DIFFERENT MODALITIES FOR THE TREATMENT OF LIVER ABSCESS

M. NAJMUDDIN SHABBIR, MISBAH NIZAMI, ZAHID ALI MEMON, RIAZUDDIN KHANZADA
Department of General Surgery, Liaquat College of Medicine and Dentistry, Karachi

ABSTRACT
Objective: To evaluate the treatment of liver abscess.
Study Design: Quasi experimental.
Setting & Duration: Liaquat National Hospital, Liaquat College of Medicine and Dentistry, Darul Sehat Hospital, SESSI Landhi Hospital, Karachi from January 2007 to June 2007.
Methodology: All patients with liver abscess were included in this study and were exposed to four different treatment modalities. The patients were first treated with combination of medicine (option a). If they failed to respond to this treatment then they were subjected to ultrasound guided aspiration (option b). If option b failed they were exposed to pig tail catheter placement (option c). Final option was surgical drainage (option d).
Result: Out of 51 patients, 20(39.2%) patients responded to drug therapy alone. Twenty two patients required ultrasound guided aspiration and 9 patients required Pig tail Catheter placement and 6 patients required open surgical drainage. A combination of drug therapy and ultrasound guided needle aspiration was effective for majority of 83% patients.
Conclusion: Majority of patients with unruptured liver abscess can be managed without conventional surgery.

KEY WORDS: Liver Abscess, Pig Tail Catheter, Needle Aspiration, Medical Treatment, Open Surgical Drainage

INTRODUCTION

Amoebic liver abscess affects 10% of the world's population and is the most common form of liver abscess. It has a approximate 18% morbidity.[1] It has higher incidence in the under developed countries because of lower standard of sanitation. Liver abscess results in many deaths annually world wide, and affects nearly 70 to 100 million individuals annually. The right lobe of the liver is more involved than the left[2], and, the male sex is predominantly involved.

In a past study published in the World Journal of Surgery[3] it was seen that the best form of treatment is conservative.

Correspondence:
Prof. M. Najmuddin Shabbir
Head Department of General Surgery,
Liaquat College of Medicine & Dentistry, Karachi.
Phones: 0300-8229833.
E-mail: drnajamshabbir461@hotmail.com

The management was either medical or surgical. Those abscesses less than 5cm were seen to resolve with medical treatment and those with a size of 5 to 10cm would subside with subsequent aspiration.

METHODOLOGY

Prospective study is carried out in 51 patients with liver abscess over a period of 6 month at Liaquat National Hospital (LNH), Liaquat College of Medical and Dentistry (LCMD) and Sindh Employees Social Security Institution Hospital Landhi (SESSI). After classifying the lesion according to the size on ultrasound the patients were subjected to general and abdominal examination. Necessary baseline investigations were done. Selected patients underwent additional investigation like Contrast Gastointestinal studies, CT Scan, according to the symptology.

Inclusion Criteria:

1. All patients above 12 years were included in this study.
2. Only new cases were included in this study.
3. Amoebic and Pyogenic abscesses diagnosed on the

basis of investigations were included.

Exclusion Criteria:
1. Pregnant patients.
2. H.I.V diagnosed positive patients or immunocompromised patients.

RESULTS

During 6 months period between January 2007 to June 2007. Fifty one patients with the diagnosis of liver abscess fulfilled the criteria and were included in the prospective study. The age range was between 15 to75 years with the mean age of 40 years. 39(76.5%) of our patients were male while 12(23.5%) were females with a male to female ratio of 3.1:2. Jaundice was present in 29 patients while 21 patients were not jaundiced at the time of presentation (Table I). Total White Cell Count ranged from 17000 to 37300 per cubic millilitre. Erythrocyte Sedimentation Rate in 1st hour ranged between 1 to 178.

Sign	No. of patients	%
Jaundice +ve	29	56.9
Jaundice -ve	22	43.1
Total	51	100

Table I. Frequency of jaundice

Liver Function Test of 51 patients revealed Total Billirubin of 0.24 to13.5 mg/dl. SGPT ranged from 18 to 283 mg/dl. Alkaline phosphatase ranged from 67-874 mg/dl.

X-ray chest P.A view showed 6 patients (11.8%) had elevated Rt. Hemidiaphragm and Rt. sided pleural effusion was seen in 9. Forty three (83.3%) patients presented with Right lobe abscess, and Left lobe abscess was seen in 8(15.7%) patients. Abscesses were categorized into three groups according to size and treatment (see Table II).

DISCUSSION

Various surveys have disclosed that a significant percentage of the world's population harbors the parasite (E. Histolytica).[4] The incidence of hepatic abscess continues to be high in patients with intestinal amebiasis varying from 2.5 to 2.8% with an average incidence of 13.2%.[8] Amebic liver abscess is encountered predominantlyin the third, fourth and fifth decades[2], The male to female was 3.1:1. In this series presented with pain in the right hypochrondrium, malaise, fever and rigors.[5] The total leucocyte count ranged from 1.70x10/liter to 37.3x10/liter.[6] As for the ESR it ranged from 1 to 178. Tests included total bilirubin, SGPT and Alkaline phosphatase. Total bilirubin ranged from 24 to 13.5 mg/dl. The alkaline phosphatase ranged from 67 to 874mg/dl.[6] Chest X-ray was done to see the presence of elevated right hemidiaphargm and right sided pleural effusion. Ultrasound followed to determine the site, number and size of the abscess in the liver. There were six patients (11.8%) who had elevated right hemidiaphragm. Right sided pleural effusion was in 9(7.6%) of the fifty one patients. The right lobe of the liver was predominantly involved in 43 out of fifty-one patients (83%). Considering the size of the abscesses of less than 5cms responded to drug therapy alone. Those between 5-10cm, 26(86.6%) responded to either drug therapy Table II a combination of needle aspiration and Drug therapy. In abscess size >10 cm 61.5% of patients responded to the combination of drugs alone with needle aspiration. In 1996 Seeto[7] proved that percutaneous drainage combined with intravenous antibiotics was the most common therapeutic modality and resulted in cure of 76% of all patients in which it was used. As seen by the references above and from the result of this small series, the best from of treatment for most liver abscesses is drug therapy and needle aspiration followed by surgical intervention depending on the response of the patients who have signs of peritonitis or large left lobe abscesses which are vulnerable to response.

Liver abscess represent significant morbidity for the patients, who may present without classical triad of

Table II. Size of abscess and treatment

Treatment	0 - 5 cms	5 - 10 cms	> 10 cms	Total
Medical	8	10	3	21
Aspiration	-	16	5	21
Pigtail Catheter	-	2	1	3
Surgery	-	2	4	6
Total	8	30	13	15

right upper quadrant pain, fever and hepatomegaly. Differentiation between bacterial and amoebic etiology is important[9], but can be difficult due to similarities.[8] Ultrasound examination by an experienced radiologist appears to be the single most important tool for diagnosis as well as treatment. Combination drug therapy is the mainstay of treatment for all typesof liver abscesses.[2] Patients of liver abscess with size < 10cm should be managed with needle aspiration and drug therapy. Abscess size of >10cm and left lobe location requires careful in-hospital follow-up to evaluate for impending rupture and signs of peritonitis.

CONCLUSION

Majority of patients with unruptured liver abscess can be managed without conventional surgery.

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