Treatment with anti-TNFs reduces the risk of cardiovascular events in rheumatoid arthritis

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Results from a retrospective analysis of contemporary data presented today at EULAR 2012, the Annual Congress of the European League Against Rheumatism, predict, based on estimates from a multivariate regression model, that the cumulative use of anti-tumour necrosis factor drugs (anti-TNFs) for one, two, or three years is associated with reduced risk of cardiovascular events by 24%, 42% and 56% in patients with rheumatoid arthritis (RA) respectively, compared to not using anti-TNF therapies (adjusting for background use of methotrexate or other disease modifying anti-rheumatic drugs [DMARDs]).

The model, based on 109,462 patients demonstrated that each additional six months of treatment with anti-TNFs significantly reduces the risk of cardiovascular events (myocardial infarction [MI], stroke/transient ischemic attack, unstable angina, or heart failure) (Hazard Ratio [HR]=0.87, p=0.005). Breaking this benefit down further, the same model shows that the risk of MI was also significantly reduced (HR=0.80, p=0.013).

Focusing on some subgroups of patients, each additional six months of anti-TNF therapy significantly reduced the risk of cardiovascular events in RA patients aged ≥50 years (HR =0.86, p=0.007) as well as in those without prior treatment with methotrexate (HR=0.85, p=0.022).

"RA and heart disease have a common origin and the systemic inflammation involved in RA is thought to also promote cardiovascular disease and even cardiovascular death. Studies have shown that within

the first ten years of being diagnosed with RA, the risk of a heart attack almost doubles," said Dr. Michael Nurmohamed, VU University Medical Centre & Jan van Breemen Research Institute, Reade, The Netherlands and lead study author. "As anti-TNFs are now the treatment of choice for patients who are unstable on methotrexate, the decreased cardiovascular risk observed in the study is an added bonus to an already successful class of drugs."

The study using U.S. health plan claims identified 109,462 patients with ≥2 rheumatoid arthritis diagnoses and ≥1 filled prescription of anti-TNF therapy, methotrexate therapy, or other non-biologic DMARD. Patients were assessed from index fill date to first inpatient cardiovascular event diagnosis or to the end of health plan enrolment or to six months after discontinuation of their index drug, whichever came first. This included a total of 105,920 patient years of follow up, including 48,621 patient years of exposure to anti-TNFs, 35,480 patient years of exposure to methotrexate, and 52,994 patient years of exposure to other non-biologic DMARDs. A total of 1,743 patients (1.6%) had a cardiovascular event after their index prescription.

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