

## A Case Report: Subcapsular Liver Abscess in a Neonate



### Medical Science

**KEYWORDS:** sub capsular liver abscess, neonate, sepsis.

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### ABSTRACT

*Neonatal liver abscess is a very rare condition associated with high morbidity and mortality rates. There seems to be an increasing trend of this rare condition amongst the newborns admitted to neonatal intensive care units. We report a case of liver abscess in a newborn and briefly review the literature and discuss its management.*

### Introduction

Hepatic abscess in newborns is a rare disorder with less than 100 cases reported worldwide till date and a high fatality rate. (1)

Liver abscesses are rare in neonates with the majority resulting from an ascending infection via the umbilical and portal veins, haematogenous spread, or via the biliary tree, or via direct contiguous spread from neighboring structures.

Neonatal liver abscess could be idiopathic, or secondary to umbilical infections due to umbilical vein catheterization or to sepsis which are reported to be the most common predisposing factors. Other predisposing factors include central total parenteral nutrition (TPN) catheters, necrotizing enterocolitis, umbilical, gallbladder or liver surgery, prematurity, birth asphyxia and neutrophil defects.(1)

In culture negative lesions, broad spectrum antibiotics covering both gram positive, gram negative organisms and anaerobes needs to be instituted. With prompt diagnosis and appropriate treatment, the outcome seems to be better as compared to a uniformly fatal state, though unfortunately, the mortality rate still can be as high as 50 % in spite of appropriate care and treatment . (2)

### Case report

A Term/Aga neonate with birth weight 2.5 kg delivered through normal vaginal delivery ,baby was asymptomatic for 8 days then develop poor feeding and abd distension on dol-8, admitted in outside hospital for 8 days given cefotaxim and amikacin , no improvement in symptoms refer to our hospital with diagnosis septic ileus , on admission baby was lethargic with abdominal distension and on palpation tense abdomen with tender palpable liver 2-3 cm below the right coastal margin, initial investigation done s/o raised crp and tlc count , xray abd done s/o small air shadow around liver ,usg abdomen done s/o subcapsular collection in liver measuring around 25ml(there was no h/o umbilical catheterisation or umbilical sepsis) drainage done. Empirical therapy with cloxacillin, metronidazole started , gradually baby general condition improved & CRP came down and USG showed resolution of the lesion.



Fig 1- showing small air shadow around liver.



Fig 2- CECT abd showing subcapsular liver abscess

### DISCUSSION

Liver abscess is very rarely present in neonatal period and it differs from older children. The first review of liver abscess appeared in 1936 by Kutsunai who reported 2 infants with fatal peritonitis with solitary liver abscess at necropsy(3). Liver abscess is rare in newborn infants and it requires a high index of suspicion to make an early diagnosis. It should be considered in any neonate who continues to show evidence of an inflammatory response despite treatment with antibiotics, However, with improvement in diagnostics in form of radiological imaging, improvement in microbiologic identification, more effective antibiotic therapy and development of better drainage procedures, survival rate has dramatically improved(4).

Liver abscesses may be difficult to diagnose in neonates, partly due to their supposed rarity and lack of suspicion. Signs such as septic appearance, fever, intolerance to feeding, vomiting, abdominal distension, abdominal tenderness, and hepatomegaly are non-specific, as are laboratory findings such as leucocytosis, neutropenia, thrombocytopenia, and elevated or normal liver enzymes (5).

Various causes of pediatric portal vein thrombosis have been listed in literature but in neonates, umbilical vein catheterization and sepsis are the commonest causes implicated(4). Risk factors for development of neonatal pyogenic liver abscess include blood culture proven sepsis, umbilical catheterization, central parenteral nutrition catheters, necrotizing enterocolitis, surgery and prematurity(1).

Treatment of hepatic abscess would include diagnostic or therapeutic drainage of abscess by needle aspiration, surgical drainage and intravenous antibiotic therapy for 4-6 weeks(6). In our case we treated this neonate with antibiotic for 28 days , usg abd showed resolution .

**Conclusion;** performing routine bedside USG to look for a liver abscess in all septic preterm or term newborns without an identifiable septic focus may ensure early diagnosis. Prompt and appropriate management is expected to improve the current outcome trends.

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