MedicalXpress

Combining NSAIDs and TNFi may reduce radiographic progression in ankylosing spondylitis

June 14 2018

The results of a cohort study presented at the Annual European Congress of Rheumatology (EULAR 2018) showed that, in patients with ankylosing spondylitis (AS) taking tumour necrosis factor (TNF) inhibitors, the addition of non-steroidal anti-inflammatory drugs (NSAIDs) was associated with significantly less radiographic progression in a dose-related manner at four years.

When looking at specific NSAIDs, celecoxib in combination with TNF inhibitor use was associated with the greatest reduction in radiographic progression, which was significant at both two and four years.

"Our results suggest that the use of TNF inhibitors and NSAIDs, particularly celecoxib, have a synergistic effect to slow radiographic progression in AS patients, particularly at higher doses," said Lianne Gensler, Associate Professor of Medicine, University of California, San Francisco (study author). "This is the first study to compare whether effects are comparable among different NSAIDs in this setting."

Ankylosing spondylitis is a chronic inflammatory disease that can be classified as being axial or non-axial (peripheral) disease, according to which joints in their body are affected. Over time, the joints can become damaged, a process referred to as radiographic or structural progression.

NSAIDs are first-line therapy for patients with AS. If patients have a

poor response, contraindications or intolerance to NSAIDs, they may then be given TNF inhibitors. Current treatment practice is based on symptomatic relief, however there is also some evidence that NSAIDs slow radiographic progression if taken continuously. The evidence for the impact of TNF inhibitors on radiographic progression is unclear despite their good clinical efficacy. Many patients discontinue NSAIDs when they are put onto TNF inhibitors due to good symptom control, therefore there is very limited data on the impact of combined therapy on radiographic progression.

"Radiographic progression has an important bearing on patient mobility, as well as affecting their general well-being and day-to-day living," said Professor Robert Landewé, Chairperson of the Scientific Programme Committee, EULAR. "We welcome these results that support a potential disease modifying effect in patients with ankylosing spondylitis taking current therapies."

This prospective cohort study included 519 patients with AS who met the modified New York criteria with at least four years of clinical and radiographic follow up. The average age of participants was 41.4 years with an average symptom duration of 16.8 years, three quarters were male. NSAIDs were used in 66% of patients (half using an index below 50 and half above). TNF inhibitors were used in 46% of patients.

After baseline measures, clinical and medication data were collected every six months, and radiographs performed every two years. Radiographic progression was measured using the modified Stoke Ankylosing Spondylitis Spine Score (mSASSS). Statistical analysis which accounted for time-varying covariates was used to estimate the causal effect of TNF inhibitors and NSAIDs on radiographic progression. The analysis was adjusted for gender, race/ethnicity, education, symptom duration, enrolment year, number of years on TNF inhibitors, symptom duration at time of TNF inhibitor start, baseline

mSASSS, ASDAS-CRP, current smoking, and missed visit status.

In patients taking TNFi, the addition of NSAID therapy was associated with less radiographic progression in a dose-related manner at four years. Mean difference in mSASSS between TNFi use and no TNFi use at four years was 0.50 (p=0.38), -1.24 (p