10. ACR Fellows

A216 METHOTREXATE USE, MTHFR POLYMORPHISMS AND TRADITIONAL RISK FACTORS IN PREDICTING CARDIOVASCULAR EVENTS IN ELDERLY MALES WITH RHEUMATOID ARTHRITIS (RA)

Lisa A Davis,¹ Grant W Cannon,² Lauren M Pointer,¹ Roger K Wolff,² Ted R Mikuls,³ Leah Haverhals,¹ Andreas M Reimold,⁴ Gail S Kerr,⁵ J Steuart Richards,⁵ Dannette S Johnson,⁶ Liron Caplan¹ ¹Denver Veterans Affairs Medical Center (VAMC), University of Colorado School of Medicine, Denver, Colorado, USA; ²George E. Wahlin VAMC, University of Utah, Salt Lake City, Utah, USA; ³Omaha VAMC, Nebraska Arthritis Outcomes Research Center, University of Nebraska Medical Center, Omaha, Nebraska, USA; ⁴Dallas VAMC, Texas Southwestern University Medical Center, Dallas, Texas, USA; ⁵Washington, DC VAMC, Georgetown University, Washington, DC, USA; ⁶Jackson VAMC, University of Mississippi, Jackson, Mississippi, USA

10.1136/ard.2011.151209.1

Objective The enzyme methylenetetrahydrofolate reductase (MTHFR) has been implicated in the metabolism of methotrexate (MTX) – the most common disease modifying antirheumatic drug used to treat rheumatoid arthritis (RA). MTHFR C677T and A1298C polymorphisms have been associated with increased cardiovascular (CV) events in non-RA populations. We explored the potential associations of MTHFR C677T, A1298C and MTX with decreased time-to-CV event in the prospective Veterans Affairs Rheumatoid Arthritis (VARA) registry.

Methods VARA participants were genotyped for MTHFR polymorphisms. Demographic information, RA duration and auto-antibody status were collected upon enrolment into the registry. Disease activity was recorded at baseline and at follow-up visits. Patients' baseline comorbidities and the outcome variable were defined using ICD-9 and CPT codes recorded in inpatient and outpatient patient treatment files. The combined CV event outcome included: myocardial infarction (MI), percutaneous transluminal coronary angioplasty, coronary artery bypass graft and stroke. Multivariable Cox proportional-hazards regression was used to model the time-to-CV event.

Results Data were available for 1047 subjects. Post-enrolment CV events occurred in 406 patients. Prior MI was strongly associated with time-to-CV event (HR 6.65 (CI 5.31 to 8.33)), as was hyperlipidaemia (HR 1.64 (CI 1.32 to 2.05)). Methotrexate use was associated with a substantial decline in first CV events (HR 0.76 (CI 0.62 to 0.92)). MTHFR polymorphisms were not associated with decreased time-to-CV event.

Conclusions Although MTHFR polymorphisms have previously been associated with increased CV events, we found no evidence that MTHFR status was associated with VARA patients' time-to-CV event. Traditional CV risk factors conferred substantial CV risk, while methotrexate use was protective.