

## COVID-19-vaccine-Gamaleya-National-Research-Center-of-Epidemiology-and-Microbiology

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### Seropositive rheumatoid arthritis: case report

A 38-year-old woman developed seropositive rheumatoid arthritis following vaccination with COVID-19-vaccine-Gamaleya-National-Research-Center-of-Epidemiology-and-Microbiology.

The woman received her first dose of COVID-19-vaccine-Gamaleya-National-Research-Center-of-Epidemiology-and-Microbiology [Sputnik-V] vaccination on 20 May 2021 [*route and dosage not stated*]. She did not have history of joint swelling, chronic joint disease, inflammatory back pain or morning stiffness. However, 20 days after vaccination, she developed pain and stiffness in the left shoulder which also appeared in the right shoulder 2 days later.

The woman received unspecified non-steroidal anti-inflammatory drugs. She did not receive second dose of vaccine. Two months after vaccination, she developed pain and morning stiffness in the small joints of her hands and feet lasting more than 30 minutes. On 24 August 2021, she presented to a Medical Centre of Joint Diseases for further investigation. She reported morning stiffness for more than 2 hours and symmetric polyarthritis of the knees, feet and hands. Laboratory investigation revealed elevated levels of rheumatoid factor at 170 IU/mL, erythrocyte sedimentation rate at 39 mm/h, C-reactive protein 10 mg/L and anti-citrullinated protein antibodies (ACPA) at 157 U/mL. Her Disease Activity Score of 28 joints with a C-reactive protein (DAS28-CRP) level was 6.02. The anti-nuclear antibody screen-test and *Chlamydia* and *Ureaplasma* immunoenzyme tests were negative. An immunoenzyme SARS-CoV-2 Spike IgG antibody test was strongly positive. Hand X-rays did not show any lesions. Ultrasonography demonstrated moderate effusion in both knee joints and the metacarpophalangeal and proximal interphalangeal joints of both hands. Based on clinical presentation and investigational findings, she was diagnosed with seropositive rheumatoid arthritis secondary to COVID-19-vaccine-Gamaleya-National-Research-Center-of-Epidemiology-and-Microbiology. She was treated with methotrexate, methylprednisolone and unspecified non-steroidal anti-inflammatory drugs. On 1 September 2021, a repeat examination showed C-reactive protein 1 mg/L, DAS28-CRP level 3.99, ACPA at 314 U/mL and rheumatoid factor 231 IU/mL.

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