

Original article:

Study of utility of ultrasonography in abdominal pain cases in tertiary care hospital

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Abstract:

Introduction: Ultrasonography is a cheap, non-invasive, reliable, simple to perform, has no contraindications and can be repeated as and when required. It is a high-resolution imaging technique. Its versatility and real-time imaging capability are also major advantages and useful tool in abdominal pain cases.

Methods: Present study was carried out in Department of Radiology. Patients admitted and referred with complaints of abdominal pain were randomly included in this study. Total of 50 cases included in present study.

Result: Ultrasonography was diagnostic in 82% of patients in our study. For 14% cases required additional tests for confirmation of diagnosis.

Conclusion: From present we conclude that ultrasonography is a sole best method for emergency as well as routine diagnosis useful.

Keywords: Abdominal Pain, Acute Abdomen, Ultrasonography

Introduction:

Ultrasonography is a cheap, non-invasive, reliable, simple to perform, has no contraindications and can be repeated as and when required. It is a high-resolution imaging technique. Its versatility and real-time imaging capability are also major advantages and useful tool in abdominal pain cases. ¹

Abdominal pain is commonest cause of necessitating emergency abdominal surgery. Although diagnosis is still largely considered to be a clinical one, ultrasound is established as easily available, less time consuming and very accurate at timely diagnosis of acute appendicitis largely reducing complications as well as negative laparotomies. Due to development of high frequency transducers and better resolution, ultrasound is highly specific and sensitive in diagnosis of abdominal pain. This study was done to establish the diagnostic role of ultrasound in abdominal pain in our tertiary care hospital. ²

Material and Methods:

Present study was carried out in Department of Radiology. Patients admitted and referred with complaints of abdominal pain were randomly included in this study. Total of 50 cases included in present study.

The sample size was estimated with the help of expert. We included randomly patients who were referred to our department from Medicine and Surgery Departments. In our study we included patients in range from 12 years to 70 years, with 35 male and 15 female patients. We excluded complicated cases,

This study was carried out for six months duration.

All the 50 admitted cases were examined in the ward and provisional clinical diagnosis was made by the information obtained from clinical history and physical examination. Simultaneously, laboratory and radiological investigations were carried out. Data collected from routine investigations was used to reach a reasonable provisional diagnosis. Following this, all the patients were examined by radiologists

Result:

In our study we included patients in range from 12 years to 70 years , with 35 male and 15 female patients.

Table 1) Age wise distribution of cases

S.NO.	Age range (in years)	Number of cases	Percentage
1	< 20 years	4	8
2	21-40 years	8	16
3	40-60 years	32	64
4	>60 years	6	12

Table 2) Diagnostic Accuracy of Ultrasonography in Abdominal Conditions

USG	No. of patients	Percentage
Diagnostic	41	82%
Mis-diagnostic	2	4%
Other investigations required	7	14%

Ultrasonography was diagnostic in 82% of patients in our study. For 14% cases required additional tests for confirmation of diagnosis.

Discussion:

Abdominal pain is very common clinical condition in emergency and non-emergency cases accounting for 5 to 10% of all referrals to the emergency department. Studies have indicated that these widely differentiated diagnoses are common to these complaints. Considering the high prevalence of this complaint in the patients and the wide range of its differential diagnosis.³

In contrast, ultrasonography with broad availability, relatively low cost and absence of radiation, has a unique advantage over CT-Scan as an emergency diagnostic tool ⁴Moreover, it is employed as an excellent screening and diagnostic method, which has been accessible and inexpensive as well as welcomed by emergency staff over the past decade . ⁵Obviously, the overall diagnostic power of the US is lower than that of CT scan. In one article, the sensitivity of 89% for CT scan and 70% for the US was reported in terms of identifying the causes of acute abdominal pain. Nevertheless, considering all different aspects, CT scan can be more useful with the highest diagnostic sensitivity in cases where the US is negative or inconclusive. Based on the findings, CT-Scan is a diagnostic aid for

patients with stable hemodynamics or stabilized patients suspected of intra-abdominal injury; however, it is not a good choice for patients with unstable hemodynamics .⁶

In general, the most common indications of abdominal ultrasound in acute ill patients are blunt trauma, acute abdominal pain and undifferentiated hypotension .⁷

In our study, ultrasonography was diagnostic in 82% of patients in our study. For 14% cases required additional tests for confirmation of diagnosis.

Acute abdominal pain is one of the most common complaints of patients referring to the emergency department. Considering the wide range of causes causing multiple differential diagnoses, as well as the limited time of the health team in the emergency department for diagnostic and therapeutic measures, particularly in time-sensitive clinical conditions, ultrasound can be given by EMP as a diagnostic aid, which is considered to improve the overall diagnosis and treatment of patients, thereby reducing complications and complications.⁸

Conclusion:

From present we conclude that ultrasonography is a sole best method for emergency as well as routine diagnosis useful.

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