

Diagnosis of Sjogren's Syndrome with Acute Polyarthritis after Covid-19 Vaccination: A Case Report

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Vaccinations have been reported to be associated with autoimmune reactions. We report a case of diagnosis of Sjogren's syndrome with acute inflammatory polyarthritis following vaccination against Covid-19. A 63-year-old woman presented with painful swelling and stiffness in both hands ten days after the first dose of mRNA Covid-19 vaccine. On physical examination, symmetrical polyarthritis with swelling and tenderness of the wrists, 1st to 5th metacarpophalangeal and proximal interphalangeal joints were observed (Figure 1). No large joints or lower extremities were involved. She had a history of chronic, severe dry mouth and her tongue showed chronic change with cracking (Figure 2). A low-dose glucocorticoid (prednisolone 7.5mg) was started, and further investigation continued. Laboratory tests showed anemia and elevated ESR (91 mm/hr). Hs-CRP level was normal. Rheumatoid factor was positive (70 IU/mL) and Anti-CCP was negative. ANA was high titer positive with a mixed pattern (1:640 speckled + 1:320 cytoplasmic). Both SS-A/Ro and SS-B/La antibodies were positive and the other extractable nuclear antigen antibodies were negative. Plain radiographs showed no erosive changes (Figure 3), and the salivary scan showed a significant decrease in salivary function (Figure 4). Altogether, Sjogren's syndrome was diagnosed based on the overall clinical picture. Her dry eye symptoms were mild, and Schirmer's test was 9mm/5min in both eyes. A minor salivary gland biopsy was suggested, but she refused. Arthritis improved rapidly with prednisolone and we were able to continue reducing its dose. At four months of follow-up, no active synovitis was observed and the ESR level improved to 22 mm/hr (Figure 5). Hydroxychloroquine was started after a diagnosis of Sjogren's syndrome and no other DMARDs were added as the clinical course was stable. The global pandemic caused by Covid-19 is a major threat today. The safety of vaccinations in patients with autoimmune disease has long been a subject of debate. And the Covid-19 vaccines are no exception to these concerns. Clinicians should be aware that autoimmune reactions or flare of underlying disease may occur after vaccination.



Figure 1 (A, B) Symmetrical polyarthritis with swelling and tenderness of the 1st to 5th metacarpophalangeal and proximal interphalangeal joints were observed



Figure 2 Tongue showed chronic change with cracking



Figure 3 Plain radiographs showed no erosive changes

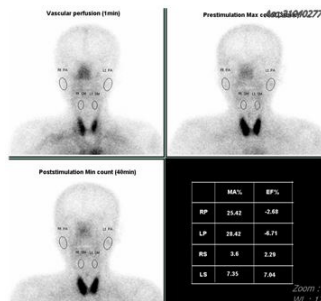


Figure 4 Salivary scan showed a significant decrease in salivary function

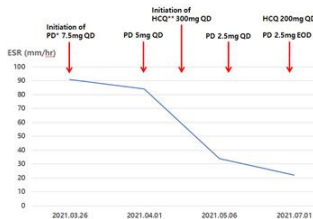


Figure 5 At four months of follow-up, ESR level improved from 91 mm/hr to 22 mm/hr
*PD: Prednisolone, **HCQ: Hydroxychloroquine