OUT COME OF SURGICAL MANAGEMENT OF LIVER ABSCESS

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Abstract

Objectives: To determine the outcome of surgical management of liver abscess.

Material and method of study:After ethical approval ,this descriptive study was conducted over a period of one year from January to December 2013 in surgical units at hayatabad medical complex Peshawar. A Total of 30 patients who presented to surgical OPD and emergency with liver abscess and fulfill the inclusion and exclusion criteria were included in this study. After taking an informed consent, history, clinical examination and related investigations were carried out. All the patients under went open surgical drainage in the form of laparotomy and were followed up for 0ne month.

Results: Total numbers of patients were 30.Mean age was 28years.Male to female ratio were 3:2. 18 (60%) patients were from low socioeconomic group. Mean hospital stay was 8.6 days.25 (83.33%) showed complete resolution of abscess cavity.2 (6.67%) had persistent cavity.3 (10%) died.9 (29.8%) developed complications but resolved conservatively.

Conclusion: Liver abscess is more common in young males and in low socioeconomic group and its surgical drainage has excellent results with low complications.

Key Words: Liver abscess, surgical drainage, Post operative complications.

INTRODUCTION

Liver abscess is a pus filled cavity with in the liver and frequently encountered clinical condition with worldwide distribution. It is more prevalent in tropical countries, accounting for almost one out of seven thousands hospital admissions. It can occur at any age but is more common in young males[1].

High grade fever, chills, pain abdomen (right upper quadrant), malaise, anorexia and weight loss are the usual presenting symptoms.

Examination may reveal tenderness, guarding, rigidity and sometimes mass abdomen (right hypochondrium / or epigastrium). Jaundice and hepatomegaly may be the other findings[2].

Recent studies shows increase incidence of gastrointestinal cancers among patients with pyogenic liver abscess.[3,4]

Imaging studies are usually required to substantiate the clinical suspicion of liver abscess. Both ultrasonography and computed tomography are sensitive[4].

The aetiology of liver abscess can be grouped broadly into Amoebic and Pyogenic[1].

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The clinical presentation / imaging studies and distribution of these abscesses may vary from patient to patient. Majority of these respond to medical therapy, which includes metronidazole and broad-spectrum antibiotics. However, the mortality may range from 2-18.5%. If it gets complicated it may rises up to 40 %[2].

Minimally invasive procedure includes percutaneous drainage of the abscess cavity via a pigtail catheter under ultrasound guidance. Irrigation of the abscess cavity with metronidazole infusion is also advisable[5].

Despite good response to antibiotic therapy, a large number of patients require some sort of surgical intervention[5]. World literature is abundant on various aspects of liver abscess from a surgeon's perspective. Similarly few local studies have highlighted the liver abscess management.

METERIAL AND METHODS

This was a descriptive study of 30 patients who underwent exploratory laparotomy for liver abscess (Amoebic/pyogenic) from january to december 2013 in surgical unit hayatabad medical complex after ethical aproval. The sample technique was consecutive. All the patients were admitted through emergency or surgical outpatient department.Selection Criteria included all adults of either sex presenting with signs, symptoms and imaging studies (CT abdomen, USG abdomen) suggestive of liver abscess.

Age below 12 years, Pregnant Ladies, Hydated Liver cyst, Cirrhosis,Carcinoma Liver or secondaries in liver were excluded from the study. After taking informed concent all the informations of patients regarding demographic data(age,sex,occupation,address), detailed

symptoms(High grade fever, chills, pain abdomen right upper quadrant, malaise, anorexia and weight loss) identification and objective clinical features were recorded. Patients with clinical features suggestive of liver abscess were confirmed by abdominal sonography, hemagglutimation and CT abdominal cavity where necessary. Hematological investigations including complete blood picture, prothrombin and activated partial thromboplastin time, liver function tests including total proteins and albumin, renal function tests, blood sugar, urea, serum electrolytes,Blood culture, post drainage aspiration culture, indirect haemagglutination test and stool examination were performed in all patients. The diagnosis of liver abscess was based on clinical features, ultrasonographic findings, chest X-ray, typical character of aspirate and positive indirect hemagglutimation test as standard given by royal college 2011. All the patients were given medicines as standard protocol.

PROCEDURE

After informed written consent and standard anesthesia patient placed in supine position. Midline upper vertical incision was made. Drainage performed with nelton tube placed in abscess cavity. All the patients underwent open surgical drainage in the form of laparotomy. Postoperative care included I.V fluids, Triple antibiotics, Analgesics and Blood transfusion where requiredt. Postoperative complications like hemorrhage, drainage tube blockage, ileus, wound dehiscence, wound infection, respiratory complications and death if any were noted. Stay in hospital was recorded and all the patients were followed for 2-4 weeks. The details related to all the selected patients were entered into an already designed standard proforma. All the data was analyzed for descriptive statistic by using SPSS for windows version 16.

RESULTS

Mean age of the patients was 28 years. The youngest patient was 14 years and the oldest patient was 70 years of age. Eleven patients (36.6%) belonged to age group 12 – 30 years.23 patients (76.6%) were male and 7 (23.3%) were female. Male to female ratio was 3.2: 1. Twenty-four patients (80 %) were Pakistanis and 6 (20 %) were Afghan refugees, living in different areas of KPK.

Patients belonged to different groups e.g. labourers, farmers, traders, housewives and students. 18 out of 30 (60%) patients were from low socioeconomic group as standard given by WHO.Mean hospital stay was 8.6 days. Patients were followed up for one month. Three patients died. Twenty-five patients (83.33%) showed complete resolution of abscess cavity. Two (6.67%) had persistent cavity and were treated conservatively with tube drainage. *Table-1* They showed resolution by 22nd day.

Table 1: Outcome of abscess management (after two weeks), n=30

Out come	No. of Patients	%
Complete resolution	25	83.33
Persistent cavity	2	6.67

Table II: Distribution of the post operative complications (n=30)

Complications	No. Of cases & %ages
Wound Infection	2 (6.6%)
Billiary / blood Leakage	3 (10 %)
Burst Abdomen	1 (3.3 %)
Persistent Cavity + Pleural Effusion	1 (3.3 %)
Ileal Injury	2 (6.6 %)

Three patients (10%) had persistent bleeding/ billiary leakage through the drain Table-11. They were treated safely conservative till the leak stopped. Two patients (6.67 %) had wound infection and a similar number of patients (6.67 %) had iatrogenic ileal perforation. Two patients (6.67 %) had persistent cavity after two weeks associated with right pleural effusion. They were treated conservatively with tube drainage and resolved after 22 days. One patient had burst abdomen. Three out of thirty patients died giving a mortality of 10.

DISCUSSION

Liver abscess is one of the important public health problems especially in developing countries like Pakistan[6,7]

It poses significant risk to public health particularly pyogenic liver abscess which if left untreated carries a 100 % mortality[8].

Majority of the patients were younger than forty years with an overall male predominance. This reflects a trend which is similar to other developing countries of the region[9].

Majority of the patients belonged to low socioeconomic group, a fact supported by other researches as well TM Rehan[10] & Rafi Ahmed Ghouri[11].

Lack of education, poor health care and contaminated food and water supply are few of the factors accounting for the increased occurrence in this socioeconomic group. (Hussain KS[12])

Outcome of the surgical management was excellent with more than 80% of patients showing complete resolution. The mortality was low and has been similarly reported elsewhere Samad[9], Gulshan Ali Memon[13] and Reginald K Setto[14].

All these settled with conservative treatment

similar findings have been reported by Jose' Antonio Alvarez Perez[15], A.Samad Khan[10] and Rehan TM[11].

CONCLUSIONS

Liver abscess is more common in relatively young, and is predominant in male population.

People belonging to low socioeconomic group are more frequently affected.

The out come of surgical management is excellent.

Complications are low and easily manageable.

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