中文題目：克雷伯氏肺炎桿菌所致的多處膿瘍

英文題目：***Klebsiella pneumoniae*-induced multiple invasive abscesses**

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Introduction:

Klebsiella pneumoniae (K. pneumoniae) is a well-known human nosocomial pathogen, which could induce multiple invasive abscesses, especially in patients with impaired immuno-defenses. Here, we presented a case with multiple invasive abscesses induced by *K. pneumoniae*. The patient was cured after long-term antibiotic treatment and adequate drainage.

Case Presentation:

A 66-year-old male with a history of diabetes mellitus, hypertension, and gout, was admitted to our hospital due to intermittent fever for 4 days with a diagnosis of liver abscess from another hospital (Figure 1). Computer tomography (CT)-guided drainage was performed and a lung abscess was accidentally noted (Figure 2). The empirical antibiotic with piperacillin/tazobactam was administered. The liver abscess aspiration culture yielded growth of *K. pneumoniae* and the amoebic antibody test revealed negative. However, persistent fever, left ocular pain, blurred vision, and conscious disturbance were noted. The previous brain CT showed non-specific findings, and no electrolyte imbalance was noted. Therefore, brain magnetic resonance imaging was performed. It showed multiple abscesses formation with ventriculitis (Figure 3) and endogenous endophthalmitis (Figure 4). The patients received a bilateral external ventricular drain placement and partial retinectomy. The antibiotics were shifted to ceftriaxone for better central nervous system infection control and the following cerebrospinal fluid analysis revealed improvement later. After 2 months of treatment for *K. pneumoniae* induced invasive liver abscess syndrome, he was able to discharge but required further rehabilitation.

Discussion:

K. pneumoniae invasive infection is severe and life-threatening. In this case, multiple invasive abscesses in the liver, lung, eye, and central nervous system were identified by imaging studies. The approach to liver abscess drainage depends on the size and number of abscesses, small abscesses (<3 cm in diameter) can be treated solely with antibiotics. In our patients with abscesses greater than 5 cm, percutaneous drainage was recommended. Most lung abscesses respond to a prolonged course of antimicrobials (90%). Due to no signs of lung abscess being noted in our patient, drainage was not necessary. The outcome of some patients with *K. pneumoniae*-induced endophthalmitis could be complete visual loss. Although our patient was

treated with partial retinectomy, the blurred vision was still noted. As for brain abscess management, before encapsulation and localization, antibiotics and control of intracranial pressure, are essential. After the brain abscess has formed, surgical excision or drainage and prolonged antibiotics (4–8 weeks) are the treatment of choice. In this case, bilateral external ventricular drain placement for ventriculitis and antibiotics were given. The patient recovered from such life-threatening with these drainage treatment combined with antibiotic therapy.

Conclusion:

Imaging examination is very important for the diagnosis of *Klebsiella pneumoniae*-induced multiple invasive abscesses. Drainage with appropriate antibiotic therapy is associated with the outcomes for those patients.