

## TREATMENT DIFFICULTIES WITH LIVER ABSCESS IN PREGNANCY : A RARE CASE REPORT

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### ABSTRACT

Liver abscess in pregnancy is a rare entity and can be a life threatening condition. Here we present A case of amoebic liver abscess in 25 years old lady in third trimester of pregnancy, with highlights on treatment difficulties which we had faced in the management and timely intervention leads to good fetomaternal outcome.

**KEYWORDS:** Amoebic liver abscess, Anchovy sauce pus, Pigtail catheter, Entamoeba histolytica.

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### Introduction

Liver abscess is an extremely rare pathology occurring in pregnancy (1). It is often a diagnostic and therapeutic challenge, even it might become a cause of maternal mortality. Amoebic abscess is the most common etiology of liver abscess in the developing countries whereas in the developed countries pyogenic liver abscess is the commonest one. Most common organisms reported are Escherichia coli, Bacteroides, and polymicrobial infections (2).

### CASE REPORT

A 25 year old women gravida 2, para 1, live 1 with 32 weeks 2 days period of gestation presented with the complaints of pain in the right upper abdomen for last 7 days which was throbbing in nature, radiating towards the left side of the upper abdomen, non radiating to the back or any other site. She also complained of fever, which was not associated with chills and rigor for last 7 days. There was no history of nausea, vomiting, retching, no history of upper respiratory tract infection or urinary tract infection. Her bowel and bladder habits were normal, no malena or hematochezia. There was no past history or family history of tuberculosis. On general examination: she had fever of 101.1°F, pulse rate was 130 beats/minute, blood pressure of 130/80 mmHg, and respiratory rate of 18 breaths/minute. Systemic examination was within normal limits. On per abdominal examination: There was tenderness on palpation in the epigastrium. No guarding or rigidity. No other palpable organomegaly was noted.

On Obstetric examination: uterus was relaxed, fundal height was 32 weeks, cephalic presentation, Fetal Heart Sound was 130 beats/minute, regular and liquor was adequate. The laboratory investigations at admission were:- Hemoglobin=9 gm%, Total Leukocyte Count= 16,000/mm<sup>3</sup>, Differential Leukocyte Count= 88/5/1/6, Platelet count= 4 lakhs/mm<sup>3</sup>. Her Liver Function Test, Kidney Function Test, serum electrolytes and coagulation profile were normal. Test for Malarial Parasite by ELISA was negative. Blood culture was sterile. Routine Urine analysis was unremarkable. Her whole abdomen Ultrasonography showed a well-defined round heterogeneously hypoechoic space occupying lesion measuring 8.05×7.24×6.16cm with volume 2.34 Cubicmeter with minimal areas of liquefaction in the left lobe of the liver suggestive of an abscess. Fecal sample was negative for Entamoeba histolytica cysts and trophozoites. Entamoeba histolytica serology and PCR (polymerase chain reaction) was not done as patient was not affordable. Obstetric USG (Ultrasonography) reported a live fetus, of 31 weeks 2 days gestational age, oligohydroamnios was present with AFI of 4. Placenta was anterior and in the upper segment, the Estimated Fetal Weight- 1.760 kg with normal colour Doppler indices. Inj Metronidazole 1000 mg (200 cc) i.v. 8 hourly & cefoperazone 1 gm i.v. 12 hourly was started as well as steroid coverage for fetal lung maturity was done. Repeat blood counts on the following days showed increasing leukocytosis, which initially increased from 16000 cells/mm<sup>3</sup> to 21,000 cells/mm<sup>3</sup> as well as thrombocytosis with

platelets-8 lakhs. USG guided Percutaneous needle aspiration was done by the general surgeon and 40 cc of anchovy sauce with thick flakes pus was aspirated. The aspirate was sent for culture and sensitivity, AFB(acid fast bacilli) staining and CBNAAT (Catridge based nucleic acid amplification test). Since the abscess was not fully drained by percutaneous needle aspiration pigtail catheter was inserted in the left lobe of the liver under Ultrasound guidance and around 200cc of pus was drained out. When the output from the pigtail catheter became negligible a repeat Ultrasound of whole abdomen was done. Unfortunately the reason for negligible pus drainage was the displacement of pig-tail catheter. So the Abscess volume increased upto 500 ml in spite of parenteral antibiotics. So the pig-tail catheter was removed. The elective LSCS at 35 weeks of gestation was performed under general anesthesia. A male baby of 2.02 kg with Apgar score of 8 and 9 at 1 and 5 minutes was delivered. Open drainage of liver abscess was also done at the same sitting. A 7×6 cm sized abscess was in the left lobe of liver, adhered to the anterior wall of the stomach. The abscess cavity was explored and about 150cc of anchovy sauce pus was drained. Post operative period was uneventful for the patient, But the baby developed meningitis and was admitted in NICU for 21 days.

## DISCUSSION

Liver abscess is more commonly seen in developing countries and in the Indian subcontinent, the commonest variety is the amoebic liver abscess. It is more common in males than females. Ghosh et al in their study recruited 200 consecutive patients of liver abscess. Male to female ratio was 13.3: 1, only 3 were female patients in this cohort and none was with pregnancy (3).

Sharma et al and Mukhopadhyay et al also reported the higher preponderance of liver abscess in males with the male to female ratio to be 7:1 and 11:1, respectively (4-5). However these studies did not specify any of their cases where pregnancy coexisted with the liver abscess.

While searching the Literature we did not come across any study which gave the incidence of association of liver abscess and pregnancy; the data only exists as case reports. Further liver abscess association in third trimester of pregnancy is extremely rare and so is being reported.

The pus culture as well as the blood culture was sterile so in this case it was not of pyogenic origin; the absence of micro-organisms thus supported the diagnosis of amoebic liver abscess. Additionally *Entamoeba histolytica* may not be isolated in all cases.

Several studies suggest the commonest causative agent to give rise to a liver abscess in the Indian subcontinent is *Entamoeba histolytica*. Ghosh et al reported this as the causative organism in 69% of the cases in their study; in their study 71% involved the right lobe.

Generally, these patients present with fever, abdominal pain, nausea, vomiting, malaise, and many cases with jaundice (6). Similarly in our case patient presented with vague complaints of upper abdominal pain and fever for last 1 week.

Physical examination may show hepatomegaly and right upper quadrant pain although this is seen in only 50% cases (6). There was no hepatomegaly in our patient but tenderness was present in epigastrium and left hypochondrium.

In our case there was no delay in diagnosis as the USG was done on the day of admission itself and the diagnosis established. The sensitivity of Ultrasound for liver abscess diagnosis is reported to be 85.8% which was true in our case also (8-9).

Regarding the location of the liver abscess, most studies have reported the pyogenic as well as amoebic liver abscess to involve the right lobe of the liver. Akhondi H et-al study showed that 50% of solitary liver abscesses occurred in right lobe of liver (A more significant part with more blood supply), (10) while tubercular liver abscess more commonly involves the left lobe of the liver.

Interestingly in our case the collection was in the left lobe but the pus sent for culture was negative for AFB as well as CBNAAT so the liver abscess in our case was not of tubercular etiology.

In present case, very next day of admission USG guided percutaneous pus aspiration followed by pigtail catheter insertion was done, despite this the collection increased. Intravenous broad spectrum antibiotics, to cover both parasitic and bacterial causative agents were immediately started once the diagnosis of liver abscess was made.

The management carried out with a multidisciplinary team approach, including the general surgeon, interventional radiologist, and the obstetric team. The hospital stay got prolonged because of the baby's condition but at the end both mother and baby were discharged in a satisfactory condition.

## CONCLUSION

Pregnancy with hepatic abscess is a fatal and morbid condition with a diagnostic and therapeutic challenge. Upper abdominal pain with fever should always be properly investigated as it might turn out to be a liver

abscess with the potential of serious and dire consequences. Multidisciplinary approach with timely intervention is necessary which leads to good fetomaternal outcome.

#### Conflict of Interest

The authors declare that they have no conflict of interest regarding the publication of this case report.

#### Financial Considerations

No external or internal funding was sought or secured in relation to this case report.

#### Ethical Clearance

Patient identifiers have been anonymised.

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