Research Paper

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Clinical Study of Amoebic Liver Abscess Cases & their Management

Medical Science

KEYWORDS : Amoebic liver abscess, clinical study, management

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ABSTRACT

Introduction :

Amoebic Liver Abscess is the most common extra intestinal manifestation of infection by E histolytica , and it is associated with significant morbidity and mortality .

Methods :

All patients that presented with amoebic liver abscess & treated at general hospital of Ahmedabad during the year 2009 to 2012 were included.

Observations and results:

Total 30 patients with predominantly male involvement & mean age 46 years were studied. Fever, pain in abdomen were major presenting symptoms. Out of 29 cases managed by USG guided aspiration, 4 cases show failure, after that they were treated by tube drainage and it was successful in all.

Conclusion :

Conservative management for uncomplicated amoebic liver abscess and insertion of single per-cutaneous pigtail catheter drainage for complicated amoebic liver abscess are both efficacious as treatment modalities.

Introduction:

Intestinal amoebiasis is an endemic problem in the lower socio-economic strata of developing countries affecting nearly 10 % of the world population. Amoebic liver abscess is an infrequent complication of intestinal amoebiasis seen in 3-9% of cases of intestinal amoebiasis.[1] Surgical management of liver abscess includes open drainage, single or multiple needle aspirations or percutaneous transhepatic catheter drainage, the latter being a recent treatment modality. [2,3] This study was carried out to elucidate the clinical profile of amoebic liver abscess cases & their surgical management.

Materials and Methods

All patients that presented with amoebic liver abscess & treated at civil general hospital of Ahmedabad during the year 2009 to 2012 were included. All data regarding the history ,general physical examination & Laboratory investigations were noted. The cure was considered with the absence of symptoms and clinical signs, Though the cavity persisted in follow up USG for much longer time.All patients were given medical treatment of metronidazole and diloxanide furoate.Abscesses of 1 to 3 cm size do not usually require aspiration. However, in our study all the cases had abscesses larger than this size. Hence, 29 patient out of 30 were treated by USG guided aspiration . Out of them 4 patients show failure ,who underwent Pig tail catheter drainage subsequently. Exploratory Laparotomy and drainage was done only one patient owing to rupture of the amoebic abscess into peritoneal cavity. Follow up USG was done every 15 days with simultaneous aspiration when the residual volume was 50 cc or more.

Observations & Results

Total patients of Amoebic liver abscess studied-30

Table No. 1 : Age Incidence

Age group (yrs.)	No. of patient	% of patient
0-10	0	0
11-20	0	0
21-30	4	13.33
31-40	9	30
41-50	6	20
51-60	6	20
61-70	5	16.66
Total	30	100%

Sex incidence

Male patients – 27

Female patients – 3

Sex ratio – 9:1

Table No. 2 : Symptoms and signs

Symptoms/signs	No. of patients having the symptom/sign	Percentage (%)
Fever	22	73.3
Pain	22	73.3
Malaise	21	70
Nausea/ vomiting	13	43.3
Anorexia/wt. loss	12	40
Diarrhea	21	70
Cough	7	23.3
Jaundice	5	16.7
Tenderness/guarding	25	83.3
Hepatomegaly	22	73.3
Ascites	3	10
Shock	2	6.7

Table No. 3: Addictions

	No. of patients	Percentage of patients
Alcohol	24	80%
Smoking	6	20%

Table No. 4 : Laboratory findings

Investigation	Finding	No. of patients	% of patients
Hb g%	Males < or =9 Female < or =8	20	66.7%
TC	<3500 or >9500/m^3	25	83.3
S. bilirubin	>1.2 mg%	9	30
S. Alb	<3 g%	4	13.3%

Table No. 5 : Chest X ray findings

X ray finding	No. of patients	%
Right Pleural effusion(PE)	4	13.3%
Blunting of CP angle	2	6.7%
Elevated dome of diaphragm	18	60%

Table No. 6 : Ultrasonography of abdomen

Lobe involved in liver	No. of patients	%
Right	24	80%
Left	4	13.3%
Both	2	6.7%

Table No. 7 : Management

METHOD (Medical therapy given to all pts.)	No. of patients	Success (%)	Failure (%)
USG guided aspiration	29	25 (86%)	4(14%)
Pig tail Catheterization	4	4(100%)	-

USG guided aspiration

Of the 30 cases, 29 were managed by USG guided aspiration. Average size of abscess was between 5 to 10 cm diameter. On an average 300 cc anchovy sauce pus was aspirated. Out of 25 patients in which aspiration was successful, 17 cases had to be aspirated only once; 7 pts. had to be aspirated twice, while one case had to be aspirated three times.

Table No. 8 : Resolution of abscess cavity

Resolution of abscess cavity in weeks after aspiration (weeks)	No. of patients
2	3
4	10
6	6
8	5
12	1

Tube drainage

Tube drainage was used in 4 cases and was successful in all. The only indication in our study was thick loculated collection, not getting aspirated by needle.

Exploratory Laparotomy and drainage

Only one patient had to be operated in our study owing to rupture of the amoebic abscess into peritoneal cavity. Patient was discharged after 2 weeks without any post op complication.

Table No. 9 :Complications of liver abscess

Type of complication	No. of patients	Percentage of patients
Rupture into Pleura Peritoneum Both	 2 1 -	 6.67% 3.33% -
Septicemia	2	6.67%
Liver failure	-	-
Renal failure	1	3.33%
CNS disturbance	-	-
Total	6	20%

Of all our patients Rupture of abscess occurred in 2 patients (6.67%), into pleural cavity who were treated with ICD drainage, and one into peritoneum, for which exploratory laparotomy was done.

Complications of pigtail catheter insertion

Pigtail catheterization was done in 4 patients with partially liquefied single abscess, from these 1(3.33%) patient developed infection of local site as complication.

Mortality rate and hospital stay

No mortality occurred in the study, with a mean hospital stay of five days.

Discussion:

Diagnosis of amoebic liver abscess is usually straightforward on the basis of the clinical, epidemiological, serological and ultrasonographic findings. Compared to pyogenic liver abscesses, patients with amoebic abscesses are often younger, more acutely ill with fever and right upper quadrant pain, and are usually from high prevalence areas.[4,5] The mean age of our patients with amoebic liver abscess was 46 years with predominantly male involvement which was comparable to other studies .[4,6,7] The frequency of fever and pain abdomen is 67-87% and 62-94% of patients with amoebic liver abscess respectively in different series [8]. In our study, these two symptoms of fever and pain abdomen occurred in 73% and 73% respectively .From India, Sharma et al in a study of 70 cases of amoebic liver abscess found hepatomegaly in 84%, pleural effusion in 10% and ascites in 4% cases[9].In our study, hepatomegaly occurred in 73.33%, pleural effusion in 13.33% and ascites in 10% cases. From India, earlier series showed jaundice in 45%-50% of cases of amoebic liver abscess, but, after the advent of invasive catheter drainage, coupled with effective anti-amoebic therapy, it has become less common [4,5,10]. Jaundice occurred in 16.7% cases in our study. In contrast, diarrhoea (70%) was a predominant feature of amoebic liver abscess in our study whereas in other studies, this occurs in 14-40% cases. [4] As this study was done on patients of amoebic colitis with liver abscess primarily, it may have accounted for greater occurrence of diarrhoea. In our study, cough occurred in 3.5% cases whereas in other studies, cough occurred in 8-24% cases.[4] Abdominal Ultrasound is the gold standard for diagnosing liver abscesses. Sonographically, in ALA, 4%-42% cases have multiple abscesses, 20%-35% have an abscess in the left lobe, and the remaining 49%-80% have a solitary abscess in the right lobe [11,10].Our study showed multiple abscesses in 6.7% cases, a solitary left lobe abscess in 13.3% cases and a single right lobe abscess in 80% of cases. Atelectasis and pleural effusions are common complications of Amoebic Liver Abscess. Pleural effusions occur mostly frequently in the right lobe and cause cough and chest pain. In our studies, Right sided pleural effusion was present in 13.3% cases. [4,5,10].In 2-7%

of cases of Amoebic Liver Abscess, a peritoneal rupture can cause shock and peritonitis .[12,13,14] A peritoneal rupture occurred in 1 case in our study. In recent years, with the advent of pigtail catheter drainage, the role of surgical exploration in Amoebic Liver Abscess ruptured into the peritoneal cavity has been mainly confined to haemodynamically unstable patients.[15]One of our patients underwent exploratory laparotomy and drainage of abscess was done. Average time after resolution of abscess after aspiration is 4 to 6 weeks. Some abscesses may take longer time to resolve if after aspiration, cavity doesn't collapse fully or there is slow re-accumulation of pus in the cavity.USG guided aspiration was successful in 86% cases, hence it appears to be the treatment of choice for abscesses between 3 to 10 cm diameter. Aspiration failed in 4 cases due to thick collection not getting aspirated by needle. The overall mortality rate seen in Amoebic Liver Abscess from various series ranges from 2-15%.[4] No mortality occurred in our study.

Conclusion:

In India, amoebic liver abscess commonly presents to the emergency department. Amoebic liver abscess should be suspected in persons presenting with prolonged fever and pain in abdomen to the emergency department and hepatomegaly as the presenting feature is not always present. Conservative management for uncomplicated amoebic liver abscess and insertion of single per-cutaneous pigtail catheter drainage for complicated amoebic liver abscess are both efficacious as treatment modalities.

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