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Original Research Article

A Study of Liver Abscess, its Management and Associated Risk Factors

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Abstract: Liver abscess are infectious space occupying lesion in the liver, the two most common abscesses being amoebic and pyogenic liver abscess. This study was undertaken at Patna medical college and hospital during july 2016 to june 2017. This study was undertaken with particular care denoted to ascertaining management of liver abscess in department of surgery Patna medical college, clinical features and various investigations of liver abscess and associated risk factors. For the purpose of this study 52 patients of liver abscess were admitted from outpatient and surgical emergency. All 52 patients were taken for thorough clinical examination, routine investigations and investigations to confirm diagnosis and treatment. Conservative management with antibiotic alone done for abscess less than <100cc, USG guided percutaneous aspiration for abscess >100cc, Explorative laprotomy for intraabdominal ruptured liver abscess and tubethoracostomy for liver abscess ruptured in pleural space. During this study we concluded that, Liver abscess most commonly occurs between 31-40 years of life with male predominance and most common among those who consume local made alcohol. Most common presentation was abdominal tenderness followed by, fever. Right lobe was most commonly involved and alkalinephosphatase most commonly eleveted biochemically.
Keywords: Liver abscess, Explorative laprotomy, alkaline phosphatase.

INTRODUCTION

Liver abscess are infectious space occupying lesion in the liver, the two most common abscesses being amoebic and pyogenic liver abscess. Amoebic liver abscess is more common than pyogenic liver abscess on global scale. It is more common in under developed countries, more so among the population with low socioeconomic status [1].

Pyogenic liver abscess is now mostly seen in patients in their 50s to 60s and is more often related to biliary tract disease or is cryptogenic in nature. Most pyogenic liver abscess involves the right hemiliver, accounting for about 75% of cases. Aproximately 50% of these are solitary. Many pyogenic liver abscess are polymicrobial in nature and account for approximately 40% of cases, some have suggested that solitary abscess are more likely to be polymicrobial. The most common organisms cultured are *Escherichia coli* and *Klebsiella pneumoniae* [2].

Amoebic liver abscess is largely a disease of tropical and developing countries but is also a significant problem in developed countries because of immigration and travel between countries. Ingestion of *Entamoeba histolytica* cyst through a feco-oral route is the cause of amebiasis. 80% of amoebic liver abscesses are solitary in nature and more commonly involve right hemiliver. Serological tests for *E. histolytica* antibodies are always positive in this type [3].

This study was undertaken with particular care denoted to ascertaining clinical features, associated risk factors, imaging studies and various management modalities of liver abscess in PMCH, PATNA.

AIMS AND OBJECTIVES

- To study the management of liver abscess in department of surgery PMCH, patna
- To study the clinical features and various investigations for patients with liver abscess.
- To find out risk factor associated with liver abscess

MATERIAL AND METHODS

For the purpose of study 52 patients of liver abscess were admitted from outpatient department and surgical emergency of Patna medical college and hospital, Patna during July 2016 to June 2017. A detailed history of patient socioeconomic status, hygiene, history of taking country made liquor along with other relevant history taken. All 52 patients were taken for thorough clinical examination, routine investigations and investigation to confirm diagnosis and treatment.

INCLUSION CRITERIA

- All cases of liver abscess diagnosed clinically/ ultrasonographically.
- All cases in evolving liquefied and ruptured stage with or without peritonitis.
- All cases of diagnosed liver abscess being referred to PMCH, PATNA.

Patients with history of chronic alcoholism and symptoms of right upper quadrant abdominal pain, fever with chills, vomiting, chest pain, dyspnoea and clinically detected abdominal tenderness, hepatomegaly, pulmonary changes, jaundice were selected for screening of liver abscess [4]. These patients were subjected for routine blood investigation along with liver function test (LFT). Ultrasonography of abdomen was done in all cases. Chest xray done for fitness of anesthesia and to rule out rupture liver abscess in pleural space. If pus was drained sent for grams staining and culture and sensitivity, CT scan was not routinely done in all cases.

TREATMENT MODALITIES

- Conservative management with antibiotic alone for abscess less than 100cc [5].
- USG guided percutaneous drainage aspiration for abscess 100cc and more in volume [6].
- Explorative laprotomy for intra abdominal ruptured liver abscess
- Tubethoracostomy for liver abscess ruptured in pleural space.

DISCUSSION AND RESULT

Out of total 52 patients studied 45 are males and 7 are females. The highest incidence of liver abscess is found between 31-40 years of life.Youngest one is 11 years old and oldest is 75 years old male. Out of 52 patients, 38 are alcoholics. 34 patients had history of consuming local made alcohol, 4 patient takes branded alcohol, 30 patients takes greater than 180 ml/day alcohol, 35 patients had history of consuming alcohol for more than one year and occasional alcohol consumer were 8 patients. The commonest symptom in these patients is pain in abdomen 43/52 patients. Followed by fever 41/52 patients (78.2%), Anorexia 34%, weight loss 19.2%, diarrhea, jaundice, abdominal distention occurring in 7/52 patients respectively, cough present in5/52 (9.6%) patients, while 3 patients (5.7%) were present with dyspnoea. The commonest sign at presentation is abdominal tenderness 46/52 (88.4%) followed by hepatomegaly 38/52 (73%) tachycardia 36/52(69.2%) followed by pallor, respiratory distress, icterus and peritonitis.

Leucocytosis of more than 12000cells/cumm was present in 42 patients (42/52). The highest count noted in this study was 23,500cells/cumm in which polymorphs were predominant. HB less than 10gm% was found in cases (18/52) and lowest HB noted in this series was 7.1gm%. Clinically jaundice was detected in 10 cases (19.23%) and all of them had the bilirubin greater than 2 mg/dl. The liver function test which was most consistently raised was alkaline phosphatase. Alkaline phosphatase was found to be raised in 39/52(75%) of cases in this study. Hypoalbunemia (<3gm/dl) was observed in 5/552 (9.56%) of the cases. Increased prothrombin time >20 sec was seen in 3/52 (5.76%) of cases. Increased SGOT WAS SEEN IN 22/52(42.3%) and SGPT was seen in 21/52 (40.3%) of the cases in this study.

Chest x-rays were analysed in all patient. They were normal in 27/52 (51.9%) of the cases. Right sided pleural effusion was noted in10/52(19.6%) of the cases. Right sided diaphragm was elevated in 8/52(15.3%) of cases. USG done in all cases, Right lobe involvement was present in 47 cases (90.38%), left lobe in 3 cases (5.76%) and both lobes in 2 cases (3.84%). 35/52(67%) of liver abscess showed solitary abscess in USG examination and 17 cases(32.69%) showed multiple abscesses.

Out of 52 cases, those whose volume is <100cc were treated conservatively and those volume >100cc were treated by USG guided needle aspiration/pigtail catheter insertion. 2/52 cases managed conservatively and 40/52 cases were treated by USG guided aspiration/pigtail catheter insertion.7/52 undergone exploratory laprotomy for ruptured liver abscess in abdominal cavity, while 1/52 ICD tube thoracotomy is done.

CONCLUSION

Liver abscess most commonly occurs between 31-40 years of life with male predominance. Liver abscess occurs most common among those who consume local made alcohol. Most common presentation is abdominal tenderness followed by fever. Right lobe of liver is most commonly involved lobe of liver. Alkaline phosphatase is most consistently elevated, abnormal liver function test in cases of liver abscess.

Not all cases of liver abscess need invasive management. Solitary abscess, 100cc can be managed conservatively by antimicrobials therapy alone. Laprotomy and ICD Tube drainage remains standard of care in ruptured liver abscess into peritoneal cavity and pleural space respectively in this study.

Intraperitoneal rupture, rupture in pleural cavity, septicemia is common complications that can occurs.

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