

# Gas-forming Pyogenic Liver Abscess in an Immuno Competent Young Adult Male

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## 1. Introduction

Gas-forming PLA (GPLA) is less common, accounting for 7%–24% of all PLA. Poor glycemic control has been linked to a higher likelihood of gas-forming PLA. The organism most commonly associated with both PLA and GPLA is the *Klebsiella*.

Mortality rates throughout the mid 20th century remained high at 60-80%. With advances in diagnostic and therapeutic radiology, coupled with improvements in microbiological identification and therapy mortality rates decreased to 5-30%.

## 2. History

34-year male, came with a complaint of fever since 10 days

Abdominal pain since 10 days

Fever high grade, associated with chills and rigor, continuous fever associated with abdominal pain more on right side associated with generalized weakness and anorexia.

He had a similar complaint of pain abdomen two and a half month back when ultrasound scan of abdomen was done, suggestive of acute cholelithiasis (stones <10mm in diameter) and liver abscess (partially liquified).

He was treated conservatively and discharged after 5 days with advise to continue oral antibiotics for 4 wks. Patient remained symptom free till he presented to us during the intervening period.

## 3. Examination

At the pulse 116 beats/min,  
blood pressure 80/50mmHg,  
pallor + and  
jaundice +  
His abdomen was soft, non-distended, with tender hepatomegaly (liver span-21 cms)

## 4. Investigations

Investigations showed hb-7.3gm/dl  
TC- 35,200 cells/cumm, with predominant neutrophilia  
LFT- total bilirubin-11.2 mg/dl  
Direct bilirubin- 7.3 mg/dl  
Indirect bilirubin- 3.9 mg/dl  
ALT-398 IU/L  
AST-360 IU/L  
Fasting blood glucose=89 mg/dl  
Post prandial glucose=93 mg/dl prothrombin time 27.8 seconds, INR – 2.3  
Virals: non reactive

Ultrasonography showed large gas forming liver abscess of 4× 5.5 cm in right lobe of liver, confirmed by CT abdomen  
Usg guided pus aspiration was done about 90 ml of pus is drained and pig tail catheter was introduced into the abscess  
pus culture and blood culture grew *klebsiella* species sensitive to piperacillin/tazobactam  
imipenem  
amikacin  
metronidazole



## 5. Treatment

Patient was managed with broad spectrum antibiotics (tazobactampipercillin and metronidazole). On 5th day of admission patients BP dropped to 70/50 mmHg, probably in septic shock and his condition was doomed unfit for any surgical intervention. He was intubated and kept him on inotropic support. He developed multiorgan dysfunction syndrome and eventually succumbed on 9th day of admission in intensive care unit despite aggressive resuscitative measures.

## 6. Conclusion

This case highlights that GPLA can also occur in patients who are non-diabetic. These patients are often sicker and require urgent drainage of the abscess. It is very important to perform imaging studies early to reach a diagnosis, as GPLA is still associated with a high mortality.

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