

Clinical and Microbiological profile of patients presenting with liver abscess to a tertiary care centre- Single and multiple abscesses are amoebic in origin

Anshula Tayal

Maulana Azad Medical College

E-mail: anshula_uniquesurfer@yahoo.co.in

Introduction

Liver abscess continues to remain a surgical problem with considerable morbidity. Over the years minimally invasive techniques like percutaneous needle aspiration and catheter drainage have gained usage in combination with intravenous antibiotics. Most of the liver abscesses in India are amoebic in etiology. Amoebic liver abscesses generally do not require drainage, amoebicidal agents being effective alone. Hence, these must be distinguished from pyogenic liver abscesses which are not uncommon. Many clinical and laboratory parameters can aid in this differentiation. The aim of this study is to compare the clinical, radiological and biochemical profile of these patients with their bacteriological, parasitological and serological findings to identify new trends in etiology of liver abscesses and determine the differentiating parameters that can aid in management of these patients.

Methods

This is an ongoing cross-sectional study being carried out at the Department of Surgery, Maulana Azad Medical College & associated Lok Nayak Hospital, New Delhi. 16 consecutive patients presenting to surgical emergency with proven liver abscess on ultrasonography, were evaluated on the basis of detailed history, clinical and radiological examination. All the patients were further investigated with hemogram, liver function tests, amoebic serology, stool examination for trophozoites and cysts of *Entamoeba histolytica* and ultrasound guided pus aspiration and analysis of the aspirate by Gram's staining, Ziehl Neelsen staining, pyogenic culture and sensitivity and anaerobic culture and sensitivity. Data was arranged in simple tables and results shown in proportion. All the patients underwent treatment according to standard treatment guidelines based on their confirmed diagnosis.

Results

Symptom analysis of the 16 patients showed right upper quadrant pain to be a common feature in all, presence of fever in 15 (93.8%) and chills in 11 (68.8%) patients. Only 1 patient (6.2%) had a history of loose

stools. Of the 16 patients, 9 (56.2%) had purely amoebic liver abscess (Group A), 4 (25%) had amoebic liver abscess with secondary pyogenic infection (Group B) and 3 patients (18.8%) had no identifiable cause. 10 patients (62.5%) had a history of alcohol intake and 8 out of these (80%) had an amoebic pathology. TLC greater than 15000/cumm was found in 5 out of 9 (55.5%) patients in Group A but only in 1 out of 4 (25%) in Group B. Neutrophil count >80% was found in 6 out of 9 (66.7%) in Group A, but all 4 (100%) patients in Group B. Raised bilirubin level >2mg/dl was found in only 4 patients with purely amoebic liver abscess. SGOT and SGPT values were <3 times normal in 13 out of 16 (81.2%). The predominant site of the abscess was the right lobe (12 out of 16, 75%). 11 out of 16 (68.8%) were solitary. Among the 9 purely amoebic liver abscesses, 6 (66.7%) were solitary and 3 (33.3%) were multiple. 3 out of 4 (75%) of the amoebic abscesses with secondary pyogenic infection were also solitary. All 4 abscesses with secondary pyogenic infection had a size larger than 400cc. Gram's stain of pus aspirate was positive in only 1 patient and revealed Gram positive cocci in pairs and clusters. Ziehl Neelsen staining was negative in all cases. The bacteria cultured in 3 out of 4 cases (75%) were *Escherichia coli* sensitive to amikacin. One culture grew *Acinetobacter* sensitive only to colistin. Anaerobic culture was negative in all cases. Stool examination in all 16 patients was negative for the presence of trophozoites or cysts of *Entamoeba histolytica*.

Conclusion

The study is ongoing and an interim analysis shows that the most common etiology of liver abscesses presenting in New Delhi is amoebic. All pyogenic abscesses were amoebic abscesses with secondary infection. Classical multiple, purely pyogenic abscess was not seen in any patient. Most common bacteria isolated were *Escherichia coli* sensitive to amikacin. The abscesses with secondary pyogenic infection had a large size (greater than 400cc). A third of all purely amoebic liver abscesses were multiple, showing that multiple amoebic liver abscesses are not uncommon which is contrary to the prevailing understanding. Stool examination failed to show trophozoites or cysts of *Entamoeba histolytica* in any case, contradicting the established view that an acute or chronic intestinal infection is essential in these patients. Thus, multiple abscesses do not mean pyogenic and presence of pyogenic organism does not imply a primary pyogenic source.