



ROLE OF CT IN EVALUATION OF LIVER ABSCESS

Radiology

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ABSTRACT

This study was conducted on 40 patients with some clinical indications CT Scanning on PHILIPS 128 slice machine[1]. In this given study, a total of 40 patients were included in which 11 (27.5%) having liver abscesses and 29 (72.5%) patients were having other abdominal diseases like cysts, pancreatitis and others, in which male patients were 25 (62.5%) and 15 were female patients i.e. (37.5%) of total number of patients.

KEYWORDS

Liver abscesses, Pyogenic liver abscess, Amoebic liver abscess, Fungal abscess, Cysts

INTRODUCTION

The liver is a large, solid, gland situated in the right upper quadrant of the abdominal cavity. Its weight's about 1600 g in males and about 1300 g in females. "Role of CT in evaluation of Liver Abscess" deals with the actual imaging findings of liver abscess. In this liver abscess study the case preferred undoubtedly from alcoholism, mainly consuming locally prepared alcohol plays a major role as a predisposing factor for the formation of liver abscesses that result from bacterial, fungal, or parasitic infection. CT is the best modality for evaluation of liver abscesses, allowing detection of liver abnormalities as well as other abdominal diseases.^[2]

The aims of the study are-

- To evaluate the site and causes of liver abscesses.
- To assess the age and gender relation of liver abscesses.

MATERIALS AND METHODS

This is a prospective observation study. In which the source of data is collected are the patients referred to the Department of Radiodiagnosis and Imaging, for the NCCT / CECT Abdomen study from OPD/IPD/ER of Subharti Medical College, Chhatrapati Shivaji Subharti Hospital, Swami Vivekanand Subharti University, Meerut, U.P. The machine is used for this study is PHILIPS Ingenuity core 128 slice MDCT machine. All age group patients are collected during data collection period.

REVIEW OF LITERATURE

R A Halvorsen Jr, W L Foster Jr, R H Wilkinson Jr, P M Silverman, W M Thompson did the study in 1988 on the imaging studies of 63 patients with hepatic abscess were evaluated to determine the sensitivity of specific imaging tests and define causes of false-negative test results. Computed tomography (CT) detected 57 of 59 (97%) separate episodes of hepatic abscess. [3]

Arthur J. Donovan M.D., Albert E. Yellin M.D. & Philip W. Ralls M.D. did study in 1991 on Hepatic abscess—amoebic or pyogenic—can be diagnosed with great accuracy by either ultrasonography or computed tomographic (CT) scanning. Cultures of pus from the abscess and from the blood must be obtained in cases of pyogenic liver abscess. A positive culture of pus from the abscess has been achieved in 90% of cases.^[4]

EPIDEMIOLOGY

Amoebic liver abscess is an important cause of space-occupying lesions of the liver; mainly in developing countries accounted for 3-9% of all cases of amoebiasis. This infection is caused by the protozoa *E. histolytica*, which ascends the portal venous system. Liver abscesses are the most common type of visceral abscess; in one study of intraabdominal abscesses, pyogenic liver abscesses accounted for 48% of visceral abscesses and 13% of intraabdominal abscesses. The

annual incidence of pyogenic liver abscess has been estimated at 2.3 cases per 100,000 populations and is higher among men than women (3.3 vs. 1.3 per 100,000).^[5]

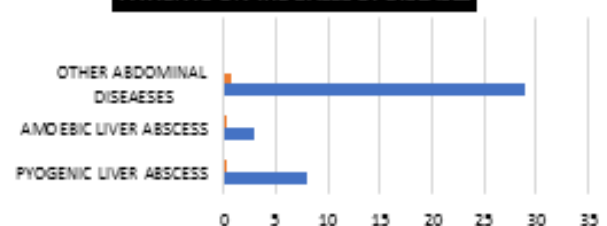
It is common in India with 2nd highest incidence due to poor sanitation, overcrowding and inadequate nutrition. Worldwide, approximately 40-50 million people are infected annually with amoebic abscesses. Prevalence of infection is higher than 5%-10% in endemic areas. Various studies from rural areas of Central and South America, India, and the tropical areas of Asia and Africa have reported prevalence rate as high as 55%. Pyogenic liver abscess has an estimated global incidence of 1.1-2.3 per 100,000 person-years and in United States, the incidence is approximately 3.6 per 100,000 and has been rising.^[6]

OBSERVATION AND RESULT

This study was undertaken with the aim to evaluate the site, causes and types of abscesses in liver and its impact in causing abdominal issues of the patients of Chhatrapati Shivaji Subharti Hospital who were referred for WHOLE ABDOMINAL CT scan (NCCT/CECT). A total of 40 cases were evaluated in this study and study was conducted from 25 December 2021 to 30 May 2022 in the Department of Radiodiagnosis and Imaging. During of course is 2 years. The findings are described below with the appropriate charts below:

S.N.	Sex	Number of patients	Percentage (%)
1	Male	25	62 %
2	Female	15	38 %
Total	40	100%	

PATIENTS ON THE BASES OF DISEASES



	PYOGENIC LIVER ABSCESS	AMOEBIC LIVER ABSCESS	OTHER ABDOMINAL DISEASES
PERCENTAGE (%)	20%	7.50%	72.50%
NUMBER OF CASES	8	3	29

PERCENTAGE (%) NUMBER OF CASES

Distribution of patients on the bases of diseases

DISCUSSION

In this given study, a total of 40 patients were included in which 11 (27.5%) having liver abscesses and 29 (72.5%) patients were having other abdominal diseases like cysts and others, in which were 25 male patients (62%) and 15 were female patients i.e. (37.5%) of total number of patients. The causes of most patients is abscess in liver abdominal infection, such as appendicitis, diverticulitis, or perforated bowel and infection in blood, trauma that damages the liver. Pyogenic liver abscess is (PLA) is most common.

CONCLUSION

In this given study, a total of 40 patients were included in which 11 (27.5%) having liver abscesses and 29 (72.5%) patients were having other abdominal diseases like cysts and others, in which were 25 male patients (62%) and 15 were female patients i.e. (37.5%) of total number of patients. The causes of most patients are abscess in liver abdominal infection, such as appendicitis, diverticulitis, or perforated bowel and infection in blood, trauma that damages the liver. Pyogenic liver abscess is (PLA) is most common.

This study comprises of total no. of 40 patients. Out of 40 patients were included in which 11 (27.5%) having liver abscesses and 29 (72.5%) patients were having other abdominal diseases like cysts and others, in which were 25 male patients (62%) and 15 were female patients i.e. (37.5%) of total number of patients and statistics results shows at the study is significant and role of NCCT / CECT Scan is very helpful in evaluating abscesses in liver.

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