

中文題目：快速生長的肝膿瘍在一位胰臟癌病人影像學上產生的劇烈變化

英文題目：Drastic image changes of fast-growing liver abscess in a pancreatic cancer patient

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Introduction: A liver abscess is defined as a pus-filled mass in the liver that can develop from injury to the liver or from an intra-abdominal infection disseminated from the portal vein. Most pyogenic liver abscesses are polymicrobial. Mixed enteric facultative and anaerobic species are the most common pathogens. Risk factors include diabetes mellitus, underlying hepatobiliary or pancreatic disease, liver transplant, and regular use of proton-pump inhibitors.

We report a case with underlying disease of pancreatic cancer who suffered from fever, progressive abdominal pain, poor appetite and general malaise for 1 day and visited our emergency department for help. Initially, abdominal computed tomography demonstrated no significant infection source. However, a huge liver abscess was found at follow-up image after 14 days.

Case presentation: A 68-year-old male was just diagnosed with pancreatic head and body cancer with multiple liver metastasis (T3N0M1). He had not received anti-cancer treatment yet. Status post PTGBD (Percutaneous Transhepatic Gallbladder Drainage) and ERBD (Endoscopic Retrograde Biliary Drainage) because of distal common bile duct stenosis and severe jaundice. After symptom relief management, patient insisted AAD (Against Advise Discharge) due to personal reason. However, patient revisited our emergent room 1 day later due to fever and progressive abdominal pain, poor appetite and general malaise. Laboratory survey showed leukocytosis (20230 u/L), direct hyperbilirubinemia (Total/direct: 3.3/1.7 mg/dL), elevated CRP (C Reactive Protein): 252 mg/L. Abdominal computed tomography revealed persistent pancreatic cancer with multiple metastases. No evidence of infection source was found. Intra-abdominal infection was our impression according to his medical history. We used Imipenem /Cilastatin as empirical antibiotics for his intra-abdominal infection. We followed up laboratory data couple days after antibiotics treatment. Infection parameters improved slightly. However, intermittent fever, persistent anorexia, abdominal distension, and severe malaise were still complained by patient. Thus, abdominal sonography was arranged for further survey which disclosed a huge tumor more than 16cm in diameter in his right liver. Therefore, abdominal computed tomography was arranged in the same day which revealed a large lobulated cystic mass in the perihepatic region. A huge liver abscess formation was impressed. Thus, we consulted radiologist for drainage tube insertion and collected specimen for microbiology. Culture of abscess later yielded 3 microorganisms: *Klebsiella pneumonia*, *Stenotrophomonas maltophilia*, and *Candida albicans*. According to antibiotics susceptibility test and infection specialist's suggestion, we shifted Imipenem /Cilastatin to Trimethoprim/sulfamethoxazole and Fluconazole to cover above species. Patient's white count and CRP (C Reactive Protein) subsided tremendously after drainage tube placement. His performance status also improved with significance.

Discussion: Primary liver abscess was defined as a liver abscess occurring in the absence of predisposing intraabdominal factors, such as hepatobiliary disease, colorectal disease, or a history

of intraabdominal surgery or trauma. In Taiwan, it's usually monomicrobial with *Klebsiella pneumoniae* exclusively [1]. Our patient has underlying disease of pancreatic head and body cancer with multiple liver metastasis, suspecting invasion to adjacent duodenal bulb. Thus, polymicrobial infection secondary to hepatobiliary disease or intraabdominal infection is reasonable.

Stenotrophomonas maltophilia, an aerobic, non-fermentative, motile, Gram-negative bacillus is extremely rare to cause liver abscess but it had also been isolated from sporadic cases previously [2]. Large diameter liver abscess caused by *Stenotrophomonas maltophilia* was also reported [3].

Candida species which is also an uncommon pathogen to lead to liver abscess in general population, however, affects patient with oncohematologic malignancies [4]. Most pyogenic liver abscesses are polymicrobial. Nevertheless, mixed-infection with multiple bacteria and fungus is relatively rare.

We postulated that this might be the culprit of the drastic image change in our case.

Another intriguing phenomenon is that patient's tumor marker level plummeted dramatically on the day we arranged him drainage tube insertion procedure. CA19-9 (Carbohydrate antigen 19-9) dropped from 1164 U/ml to 55 U/ml and CEA (Carcinoembryonic antigen) declined from 7.45 ng/ml to 3.99 ng/ml. The duration between data follow-up of both tumor makers is 1 month. The most entrancing part of this finding is that the tumor marker blood test was done even before drainage tube insertion. In other words, the association subsiding serum tumor marker level and removal of infection source is little. On the other hand, abscess formation invades adjacent metastatic tumors in liver which leads to decreasing tumor burden is possible [5]. A follow-up computed tomography for reassessment of infection lesion and cancer status should be arranged. Unfortunately, patient had no family and demonstrated bizarre behavior during the ward session. He was later diagnosed with dementia with BPSD(Behavioral and Psychological Symptoms of Dementia) by our psychiatric specialist. One day, he left hospital without authorization loss to follow-up since then.

Conclusion: Liver abscess, a common complication of cancer patients, could grow extremely fast under polymicrobial infection, which may result in significant change on image study. Abscess formation might invade adjacent tumor. It might lead to decreasing tumor burden and transient subsiding of serum tumor marker level.

References

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