中文題目：原發性克雷伯氏肺炎菌相關的胸骨骨髓炎發生在一位免疫健全的中年男子

英文題目：*Klebsiella Pneumoniae* Associated Primary Sternal Osteomyelitis Developed in an Immunocompetent Mid-age Man

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Introduction:

Klebsiella pneumoniae (*K. pneumoniae*) osteomyelitis are very rare in adults, the majority are secondary to urinary tract or skin infection with hematogenous spread to the joint. Primary sternal osteomyelitis (PSO) is rare and defined by excluding other infection sources. We present a rare case of *K. pneumoniae* PSO in a previously healthy mid-age adult, with initial presentation as a protruding sternal mass mimicking bone tumor.

Case report:

A 54-year-old male patient with hypertension, peptic ulcer and smoking history, presented to our clinic as stinging pain over right upper chest wall, with a painful 3*4*1 protruding mass near right sternoclavicular joint. The chest computed tomography(CT) revealed an enhanced soft tissue surrounding 1st rib and sternum with bony erosion. Metastasis or primary bone tumor was suspected initially and further bone scan was also compatible with chest wall tumor. Laboratory tests revealed leukocytosis with elevated C-reactive protein(CRP) of 35.31 mg/L, but normal tumor markers. CT-guided biopsy revealed inflammatory cell infiltration without malignant cells identified and the aspirate culture yielded *K. pneumoni*ae, sensitive to all antibiotics. No bacteremia nor other distant infectious focus was found. There were no diabetes mellitus, chronic kidney disease and negative for human immunodeficiency virus and hepatitis markers. Since he refused to undergo surgical intervention, a total 6 weeks treatment with cefazolin(2 weeks intravenous and 4 weeks oral at clinic) was prescribed, the follow-up chest CT revealed mildly decreased size of osteomyelitis, but the CRP and WBC re-elevated after oral antibiotics discontinued. We restartred oral cefazolin for another 2 week treatment course. The patient finally decided to undergo operation, but he was lost to follow-up later.

Conclusion:

We report a very rare case of an immunocompetent patient who presented as primary sternal osteomyelitis of *K. pneumoniae*, mimicking a bone tumor initially. Pathological proof is urgent to exclude primary or secondary bony malignancy. In addition, bacterial osteomyelitis is possible and aspirate culture from the bony lesion should be made to clarifiy the microbiological etiology. Since the *K. pneumoniae* was yielded from the aspirate, extra-articular focus and host factors predisposing should be checked before make the diagnosis of a rare *K. pneumoniae* PSO. Prolonged antibiotic course and carefully to evlaute the necessary of surgical intervention is

important. We present this rare case and share our experience to physicians in Taiwan.