

Use of NSAIDs and COX-2 Inhibitors Raises Risk for AF

Risk for atrial fibrillation was especially elevated among new users of nonsteroidal anti-inflammatory drugs and cyclooxygenase-2 inhibitors.

Use of nonselective nonsteroidal anti-inflammatory drugs (NSAIDs) or selective cyclooxygenase (COX)-2 inhibitors has been associated with elevated risk for chronic atrial fibrillation ([Arch Intern Med 2010; 170:1450](#)). In this population-based case-control study from Denmark, investigators assessed risk for atrial fibrillation (AF) or flutter associated with these drugs.

Nearly 33,000 patients (median age, 75) with first diagnoses of AF were matched with 326,000 age- and sex-matched controls. After adjustments for multiple variables including AF risk factors, NSAID or COX-2 inhibitor use was associated with significantly elevated risk for AF (incident rate ratios, 1.2 and 1.3 for current use of NSAIDs and COX-2 inhibitors, respectively, and 1.5 and 1.7 for new use of NSAIDs and COX-2 inhibitors, respectively). Results were similar for individual NSAIDs and COX-2 inhibitors.

Comment: In this study, NSAIDs and COX-2 inhibitors were associated with elevated risk for AF, especially among new users. As an editorialist noted, these findings have important public health implications because these drugs are used widely and because AF prevalence increases with age. Although the results could be influenced by confounding (e.g., the investigators lacked body-mass index data; obesity is strongly associated with arthritis — a common indication for these drugs — and a risk factor for AF), the findings are plausible: These drugs can exacerbate hypertension and heart failure and, therefore, might precipitate AF or flutter.

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