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BRIEF REPORT

A Case of Chikungunya Virus Induced Arthralgia Responsive to Colchicine

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Chikungunya virus is an emerging infectious disease that has started circulating throughout the Americas and Caribbean. It can lead to persistent arthralgia lasting months to years. Treatment has been symptomatic with nonsteroidal anti-inflammatory medications. This case report describes a trial of colchicine for chikungunya arthralgia in 1 patient.

Keywords. chikungunya virus; colchicine; chikungunya arthralgia; arbovirus.

A 69-year-old woman who returned from a trip to India, where she had traveled for 3 weeks, presented to the emergency room (ER) one day after her return complaining of lower extremity edema and joint pains. While in India she sought medical care because the symptoms had started before returning home to the United States. She did not receive any medications or diagnosis at the time.

While in India, she had traveled to rural areas and noted numerous mosquito bites to the legs and feet. She had been compliant with her antimalarial chemoprophylaxis. On physical exam, the patient had 1+ edema of the right lower extremity and 2+ nonpitting edema of the left lower extremity with tenderness around the left ankle and distal joints of the foot, no erythema, and a healing mosquito bite over the lateral aspect of the left ankle. Initial laboratory evaluation in the ER showed leukopenia with white blood cell count of 3.5 thousand with neutrophils of 60%, lymphocytes of 22%, and monocytes at 15%. Her platelet count was 217 and hemoglobin was 13.5. Her serologic testing was sent to the Centers for Disease Control and Prevention at the time, and her immunoglobulin (IgM) capture enzyme-linked immunosorbent assay for chikungunya virus antigen returned positive with a ratio of 9.4 with an IgG ratio of 1.0. At her follow-up visit 1 month later, the patient had persistent arthralgias of the left ankle and the left wrist as well and bilateral lower extremity edema. She was started on celecoxib and noted improvement in the edema, but she had persistent arthralgia. She also had gastritis as a side effect of celecoxib. At her next visit 1 month later, she continued to have arthralgia and was started on colchicine 0.6 mg daily and 2 to 3 days later noted resolution of the swelling and improved arthralgia. Later, the patient, on her own, had a trial off of colchicine for 1 week with recurrence of the arthralgia. She was then advised to increase the dose of the colchicine to 0.6 mg bid and had near resolution of the symptoms at her next visit 2 months later. She remained on colchicine for 6 months without any adverse events before self-discontinuing the colchicine to see whether the pain would recur. It did not, and she remained relatively pain free 8 months after onset of the disease, requiring only naproxen 1 to 2 times per week.

DISCUSSION

Chikungunya virus has been spreading in the Western hemisphere since December of 2013 and has been found to be transmitted in South America, the Caribbean, and in the United States [1, 2]. Colchicine is a drug used since the 18th century in the treatment of acute gouty arthritis and has anti-inflammatory effects. Colchicine is an antimitotic alkaloid that disrupts cytoskeletal assembly, intracellular signaling in neutrophils, and inhibits neutrophil migration via decreasing expression of neutrophil adhesion molecules [3]. There have been no studies evaluating its use in chikungunya arthralgia, but its use has been mentioned as an adjunct to therapy [4] and in a retrospective study from the Reunion Island outbreak [5].

CONCLUSIONS

Given the experience in treating this patient, colchicine should be considered an option in patients whose arthralgias persist despite nonsteroidal anti-inflammatory drug treatment, and consideration should be given to investigating its use in clinical trials given the ongoing epidemic of chikungunya virus.

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