中文題目：在接受 Tofacitinib 治療的類風溼性關節炎患者身上發生之 *Mycobacterium kansasii* 滑膜炎：罕見個案報告

英文題目：A Rare Case of *Mycobacterium kansasii* Synovitis in A Patient with Rheumatoid Arthritis Treated with Tofacitinib

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Introduction: Synovitis caused by non-tuberculous mycobacteria (NTM) is uncommon. Though patients with rheumatoid arthritis (RA) have increased risk of NTM infection, extrapulmonary NTM infection is relatively rare. Tofacitinib is an oral Janus kinase (JAK) inhibitor used for RA treatment. Association between NTM and Tofacitinib is not clear. Herein we present a case of synovitis caused by *Mycobacterium kansasii* in a rheumatoid arthritis patient treated with Tofacitinib.

Case report: This 71-year-old female with severe and refractory rheumatoid arthritis (RA) was intolerant to disease-modifying anti-rheumatic drugs (DMARDs) and was given tofacitinib 5mg twice daily combined with prednisolone 10mg (0.2mg/kg/day) once daily and methotrexate 7.5mg once every week about 12 months before presentation. Her serum interferon gamma release assay (IGRA) test and human immunodeficiency virus (HIV) test were both negative. Six months after tofacitinib, synovitis of the right elbow was noted. Several surgical interventions, including incision, debridement and synovectomy were performed for right elbow synovitis. Aerobic and anaerobic cultures disclosed no growth. This time she presented with right elbow synovitis with persistent discharge and the synovectomy was performed during hospitalization. The acid-fast stain of tissue showed positive (1+) with negative TB-PCR. The deep wound culture grew *Mycobacterium kansasii* 16 days after surgery. The anti-mycobacterial agents with isoniazid, clarithromycin, ethambutol (EMB) were prescribed initially and then EMB was switched to moxifloxacin for suspected EMB-induced blurred vision. However, nausea, vomit, and suspect drug-related hepatitis developed after changing regimen. For intolerable drug side effects and stable elbow condition, anti-mycobacterial agents were discontinued after total 8-week treatment.

Discussion: *Mycobacterium kansasii* is a photochromgenic, slowly-growing non-tuberculous mycobacterium, which may be isolated from environment such as tap water and soil. *M. kansasii* is related to pulmonary infection, skeletal infection (bone, joint, tendon), and disseminated infections in people living with HIV. Factors associated with NTM synovitis including trauma, previous joint puncture, local corticosteroid injections, and prolonged exposure to water or soil. Association between NTM infection and JAK inhibitor, such as tofacitinib, is currently unclear.