CLINICAL PROFILE OF 100 CASES OF LIVER ABSCESS

Pages with reference to book, From 256 To 259

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Abstract

One hundred patients with liver abscess were studied for clinical features and complications. They were diagnosed by radiography, ultrasonography, serology and by needle aspiration. A variety of interesting clinical, haematological and ultrasonographic findings were observed. Literature on liver abscess was reviewed and results compared (JPMA 39: 256, 1989).

INTRODUCTION

Amoebiasis is very common in Pakistan. Due to recurrent amoebic intestinal infection, the prevalence of amoebic liver abscess is also very high. Clinical features and laboratory parameters of such cases varywidely and poses a great diagnostic problem. One hundred cases of liver abscess were studied in the department of Medicine, Dow Medical College and Civil Hospital, Karachi. Cases from four other hospitals of the city were also included in the study.

PATIENTS AND METHODS

One hundred patientswith liver abscess were studied for aetiology, clinical features, complications, laboratory parameters, radiological and ultrasound findings. Abscess was diagnosed on ultrasonographic examination, aspiration and serological tests for amoebiasis. Patients were interrogated in detail and examined thoroughly. They were subjected to sigmoidoscopy, stool was tested for Entamoeba Histolytica, X-ray chest was done for any pleuropulmonarycomplication. Aspiration ofthehepatic pus was done for routine examination, bacteriology and to see active trophozoites. These patients received antiamoebic treatment in the form of metronidazole (infusion/tablets) and chloroquine orally close aspiration of the hepatic abscess was performed in some cases. In cases of pyogenic liver abscess, anti-bacterial therapy was instituted. These patients were subjected to re-examination after 3 weeks for clinical and laboratory parameters.

RESULTS

Of 100 patients, % had amoebic and 4 pyogenic abscesse& In the later group Actino-mycosis and proteus was cultured from one case each and E.coli from two cases. Mean age inthe amoebic group was 40 years, while in the pyogenic group it was 46 years. Males out numbered females both in the amoebic (85%) and pyogenic groups (75%). Patient's history and physical examination revealedthat fever (95.8%),right upper abdominal pain (91.6%) and anorexia (693%) were the commonest symptoms, while hepatic tenderness (100%) and hepatomegaly (100%) were the cardinal signs of amoebic liver abscess. Temperature ranged from 38.5c to 40oc It was remittent in 72% and intermittent in 28% of the cases. It was accompanied by chills in 46% cases and rigors in 14%. Mean temperature at the time of admission was 38.09°C ± 036°C. Hepatic tenderness was rated as mild, moderate and severe. Mean downward hepatic enlargement was 8 ±23 cms in the midclavicular line below the right costal margin. Upward enlargement, also confirmed on X-ray chest, PA view was present in 45.8% of cases with amoebic liver abscess. Splenomegalywas present in only 3.0% of cases, enlargemënt below the costal margin was 4 ± 13 cms (Table 1).

TABLE I. Clinical features in cases with amoebic liver abscess N=96.

Clinical Features	No. of Cases	%
Fever	92	95.8
Rt. Hypochondriac Pain	88	91.6
Anorexia	67	69.7
Aches and Pain in body	45	46.8
Jaundice	30	31.2
Nausea and vomiting	22	22.9
Loose motions (6-8 days)	16	16.6
Rt. Sided Chest Pain	15	15.6
Oedema (Pedal and Scrotal)	15	15.6
Loss of Weight	9	9.3
Dry cough with pleural pain	5	5.2
Ascites	3	3.1
Constipation	3	3.1
Pain Rt. lumbar region	2	2.08
Hepatomegaly mean 8±2.5 cms.		
1) Downward	96	100.00
2) Upward	44	45.8
Hepatic Tenderness		
1) Mild	46	48.0
2) Moderate	26	27.0
3) Severe	24	25.0
Splenomegaly 4cm ± 1.5	3	3.1

Stool when tested for cysts and trophozoites of Entamoeba Histolytica showed cysts in 80% of the cases and vegetative forms in 20%. Sigmoidoscopy could be done only in 26 cases (27%), as the rest were not willing for the procedure. Only four cases had amoebic ulcers. Thirty one patients with amoebic liver abscess had complications, like pleural effusion[16] rupture into peritoneal[4] and pleural cavities[3], compresion of the inferior vena cava[3] secondary infection, hepatic encephalopathy and monoparesis.[1] Laboratory investigations in the amoebic group showed a raised serum bilirubin in 38%

and a raised ALT in 60% of cases. More significant was the level of serum alkaline phosphatase which was elevated in 94% of the cases with a mean rise of two fold above the normal level. Leucocytosis was present in all the patients (mean TLC=19,807/ cumm). Mean ESR was 81mm in the 1st hour by Western method. Investigations were repeated at the end of 3 weeks (Table II).

TABLE II. Investigations of amoebic liver abscess N=96.

Investigation	Result (Mean Value) ±SD	3 Weeks after treatment
Hb (g%)	10.29 ± 2.16g%	11.05 ± 1.27
TLC (Per cmm)	19,807 ± 80.16	9,833.50 ± 2,887.27
Neutrophils (%)	74.9 ± 5.39	68.8 ± 7.09
ESR (mm 1st hr.)	81.32 ± 25.89	24.42 ± 20.52
Serum bilirubin (mg%)	2.03 ± 1.75	1.16 ± 0.44
SGPT (I.U.)	86.14 ± 17.37	38.10 ± 16.38
Alk. Phosphatase	2 fold rise	Within normal limit
Serum albumin (g%)	3.075 ± 0.632	3.89 ± 0.37
Serum globulin (g%)	2.015 ± 0.695	2.80 ± 0.41
Pus for C/S	93 cases, no growth 2 cases positive for E. coli 1 for proteus	
Antiamoebic Antibody titer	1 : 5242 ± 1 : 2795	

Radiology of the chest was normal in 33.3% cases with amoebic liver abscess. Two major radiological abnormalities noted were raised right hemidiaphragm (40%) and right sided pleural effusion (16%) while 11% had both abnormalities. Ultrasonographic findings showed that smallest abscess was 3 x 3.5cms and the largest 16.8 x 14.4 cms. Seventy Five percent abscesses were in the right lobe, 17% in the left and 8% in both lobes. Eighty five percent cases had a single abscess, 6% double and 8% had multiple abscess.

DISCUSSION

Present study comprises of 96 patients with amoebic liver abscess and 4 with pyogenic. This contrasts much with the studydone bykubinson et al[1], who found 5 cases of amoebic and 12 cases of pyogenic liver abscess in a series of 17 cases.All patients with pyogenic liver abscess had multiple abscesses. There was no significant difference clinically and on routine laboratory investigations between this and the amoebic liver abscess group. In one case with pyogenic liver abscess, actinomycosis was diagnosed on culture. This patient was operated for appendisectomyabout 20 years back. However, such a long latent period is not acceptable. This patient was a heroin addict with impaired immunity, hence infection might have come from some unrecognized focus like dental abscess. Moreover, in the absence of a definite proof, this case remains in the category of cryptogenic liver abscess. This was the only mor talityin the present series. Comparison of the present studywith a study done on 137 patients with liver abscess[3] showed that majority of the patients in the present study presentedwith classical syndrome i.e. fever, pain in the right hypochondrium, and tender hepatomegaly. Other striking differences were high percentage of anorexia, jaundice and loose motions in the present study being 69%, 31% and 16% respectivelyin comparison to 2.2%, 8% and 6.6% respectivelyin the other study (Table III).

TABLE III. Comparison of present study with Rama Chandran et al. study.

Sign and Symptoms	Present Study (%)	Rama Chandran[2] Study (%)
Fever	95.8	75.2
Pain RHC	91.6	72.3
Anorexia	69.7	2.2
Jaundice	31.2	8.0
Loose motions	16.6	6.6
Rt. Sided Chest Pain	15.6	30.0
Loss of Weight	9.3	4.4
Cough	5.2	15.3
Hepatomegaly:		
a) Downward	100	79.5
b) Upward	45.8	15.3

Two points in the present study are worth mentioning. One is the occurrence of Jaundice and other is

concomitant presence of intestinal amoebiasis with liver abscess. According to Wilmot and Hennessy[3], jaundice occurs in less than one percent of the cases and is usually obstructive in nature. Adams and Maergraith[4] are of the opinion that jaundice never occurs jn amoebic liver abscess. Moreover Chalgidakis[5] reported jaundice in 18% of his 87 fatal cases of amoebic liver abscess. The combination of amoebic colitis and liver abscess is said to have a grave prognosis, but all our patients with this presentation (16.6%) recovered without any complication. The above association has also been reported by others[6-9]. The scrotal and pedal oedema was present in 15.6% of the patients. Three patients had obstruction of the inferior vena cava, diagnosed clinically and on ultrasonographic examination. In these patients oedema subsided within 24 hours of drainage of the abscess. Serum albumin level was within normal limits in these three patients. Rest of the patients with oedema had hypoalbuminaemia (Serum Albumin less than 2.5 gm%). Monoparesis occurred in one patient with amoebic liver abscess. He was normotensive and non-diabetic. During stay in the hospital, he developed paresis of the left upper limb. C.T. scan of the brain could not be performeçl as the patient left against medical advice. Emboli to brain and lungs alongwith D.I.C. has been described[10] in pyogenic but not in amoebic liver abscess. One patient presented with hepatic encephalopathy, this is in contrast to most reported series where none of the patients had encephalopathy, [2,11,12]. One case each of encephalopathy was reported in 196616 and 1967[14]. Intra-peritoneal rupture is a very serious complication of amoebic liver abscess. Singha[15]. reported sudden pain at the site of rupture and Vakil et al,[16] acute symptoms without actual rupture. In the present series, four patients had intraperitoneal rupture of the abscess but none had any history of sudden abdominal pain. Reported frequency of this complication varies from 2.5%[17] to 17%[18]. In an Indian study[12] of 779 patients with liver abscess 2.4% ruptured into peritoneal cavity. This complication has also been reported by others. [14,19] Thoracic complications of liver abscess[20,21] include rupture and drainage through bronchi, rupture into right or left pleura with empyema, rupture into the pericardium and right sided pleural effusion. In the present study, reactionary pleural effusion was seen in 16%, perforation into the right pleural space in 3% and raised right dome of the diaphragm in 39.7% of cases. In 15%, there was combined abnormality. Some other interesting complications which have not been encountered in the present study are rupture through the skin, [22] hepatocolic fistula14 and haematobilia[23] and various other studies described the clinical features and complications of amoebic liver abscess,[9,10,20,29-30] All of them have emphasized that amoebic liver abscess can be confused not only with pyogenic liver abscess, but it may mimic abdominal malignancy and hepatic granuloma. It may also be confused with viral or alcoholic hepatitis, cholecystitis, pyogenic cholangitis, hepatic hydatid cyst, perforated peptic ulcer, acute appendicitis, subdiapbragmatic abscess and lesions of the right lung base and right pleura. Thus recognition of well-defined but diverse clinical syndromes are important not only for diagnosis but for planning surgical treatment.

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