Pros and cons: Disease-modifying antirheumatic drugs (DMARD) for Lyme Arthritis

Saturday, November 23, 2019

https://danielcameronmd.com/pros-and-cons-disease-modifying-antirheumatic-drugs-dmard-for-lyme-arthritis/

Antirheumatic drugs (DMARDs) are intended to slow down disease progression. Synthetic DMARDs include methotrexate and sulfasalazine. Biological DMARDs include the tumor necrosis factor alpha (TNF?), blockers infliximab (Remicade®), interleukin 1 blockers anakinra (Kineret®), and monoclonal antibodies against B cells (such as rituximab) and the T cell costimulation blocker abatacept (ORENCIA®).

I can agree with the conundrum raised by Dr. Steere in the *Journal of Rheumatology*:

- "Do [Lyme arthritis] patients with little or no apparent response to oral antibiotic therapy still have active *B. burgdorferi* infection requiring IV antibiotic therapy…
- do they have post-infectious [Lyme arthritis] requiring therapy with disease-modifying antirheumatic drugs…
- or do they have another form of chronic inflammatory arthritis?" [1]

The wrong treatment could have detrimental effects, as Steere points out. "Either IV antibiotics or DMARD, given inappropriately, might be harmful."

I do not agree, however, with Dr. Steere's conclusion: "It is now clear that this complication is not caused by antibiotic resistance or failure of spirochetal killing."

Furthermore, I do not agree with his approach: "We treat these patients with DMARD such as hydroxychloroquine, methotrexate, or tumor necrosis factor inhibitors, the standard of care for other forms of chronic inflammatory arthritis."

Both treatment approaches have complications:

Antibiotics might lead to 1) adverse events, e.g. diarrhea due to c. difficile, 2) antibiotic resistance, or 3) delay DMARD treatment.

Meanwhile, DMARD has its own side effects and may also lead to treatment failures by delaying antibiotic treatment.[1]

The evidence of DMARDs success in Lyme disease patients is weak.

The evidence to support DMARD is primarily based on results from case series studies rather than clinical trials. Doctors at Massachusetts General Hospital have described a series of 30 patients who developed systemic autoimmune joint disease following Lyme disease.

"Fifteen had rheumatoid arthritis (RA), 13 had psoriatic arthritis (PsA), and 2 had peripheral spondyloarthropathy (SpA)," according to Arvikar and colleagues. [2] They found DMARD reduced pain in their 30 subjects.

However, the trial was not designed to address whether DMARD would treat other common Lyme disease manifestations in their patients, such as fatigue, Lyme neuropathy, neuropsychiatric Lyme disease, and Lyme encephalopathy.

It is important for doctors to be sure any persistent infections have resolved before prescribing DMARDs in patients presenting with a systemic autoimmune joint disease after a history of Lyme disease.

It would also be reasonable to include patients in the discussion when prescribing DMARDs to allow shared decision-making.

Related Articles:

How can doctors determine if patients with systemic autoimmune joint disease following Lyme disease don't have a persistent infection?

Can Lyme disease trigger an autoimmune disease?

Persistent Lyme infection or inflammatory immune response?

References:

1. Steere AC. Treatment of Lyme Arthritis. J Rheumatol. 2019 Aug;46(8):871-873.
2. Arvikar SL, Crowley JT, Sulka KB, Steere AC. Autoimmune Arthritides, Rheumatoid Arthritis, Psoriatic Arthritis, or Peripheral Spondyloarthropathy, Following Lyme Disease. Arthritis & rheumatology. 2016.

Latest From the Lyme Disease Science Blog
