

A Case of Severe Gas-forming Liver Abscess

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Abstract

Liver abscess was a bacterial infected disease. Liver abscess could be described as Gas-forming and non-Gas-forming. There was high prevalence of liver abscess in Asia, especially in Taiwan, Singapore and Korea.

The patient was a 48-year-old Taiwanese woman who admitted to our hospital with abdominal pain for 1 week. After abdominal computed tomography (CT) scan, a large gas forming abscess was presented (15.7 × 13.6 × 17.6 cm). *Klebsiella pneumoniae* was cultured from pus and blood. The patient was treated with antibiotics and status post (s/p)-pig tail drainage for two times. Gas-forming liver abscess was a disease with high mortality rate and induced bacteremia. Therefore, Gas-forming liver abscess was thought important and has to be treated immediately.

Keywords: Liver abscess; Gas-forming

Introduction

Klebsiella pneumoniae was one of the bacteria that could cause much infection [1,2]. In previous studies it showed that *Klebsiella pneumoniae* was the major cause of liver abscess, bacillary meningitis, brain abscess, lung abscess, thoracic empyema, prostatic abscess, deep neck infection and complicated skin and soft tissue infections [1]. Moreover, high prevalence of liver abscess infected with *Klebsiella pneumoniae* had been observed in Taiwan [3]. The prevalence of liver abscess clinically infected with *Klebsiella pneumoniae* was 30% in 1977, and rapidly increased to 80% in 1990s [4]. Furthermore, liver abscess could be described as Gas-forming and non-Gas-forming. In pyogenic liver abscess (PLA) cases, Gas-forming pyogenic liver abscess (GFPLA) accounted for 7% to 32%. [5]. Besides, the mortality rate of GFPLA was higher (27.7-37.1%) than non-GFPLA group [5], especially in Diabetes mellitus (DM) patients.

We here reported a patient with Gas-forming liver abscess caused by *Klebsiella pneumoniae* with DM in Taiwan.

Case Report

The patient was a 48-year-old Taiwanese woman who was a homemaker with a history of hypertension and DM type II. She was presented with abdominal pain for 1 week before admission. Afterwards, the patient was brought to our ER due to persistent abdominal pain for 1 week. Laboratory data at admission were listed as the followings: WBC: 24100/ul, platelet: 553000/ul, Hb: 11.4 g/dl, Na: 121 mmol/L, K: 7.0 mmol/L, GPT: 288 U/L, Glucose: 626 mg/dl. Meanwhile abdominal CT was arranged and it revealed: (1) Hepatic steatosis. Small calcifications in bilateral hepatic lobes. Presence of hepatic pyogenic abscesses with size about 15.7 × 13.6 × 17.6 cm, and cystic neoplasms with central necrosis. (2) Mural swelling of gallbladder. (3) Presence of calcifications in spleen. (4) Small right renal cyst. (5) Presence of ascites. Moreover, *K. pneumoniae* was cultured from pus and blood.

Abdominal computed tomography (CT) (Figure 1) showed a severe gas-forming liver abscess.

Liver abscess s/p pig tail drainage was performed on 2013-11-30, and second s/p pig tail treatment was performed on 2013-12-01.

With the first treatment of pig-tail drainage, the abscess was >10

cm in size, and was located in right lobe. After 10 days, the second treatment of pig-tail drainage was carried out. The abscess was located in S7-8 and the aspirated fluid was pus-like.

The patient was discharged smoothly after 40 days.

For liver abscess, a certain amount of antibiotics should be used in early stage. However, if the medical treatment or percutaneous drainage failed, an immediate surgery should not be delayed [6].

References

- Asensio A, Oliver A, Gonzalez-Diego P, Baquero F, Perez-Diaz JC, et al. (2000) Outbreak of a multiresistant *klebsiella pneumoniae* strain in an intensive care unit: Antibiotic use as risk factor for colonization and infection. *Clin Infect Dis* 2000 30: 55-60.
- Carpenter JL (1990) *Klebsiella* pulmonary infections: occurrence at one medical center and review. *Rev Infect Dis* 12: 672-682.
- Chang CM, Lee HC, Lee NY, Lee IW, Wu CJ, et al. (2008) Community-acquired *Klebsiella pneumoniae* complicated skin and soft-tissue infections of extremities: emphasis on cirrhotic patients and gas formation. *Infection* 36: 328-334.
- Yi-Chun Lin, Min-Chi Lu, Hui-Ling Tang, Hsu-Chung Liu, Ching-Hsien Chen, et al. (2011) Assessment of hypermucoviscosity as a virulence factor for experimental *klebsiella pneumoniae* infections: Comparative virulence analysis with hypermucoviscosity-negative strain. *BMC Microbiol* 11: 50-58.
- Lee HL, Lee HC, Guo HR, Ko WC, Chen KW (2004) Clinical significance and mechanism of gas formation of pyogenic liver abscess due to *Klebsiella pneumoniae*. *J Clin Microbiol* 42: 2783-2785.
- Lee TY, Wan YL, Tsai CC (1994) Gas-containing liver abscess: radiological findings and clinical significance. *Abdom Imaging* 19: 47-52.

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