A Case of New Onset Palindromic Rheumatism Occurring in a 67-year-old American Indian/Native American Male after COVID-19 (SARS-CoV-2) Viral Infection.

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Abstract:

Palindromic rheumatism is an episodic relapsing-remitting type of inflammatory arthritis. It is known that autoimmune rheumatic phenomena can occur after COVID-19 viral infection as well as COVID-19 vaccination. We submit a 67-year-old Native American male who developed new onset palindromic rheumatism after COVID-19 viral infection. The work up for rheumatoid arthritis and other identifiable systemic inflammatory immune mediated rheumatic diseases was negative. This case represents a novel observation as, to the best of our knowledge, there have not been any previously documented cases of palindromic rheumatism arising in American Indian/Native American individuals after COVID-19 viral infection.

Keywords: palindromic rheumatism, COVID-19 infection, American Indian/Native American

Introduction:

Palindromic rheumatism (PR) is a relapsing remitting type of inflammatory arthritis characterized by episodic arthralgia and joint swelling.[1,2] The episodes last approximately a few hours to a few days in duration and typically occur every few days to every few weeks. It has been previously published in the medical literature that autoimmune rheumatic phenomena can occur after COVID-19/SARS-CoV-2 viral infection and even COVID-19 vaccination.[3,4,5] We present PR after COVID-19 infection in an American Indian/Native American (AI/NA) male individual.

Case: A 67-year-old AI/NA male with a past medical history of hypercholesterolemia and hypertension presented to the Rheumatology clinic with polyarthralgia and joint swelling. These symptoms began 3 weeks after the patient had COVID-19 viral infection in August 2020. The onset was acute and the involvement was episodic involving bilateral wrists, hands, feet, and ankles. Morning stiffness in the involved joints was significant lasting for up to 3 hours. These episodes would last about 3 hours to 3 days, and recur around every 3 weeks. At the time of presentation to Rheumatology, his vital signs were stable and the peripheral joints were free of active synovitis. The remainder of his physical exam was also rather unremarkable.

A very comprehensive rheumatology laboratory panel was negative/normal result for the following markers: rheumatoid factor, cyclic citrullinated peptide (CCP) antibodies, 14.3.3 ETA, HLA B27, antinuclear antibodies, serum creatine kinase, C-reactive protein and uric acid levels.

A shared informed decision was made to initiate hydroxychloroquine 200 mg orally daily after obtaining clearance from the patient's primary care physician and pharmacist. Appropriate lifestyle modifications including a whole food plant-based nutrition and regular physical activity as tolerated were recommended. He has remained asymptomatic.

Discussion:

Our case of a 67-year-old AI/NA male who had new onset PR after COVID-19 infection (COVID-19 antigen positive) demonstrates the possible profound, prolonged effect of COVID-19 infection on the immune system. Up to two-thirds of patients with PR can evolve into RA, mostly within 10 years,[6] however, not so far in our case, though. Our patient has remained seronegative for systemic inflammatory immune mediated rheumatic diseases at a 6 month follow up. While repeatedly observed, the overall incidence of the development of systemic rheumatic disease after COVID-19 viral infection is exceedingly rare.[7]

Conclusion:

Our case is that of a 67-year-old Native American male who had new onset PR after COVID-19 viral infection. To the best of our knowledge, this case represents a novel observation as there has not been any previously documented case of PR arising in AI/NA after COVID-19 infection. The rarity of these phenomena and paucity of the PR after COVID-19 infection in AI/NA population demonstrate the crucial importance of recognizing and treating these unique clinical correlations especially when they arise in a unique population.

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