which 6.8% were of PCOD and 4.9% were salpingitis. The CT findings also gave 3.9% cases of CA caecum and 1.9% mass of ileocaecal tuberculosis Conclusion: CT is an exceptional assessment procedure for patients with chronic abdomen pain subjects. CT imaging in the identification, management and conclusion of subjects presenting with severe abdominal pain is well-known. In a alternative of cases, the efficacy is inadequate by convinced factors; particularly, the utilizing of non-contrast imaging, the incapability of CT to define different pathologies, the lack of imaging findings in uncommon conditions and the variability in the interpretation of non-specific imaging findings. Knowledge with CT imaging appearances of developing biliary pathologic circumstances is significant for on time diagnosis and suitable clinical recommendation and treatment. Excellent communication to the treatment radiologist of the related subjects history and clinical problem becomes significant.

**Key Word:** Radiology, CT scan, abdominal pain, Imaging.

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## INTRODUCTION

Abdominal pain may still present as an investigative problem for clinicians recurrent appearance in the

outpatient setting and poses confront to detect. These complicated patients are commonly seen by several physicians and have to suffer many tests with no identifying the cause of pain.<sup>1</sup> For this reason, there has reasonably to be a rising confidence on CT imaging to show supervision in the position of intravenous contrast-enhanced CT is well recognized, with support representative better speed and exactness of identification, with consequential decrease in hospital admittance rates and duration of staying in the hospital, as well as decreases the morbidity and death<sup>2-3</sup> Surgical session often occurs late subsequent to other modalities have unsuccessful to make available decision of the symptoms. Wrong analysis of abdominal pain commonly leads to misconduct proceedings. For patients with severe abdominal pathology

recurrent misdiagnoses include gastroenteritis, gastritis, urinary tract infection, pelvic inflammatory infection, and constipation. Life-threatening circumstances that are occasionally missed in the ED in patients with abdominal pain comprise ruptured Abdominal Aorta Aneurysm, appendicitis, ectopic pregnancy, diverticulitis, perforated viscous, mesenteric ischemia, and bowel obstruction.<sup>4</sup> The responsibility of CT imaging in the finding and management of chronic abdominal pain is well conventional, but its usefulness is inadequate in a marginal of cases. The aim of this study was to assess the function clinical outcome and C T findings in diagnosis of chronic abdominal pain.

### MATERIALS AND METHODS

This is a prospective type of study conducted in Great Eastern Medical School and Hospital, Ragolu, Srikakulam in the period of Dec 2017 to Sep 2018. Case report forms and data were maintained for each patient. Patient age group among 18 – 65 years was integrated in the study. Patients with history of abdominal pain for 3 months or more with periodic abdominal pain and patients with earlier history of abdominal surgeries were also incorporated in the study. The patients who presented with acute complain and emergency findings, Immuno-compromised and patients on immune-suppressive therapy and steroids were excluded from the study. An in depth history of every patient was obtained starting with history of presenting symptoms and co-existing co-morbid circumstances like, diabetes mellitus, Hypertension and tuberculosis was eliminated from the study. A systematic common physical examination was done to rule out occurrence of pallor, icterus and cachexia. All routine laboratory tests were done. All subjects with symptoms of chronic abdominal pain who were referred for CT scan as part of their assessment were included in the study. CT scans performed within a 24-h period of by the duty consultant radiologist with maintain 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 supervision and outcome. All subjects were done in careful surgeries. All measures were done under general anesthesia. Patients were followed up after one month and three months and detail history and thorough clinical assessment were done for evaluation of any abdominal pain and radiological examination were done as needed. The statical analysis was done using parametric and nonparametric test. The results were elaborated by presenting the pattern graphically.

### OBSERVATION AND RESULTS

In our study group maximum age group of patients were in the age group of 19-44 years (63.15%). There were 59 (58%) males and 43 (42%) females in our study which. There is no much difference between the male and female study group. Fifteen patients (14.7%) have findings of chronic appendicitis in CT while nine patients (8.8%) were diagnosed with GB pathologies and nine patients (8.8%) were also diagnosed with abdominal tuberculosis and there were forty-seven (46%) cases which were diagnosed normal. There were twelve cases (11.76%) of tubo ovarian pathology, out of which seven (6.8%) were of PCOD and five (4.9%) were salphingitis. The CT findings also gave four (3.9%) cases of CA caecum and two (1.9%) mass of ileocaecal tuberculosis which were shown in table 1 and Figure 1

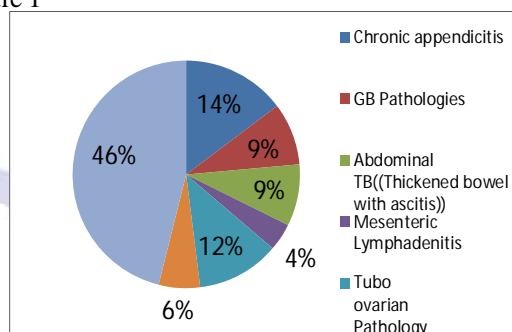


Figure 1: Showing the graphical representation of CT findings in the study population

Table 1: Findings of CT in study group.

CT finding	No of cases	Percentage
Chronic appendicitis	15	14.7
GB pathologies	09	8.8
Abdominal TB (Thickened bowel with ascitis)	09	8.8
Mesenteric Lymphadenitis	04	3.9
Tubo ovarian Pathology	12	11.76
PCOD	07	6.86
Salphingitis	05	4.9
Abdominal Tuberculosis	02	1.9
Mass Ileocaecal CA Caecum	04	3.9
Normal	47	46
<b>Total</b>	<b>102</b>	<b>100</b>

### DISCUSSION

The efficacy of CT in the diagnosis and management of abdominal pain is well recognized, and definite by the outcomes of this study, in which the CT finding associated with the final finding in 86.9%. The interobserver conformity of 94% also compare favorably, even though, statistically, conformity was only less significant<sup>4</sup>. The cause for this inconsistency is maybe due to an difference

in the optimistic and negative agreements, with a consequence of 97% and 30%, correspondingly. This outcome can be interpreted as screening usually superior conformity between the radiologists for the common of scans<sup>5</sup>. Though, enormous divergence is seen in a alternative of cases where the efficacy of CT becomes inadequate. In these few cases, the significance of fine communication to the reporting radiologist of the related patient narration and medical difficulty become significant. The accessibility of laboratory information and patient comments, as well as a capability to communicate with the clinicians and to present with other radiology people, are also necessary.<sup>4-6</sup> Chronic abdominal pain is surrounded by the majority difficult and severe condition to indulgence across the complete age scale. Potentially it can be unsatisfactory for both the patients and the therapeutic side. Abdominal pain is third most regular pain complaint of persons enrolled in a large healthiness organisation.<sup>7</sup> Indicative laparoscopy makes it feasible for the doctor to imagine surface anatomy of intra-abdominal organs with superior details improved than any further imaging modalities.<sup>8</sup> All subjects integrated in this potential study had chronic abdominal pain and they were subjected to laparoscopy assessment after leaving out of all organic causes of the pain by radiographic and laboratory test. This study established that in the study group, laparoscopy might securely recognize abnormal result and can pick up the result of majority of the cases. In this study, there were four cases in which we had identification of neoplastic mass on CT other than biopsy were not accessible and there were also doubt concerning their operability. Several situations may present with related imaging features, necessitating the reporting radiologist to present a extensive discrepancy that may be unsupportive to the clinician. Awareness of the medical laboratory and imaging findings assist fine the degree of difference in identification, but this depend obvious communication among clinicians and radiologist.<sup>9</sup> In this study, female patients who presented with right iliac fossa pain, despite the use of imaging, constituted a particular difference connecting the discharge and ultimate diagnoses on basis for this is unclear, but may be due to interclinician variability in their understanding of the CT reports, their association with clinical result and their own clinical practice. However, This study was carried out as a prospective study in a only one center with a partial number of patients. Consequently, a prospective, randomized, multicenter study is necessary to verify these findings<sup>10, 11</sup>. CT imaging in the identification, management and conclusion of subjects presenting with acute abdominal pain is well-known. In a alternative of cases, the utility is partial by confident factors; particularly, the use of non-contrast imaging, the

incapability of CT to identify a variety of pathologies, the need of imaging findings in rare situation and the unpredictability in the explanation of non-specific imaging findings. Knowledge with CT imaging appearances of developing biliary pathologic circumstances is significant for on time diagnosis and suitable clinical recommendation and treatment.

## CONCLUSION

CT is an exceptional assessment procedure for patients with chronic abdomen pain subjects. CT imaging in the identification, management and conclusion of subjects presenting with severe abdominal pain is well well-known. In a alternative of cases, the efficacy is inadequate by convinced factors; particularly, the utilizing of non-contrast imaging, the incapability of CT to define different pathologies, the lack of imaging findings in uncommon conditions and the variability in the interpretation of non-specific imaging findings. Knowledge with CT imaging appearances of developing biliary pathologic circumstances is significant for on time diagnosis and suitable clinical recommendation and treatment. Excellent communication to the treatment radiologist of the related subjects history and clinical problem becomes significant.

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