Case Report

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Perinatal Amoebic Liver Abscess in 3rd Trimester Twin Pregnancy: A Case Report

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Abstract

Background: Overall 10% of the world's population is infected with Entamoeba histolytica (E. histolytica) but out of this only 1% becomes symptomatic. Nearly 20% of the Indian population show manifestations of the disease. Liver abscess complicating a pregnancy is very rare and most common organism responsible for this complication is Escherichia Coli and Bacteroides spp.[1]

Case Description: Here we are presenting a case of high risk pregnancy who was diagnosed as a case of perinatal liver abscess with multiple large collection. She was admitted in ICU and was given Non-invasive and High flow nasal cannula support as per her need. After detailed evaluation and consultation with other department, pig-tail catheterization was done. Patient was managed conservatively and was later on discharged under satisfactory condition but lost to follow-up.

Literature Review: Amoebic liver abscess (ALA) is the most common extra-intestinal manifestation of invasive amoebiasis. Pregnancy has been described as a risk factor for development of invasive amoebiasis and management of these patients is especially complex.[3] The American College of Obstetricians and Gynecologists (ACOG) guidelines recommend ultrasound and MRI as the modalities of choice.[3] Metronidazole is the treatment of choice for pregnant women for amoebic liver abscess. Metronidazole is a US Food and Drug Administration (FDA) pregnancy category B drug, is generally well tolerated and although it crosses the placenta it seems to have no significant embryo toxic effects.[3]

Clinical Relevance: Here the case of amebic liver abscess concurrent with twin pregnancy possess a challenge for clinician. Detailed analysis and discussion with other department is main approach in dealing such high risk cases.

Keywords: Perinatal; Abscess; Amoebic; Drainage.

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INTRODUCTION

The annual incidence rate of liver abscess is about 2.3 cases per 100,000 people. Worldwide Males are more frequently affected than females. Age plays a factor in the type of abscess one develops. People aged 40-60 years are more vulnerable to developing liver abscess that does not result from trauma.[5] Although infection with Entameoba histolytica occurs world-wide, yet, liver abscess is the most common extra intestinal complication in 3% to 9% of patients. In India, amoebiasis is endemic and amoebic liver abscess accounts for 3-9% of all cases of amoebiasis.[4] Overall 10% of the world's population is infected with Entamoeba histolytica (E. histolytica) but out of this only 1% becomes symptomatic. Nearly 20% of the Indian population show manifestations of the disease. Liver abscess complicating a pregnancy is very rare and most common organism responsible for this complication is Escherichia Coli and Bacteroides spp.[1] Amoebic liver abscess in 3rd trimester twin pregnancy is unlikely to be heard due to it's rarity and due to high morbidity of amoebic liver abscess making it quite grave condition if left unattended. Mortality due to amebiasis is mostly by extra intestinal infections, amebic liver abscess being the most common one.[6]

Here, we present a case of perinatal liver abscess with high risk pregnancy which needed multi-disciplinary approach along with meticulous decision making, resulting in fruitful outcome.

CASE REPORT

Here we present a case of 30 yrs old female who was having amenorrhea for 7 months, presented to us with complaints of fever for past 6 days associated with generalized body ache and shortness of breath. Patient was shifted to ICU as patient was vitally unstable. After evaluating clinicoradiologically, she was diagnosed with sepsis with septic shock with multiple liver abscess on ultrasound. Patient was started on IV anti-biotic along with mild inotropic support and on Non-Invasive Ventilation (NIV) and High-flow Nasal Cannula to decrease the breathing workload on patient. Patient was having twin pregnancy with 22wks of gestation. Patient has an obstetric score of G3A2 and was conceived with the help of IVF in another hospital. OBGY reference was noted. Fetal heart sound was noted on abdominal ultrasound on regular basis and was normal. Repeated POCUS was also done and moderate amount of bilateral pleura; effusion was also noted (BLUE protocol). There were multiple abscess the largest one was measuring approx. 200cc and other being 70cc. Intervention Radiologist opinion was noted and pig-tail catheterization was done under US guided. Post pig-tail insertion approx. 250ml of pus was drained from segment 6&7. Patient improved significantly post pig-tail insertion. Pus culture was done and it did not harbored any bacteria but on serology was found to be positive for Endameba Histolytica. The pigtail was removed on day 5 after its insertion and another large abscess was aspirated simultaneously which measured approx. 80ml from segment 4. Patient improved significantly post abscessdrainage and all the supportive measures were removed. Patient was moved out of ICU on day 8 of ICU admission. Patient was discharged later on but was lost to follow up.

DISCUSSION AND CONCLUSION

Amoebic liver abscess (ALA) is the most common extra-intestinal manifestation of invasive amoebiasis. Pregnancy has been described as a risk factor for development of invasive amoebiasis and management of these patients is especially complex.[3]

Very few cases of perinatal liver abscess cases have been described, with exceedingly rare occurrence.[2] The overall mortality rate seen in ALA from various series ranges from 2-15%.[3] In our case, pregnancy might have served as a predisposing factor for amoebic infection. The presence of a fetus requires an altered immunological response and results in a variety of immunomodulating processes with measurable changes in cellular and humoral immunity.[3] ALA is more common in males (up to 9:1 male-to-female ratio in the age group of 20–40 year olds), and since testosterone plasma levels in females can double in the setting of pregnancy, its immunopathological effects on monocyte function further illustrate heightened susceptibility to a variety of clinical manifestations of amoebiasis.[3]

Imaging modalities need to be chosen with care in the pregnant patient. The American College of Obstetricians and Gynecologists (ACOG) guidelines recommend ultrasound and MRI as the modalities of choice.[3] In our case we did detailed radiological evaluation with the help of POCUS. Pocus was done to rule out other underlying lung pathology and follow up was done with the same. Metronidazole is the treatment of choice for pregnant women for amoebic liver abscess. Metronidazole is a US

Food and Drug Administration (FDA) pregnancy category B drug, is generally well tolerated and although it crosses the placenta it seems to have no significant embryo toxic effects.[3] With both the clinical diagnosis of liver abscess radiologically and a positive *E. histolytica* serology, the definition of confirmed amoebic liver abscess was made.

Conservative management with multidisciplinary approach for amoebic liver abscess along with required intervention such as per-cutaneous pig-tail catheter drainage for amoebic liver abscess are both efficacious as treatment modalities in high risk pregnancies.

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