

Krishna Adi Wibisana<sup>1</sup>, Nikko Darnindro<sup>2</sup>, Ifael Yerosias Mauleti<sup>1</sup>

<sup>1</sup>Division of Tropical Medicine and Infectious Disease, Departement of Internal Medicine, Fatmawati General Hospital, Jakarta

<sup>2</sup>Division of Gastroenterohepatology, Departement of Internal Medicine, Fatmawati General Hospital, Jakarta

Introduction

- *Klebsiella pneumoniae* has been increasingly reported as the leading etiology of pyogenic liver abscess, especially in East and Southeast Asia region.
- The infections are usually community acquired and mostly occur in uncontrolled diabetic patients.
- Some *K.pneumoniae* liver abscess manifest as a single or multiple solid masses mimicking malignant lesion which potentially can delay the diagnosis and management.

Case Presentation

- A 50-year-old male was referred from another hospital with a history of high grade fever persisting for eight days followed by a decline in consciousness since one day before admission. There was no history of abdominal pain, diarrhea or bloody stools. He was newly diagnosed with diabetes mellitus and had no other significant comorbidities.
- On admission, vital signs showed a temperature of 39° C, tachycardia, tachypnea with normal blood pressure. Neurological examination showed Glasgow Coma Scale score of 13 (E3V4M6). Hepatomegaly was observed but no tenderness of the right upper quadrant. Other systemic examinations were unremarkable.
- Initial laboratory examination showed leukocytosis with neutrophilia, thrombocytopenia, elevated procalcitonin level, and elevated serum ureum and creatinine level. Computed tomography (CT) scan of the abdomen showed a large solid nodule (8 x 8 cm) with smaller multiple nodules occupying the liver suggesting the possibility of hepatocellular carcinoma or malignant liver metastases.
- Since the laboratory examinations showed that Alpha-fetoprotein (AFP) and Carcinoembryonic Antigen (CEA) were in the normal range and markers for hepatitis B and C viruses were negative, the liver biopsy was performed. The biopsy revealed abundant inflammatory cells with necrotic debris, consistent with liver abscess. The blood culture were positive for *Klebsiella pneumoniae*, susceptible to 3rd generation cephalosporin and fluoroquinolone.
- The patient was initially treated with meropenem and then de-escalated to ciprofloxacin based on susceptibility test from the blood culture. After two weeks of antibiotic therapy, the large nodule was liquified and aspiration of abscess was done. The aspirate pus culture showed negative growth. The patient progressed well. The leukocyte, thrombocyte, procalcitonin and serum creatinine level were back to normal range. After two weeks of intravenous antibiotics administration, the patient was discharged. After eight weeks of antibiotics, the ultrasound showed resolution of the abscess.

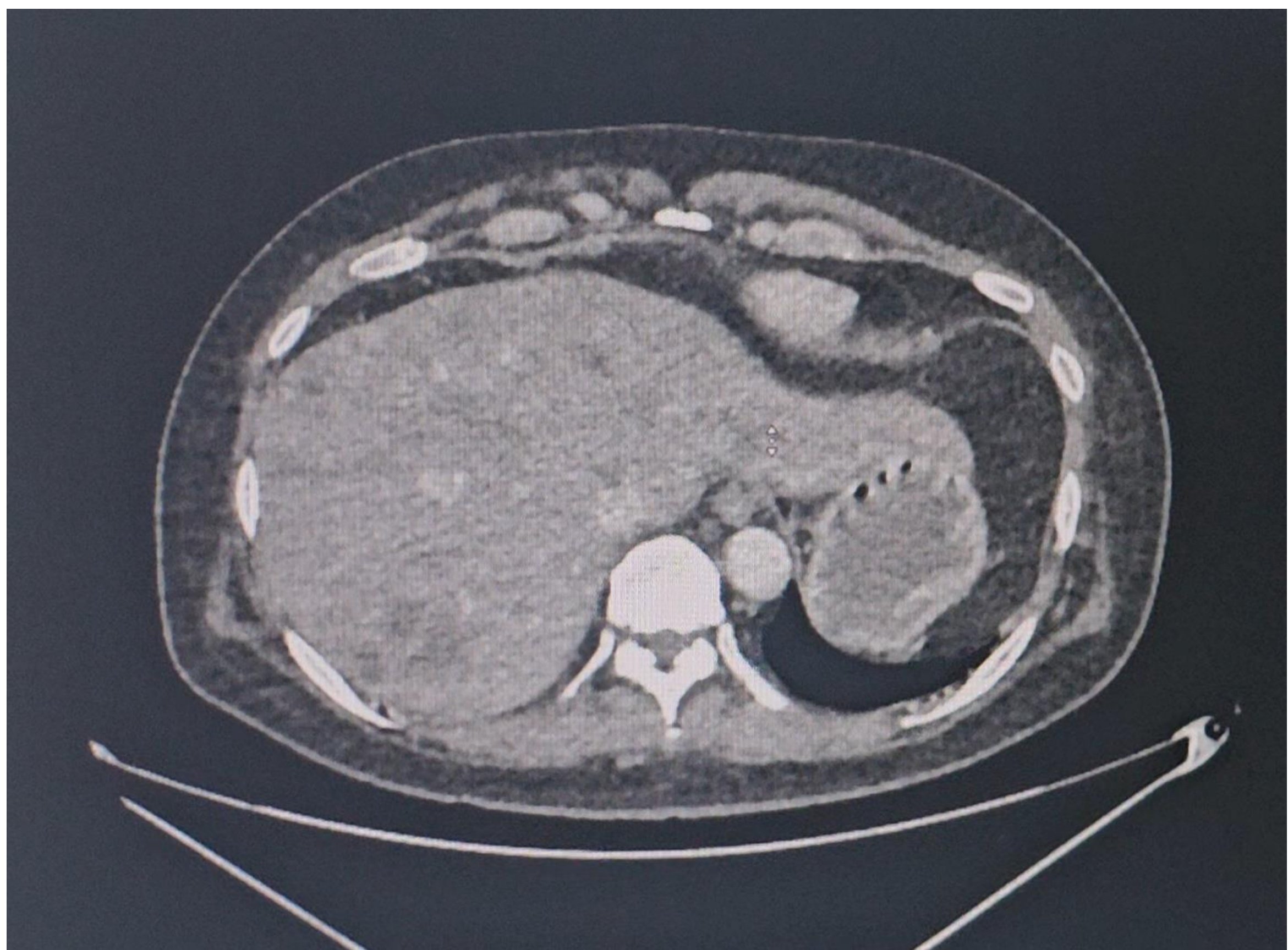


Figure 1. Abdominal CT-scan showed multiple solid nodules occupying the liver, suggesting the possibility of malignancy

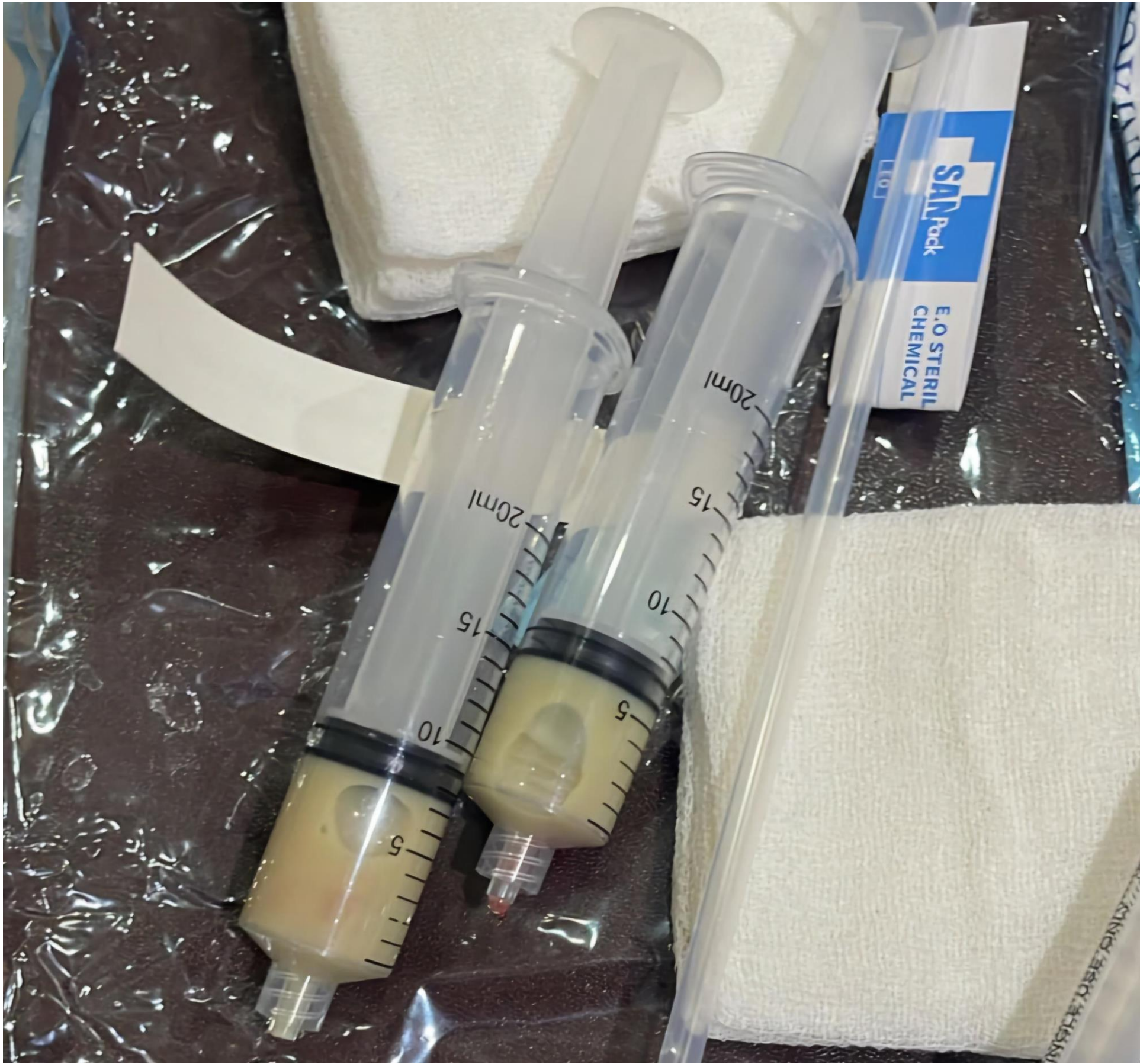


Figure 2. Aspirate of the pus after the nodule was liquified

Conclusions

*Klebsiella pneumoniae* liver abscess should be considered as a differential diagnosis when evaluating liver nodules in patients presenting with sepsis, especially in diabetic patients.

Contact

Krishna Adi Wibisana  
Fatmawati General Hospital, Jakarta  
Email: k.wibisana@gmail.com

References

1. Jun JB. *Klebsiella pneumoniae* Liver Abscess. Infect Chemother. 2018 Sep;50(3):210-218. doi: 10.3947/ic.2018.50.3.210.

2. Necas M, Mitchell J. *Klebsiella* liver phlegmon mimicking a solid liver tumour. Australas J Ultrasound Med. 2024 Sep 30;28(1):e12406. doi: 10.1002/ajum.12406.

3. Wang CH, Sun CK, Jiang JS, Tsai MH. Tumor-Like Liver Abscess Mimicking Malignancy With Lung Metastases in a Patient With Acute Renal Failure: A Case Report. Medicine (Baltimore). 2016 Mar;95(11):e3145. doi: 10.1097/MD.0000000000003145.

4. Premathilake PNS, Kularatne WKS, Jayathilake JPK, Senadhira SDN. *Klebsiella pneumoniae* liver abscess: a case report. J Med Case Rep. 2018 Dec 13;12(1):367. doi: 10.1186/s13256-018-1924-4.

5. Wang, Y., Zhou, H., Ding, M. et al. Hypervirulent *Klebsiella pneumoniae*: watch the eyes. *Intensive Care Med* (2025). <https://doi.org/10.1007/s00134-025-08109-3>