Early drug intervention reduces risk of cardiovascular events in rheumatoid arthritis sufferers

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People who develop rheumatoid arthritis as older adults benefit from early and sustained use of a drug called Methotrexate (MTX), a recent

study led by University of Toronto researcher Jessica Widdifield has found.

The study, the first of its kind to examine the evidence around the effect of timing of MTX initiation in relation to long-term outcomes, found that rheumatoid arthritis patients who have access to MTX earlier in their diagnosis reduce their risk of cardiovascular events associated with the disease.

The research was recently published in the *Journal of Rheumatology.*

"Rheumatoid arthritis is an inflammatory disease, and patients who develop the condition at an older age have a higher disease activity and inflammation in their joints," says Widdifield, an assistant professor at the University of Toronto's Institute of Health Policy, Management and Evaluation and a scientist at Sunnybrook Research Institute.

"This type of chronic systemic inflammation has been linked to atherogenesis, a disease of the arteries, but MTX may also influence this type of inflammation throughout the body, reducing a patient's cardiovascular risk."

While MTX has been vetted for safety and efficacy, it is also a chemotherapeutic agent and an immunosuppressive drug, which means that some family physicians aren't comfortable prescribing it. Early access to treatment for rheumatoid arthritis is also dependent on a patient's ability to see a rheumatologist, creating a barrier for older adults that can delay the effectiveness of the drug.

"There are many factors that delay access to treatment—one of which is a shortage of rheumatologists, which leads to longer wait times," says Widdifield, who is also an adjunct scientist at the Institute for Clinical Evaluative Sciences (ICES). "Another is that patients might delay

presenting to primary care physicians thinking that they are suffering with just arthritis or symptoms of getting older."

Widdifield also notes that primary care physicians may not always recognize signs and symptoms of rheumatoid arthritis and the urgency of a referral to a rheumatologist. Further delays in treatment may also result from a rheumatologist opting to use another form of treatment other than MTX.

Each of these barriers can have a negative impact on the ability of MTX to diminish long-term risks, including cardiovascular events, or even delay remission of the disease. Patients who were treated with MTX within the first year of diagnosis experienced a lower rate of cardiovascular events, while those that were given the drug continuously and assessed in the last 12 months reduced their risk by 20 percent, according to the study.

With evidence already in place showing that early MTX treatment helped patients end up in remission from the disease, Widdifield felt it was imperative to assess whether early treatment also reduced cardiovascular risks.

"Our evidence supports the recommendation that rheumatoid arthritis patients should receive methotrexate treatment early and continue to receive it in order to control the disease and reduce their risk of a cardiovascular event," says Widdifield.

Her study also demonstrates the importance of rheumatologists in providing timely care. In Canada, Widdifield notes the supply of rheumatologists has not kept up with the needs of our growing and aging population, increasing the burden of symptoms and risks on patients with rheumatoid arthritis.

"We have made great strides in improving care and outcomes for Canadians with rheumatoid arthritis," says Widdifield, "but future patients may not have the same experience if we don't also address the impending shortage and maldistribution of rheumatologists across the country."

More information: Jessica Widdifield et al. Associations Between Methotrexate Use and the Risk of Cardiovascular Events in Patients with Elderly-onset Rheumatoid Arthritis, *The Journal of Rheumatology* (2018). DOI: 10.3899/jrheum.180427

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