Not taking gastroprotective drugs prescribed with anti-inflammatory medicines

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To relieve pain, arthritis sufferers are prescribed medications that may include non-steroidal anti-inflammatory drugs (NSAIDs) or cyclooxygenase-2 (COX-2) inhibitors, both of which can irritate the digestive tract. At times additional drugs are co-prescribed with NSAIDs or COX-2 inhibitors to prevent adverse gastrointestinal (GI) effects. Now a new study available today in the American College of Rheumatology journal, *Arthritis & Rheumatism*, reveals that decreasing gastroprotective agent (GPA) adherence among users of COX-2 inhibitors is linked to an increased risk of such upper GI complications.

Current clinical guidelines recommend that GPAs, such as proton pump inhibitors (PPIs) or misoprostol, be prescribed to patients taking NSAIDs and COX-2 inhibitors—also known as COX-2 blockers—who are at high risk of upper GI events. Previous research shows that in NSAID users who fail to adhere to the GPA regimen, the protective effect of GPA drugs is diminished. However, limited evidence is available regarding the effect of adherence to a gastroprotective drug regimen with COX-2 blocker use, and is the focus of the current investigation led by Dr. Vera Valkhoff with Erasmus University Medical Center in the Netherlands.

Dr. Valkhoff and colleagues analyzed data from population-based primary care registries in the United Kingdom, the Netherlands, and Italy between 1996 and 2008. The study group included 14,416 patients 50 years of age or older who were prescribed COX-2 inhibitors and GPAs. Researchers calculated GPA adherence as the proportion of the

COX-2 blocker treatment days covered by a GPA prescription. Cases were part of the COX-2 blocker plus GPA group who had an upper GI complication (GI bleeding or symptomatic ulcer) which included 16,442 episodes.

Researchers noted that of the COX-2 blockers prescribed 43% of participants used celecoxib (Celebrex), 41% rofecoxib (Vioxx),1 and 15% etoricoxib (Arcoxia),2 with most patients using these drugs for less than 30 days. During the study 74 patients had an upper GI event, resulting in an incidence rate of 11.9 per 1,000 COX-2 inhibitor user years. Results showed that the risk of upper GI complication was higher in low GPA adherers (GPA was taken on average one out of five days of COX-2 blocker use, or less) compared to full adherers (GPA was taken four out of five days of COX-2 inhibitor use, or more).

Further analysis found that for every 10% decrease in GPA adherence, there was a 9% increase in the risk of gastrointestinal complications. "Our findings show that with every three day reduction of GPA coverage per 30 days of COX-2 inhibitor use, the risk of upper GI events increases 9%," concludes Dr. Valkhoff. "This study confirms the benefits of GPA adherence in reducing risk of upper GI complications from use of COX-2 blockers." The authors point out that GPA adherence is important in reducing risk of upper GI events with COX-2 blockers, and non-adherence is a modifiable risk factor while conventional risk factors such as a prior GI event or use of anticoagulant therapy are not.

More information: "Adherence to Gastroprotection During Cyclooxygenase-2 Inhibitor Use and the Risk of Upper Gastrointestinal Events: A Population-based Study." Vera E Valkhoff, Eva M van Soest, Giampiero Mazzaglia, Mariam Molokhia, Rene Schade, Gianluca Trifiro, Jay L Goldstein, Sonia Hernandez-Diaz, Ernst J Kuipers, Miriam C J M Sturkenboom. *Arthritis & Rheumatism*; Published Online: April

16, 2012 (DOI: 10.1002/art.34433).