

New advice on arthritis drugs

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New research evaluating the drugs commonly used by rheumatoid arthritis patients suggests two combinations could reduce the risk of heart attack and strokes.

The new publication in Frontiers in Cardiovascular Medicine has found



that anti-rheumatic drug regimens that include either tumor necrosis factor inhibitors or hydroxychloroquine might significantly protect the endothelium in rheumatoid arthritis.

Occurring in about one in 100 people, rheumatoid <u>arthritis</u> (RA) is a common autoimmune disease which leads to inflammation and pain in the connective tissue of a patient's joints.

"Rheumatoid arthritis patients have an increased risk of atherosclerosis (clogged arteries) and <u>cardiovascular disease</u> when compared to the <u>general population</u>, probably due to an excess of inflammation in patients with this condition," says chief investigator Professor Gian Luca Erre, national coordinator of the Evaluation for Coronary Heart Disease Risk Estimation in Rheumatoid Arthritis (EDRA) study.

The Italian and Australian research evaluated five different types of antirheumatic drug usage groups in a group of 868 rheumatoid arthritis patients in a national Italian study.

"This excess of inflammation is not limited to the joints, but also involves the blood vessels leading to dysfunction in the inner layer of blood vessels (the endothelial)," says University of Sassari Professor of Rheumatology Gian Luca Erre.

Drugs prescribed for rheumatoid arthritis (anti-rheumatic drugs) typically have anti-inflammatory effects and may potentially protect the endothelium, reducing the risk of atherosclerosis in these patients.

"However, most patients take several anti-rheumatic drugs at once. Hence, it is difficult to see which specific agent is better than others at protecting the endothelium."

Links between anti-rheumatics and endothelium were studied in five



types of anti-rheumatic <u>drug</u> usage (groups) in the EDRA study—a multicentre study of Italian patients with rheumatoid arthritis, led by the University of Sassari.

The endothelial function was relatively preserved in two of these groups—that is, those with the tumor necrosis factor inhibitors and use of hydroxychloroquine.

Drugs used to treat RA's debilitating pain in millions of patients around the world might have protective cardiovascular effects however these can be variable, as also shown in our study, says Flinders University Professor of Pharmacology Arduino Mangoni.

"Prospective studies are now required to test whether such regimens are also able to curb the risk of heart attack and stroke in these patients," says Professor Mangoni.

The study used a relatively new statistical technique called latent class analysis to investigate whether specific groups of anti-rheumatics, rather than single agents, have different effects on the endothelium.

More information: Arduino A. Mangoni et al, Patterns of anti-inflammatory and immunomodulating drug usage and microvascular endothelial function in rheumatoid arthritis, *Frontiers in Cardiovascular Medicine* (2021). DOI: 10.3389/fcvm.2021.681327

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