中文題目：似多發性骨髓瘤表現之瀰漫性 *Mycobacterium colombiense* 感染在一個免疫正常的病患-案例報告

英文題目：Multiple *Mycobacterium colombiense* skeletal infections mimicking multiple myeloma in an immunocompetent patient.

作　　者：陳芃文[1], 楊志仁[2]

服務單位：[1] 高雄醫學大學附設醫院內科部, [2] 高雄醫學大學附設醫院內科部胸腔內科

Introduction: Disseminated mycobacterial infection is always confused for metastatic malignancy or other subacute or chronic infections. Here we reported a case of disseminated mycobacterial infection of bones and soft tissues mimicking multiple myeloma or multiple bone metastasis from solid tumors.

Case Presentation: A 71-year-old man with benign prostate hypertrophy, chronic kidney disease, hyperlipidemia and coronary artery disease, was presented to the emergency room with fever with chills for one day. Accompanied symptoms included right neck pain, nausea, vomiting, general weakness and body weight loss about 7 kg within one month. His laboratory data revealed elevated creatinine, anemia and hypercalcemia. Chest X-ray showed suspect a nodular opacity over left lung with some tiny nodules over both lungs. Chest computed tomography disclosed (1) suspect tumor in the right upper, middle and lower lobe of the lung with pleural effusion, (2)suspect metastatic lymphadenopathy in the right hilum and right mediastinum, (3)multiple osteoblastic skeletal lesions over spine, pelvis, sternum and ribs. Cervical magnetic resonance imaging (MRI) revealed multiple marrow-replacing lesions in the vertebral bodies (C2-C4). Blood exams showed mild elevated serum IgG, IgA, and β2-Microglobulin levels. Thus, multiple myeloma was highly suspected in the beginning. Positron emission tomography/computed tomography (PET/CT) revealed multiple sites of increased 2-fluoro-2-deoxy-D (FDG) uptake in sternum, cervico-thoraco-lumbar spine, sacrum, bilateral clavicles, rib cages, scapulae, bilateral humerus, pelvic bones, and femur. However, the urine and serum immunofixation electrophoresis (IFE) and the bone marrow biopsy didn't support the diagnosis of multiple myeloma. Bronchoscopic biopsy cannot find malignancy but the acid-fast stain of the bronchial washing was positive (2+), but negative for PCR of tuberculosis. Mycobacterium culture yielded *Mycobacterium colombiense*. Eventually, bone biopsy of the lumbar spine showed caseating granulomatous inflammation. A diagnosis of mycobacterial skeletal infection was made. Anti-mycobacterial agents were prescribed and his clinical presentations improved gradually.

Discussion: Mycobacterial infection of the bones may mimic metastatic malignancy or multiple myeloma. The incidence of mycobacterial skeletal infection is rare. Our case was suspected to be infected by *Mycobacterium colombiense*, which belongs to the *Mycobacterium avium* complex. There are few case reports of *Mycobacterium colombiense* infection instead of colonization. It usually affects immunocompromised hosts such as HIV carriers or hematologic malignancy. Disseminated infection of *Mycobacterium colombiense* to bones is extremely rare and the vertebral

bodies are the most common sites to be involved. History taking is important but the diagnosis always relied on tissue proof or and repeated positive for mycobacterial cultures. Obtaining appropriate specimens for culture is essential and tissue biopsy may be useful. With the right diagnosis, right treatment could be made.

Conclusion: This case of mycobacterial skeletal infection implicated the clinicians to include mycobacterial infection as a differential diagnosis when investigating the bone lesions.