Non-steroidal anti-inflammatory drugs and the risk of atrial fibrillation: A population-based follow-up study

British Medical Journal Open April 8, 2014; Vol. 4; No. 4; e004059

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1) Atrial fibrillation (AF) is a common cardiac arrhythmia, which is associated with increased morbidities (stroke and heart failure), increased mortality and reduced life expectancy.

2) "Several drugs have been associated with an increased risk of AF including nonsteroidal anti-inflammatory drugs." [NSAIDs]

3) NSAIDs are inhibitors of cyclooxygenase, and are widely used to treat inflammatory conditions and pain. [They block the conversion of the omega-6 fatty acid arachidonic acid into the inflammatory eicosanoid prostaglandin-E2 (PGE2)].

4) Use of NSAIDs is associated with a higher risk of myocardial infarction, stroke and heart failure.

5) The objective of this study was to investigate the association of nonsteroidal anti-inflammatory drugs (NSAIDs) and the risk of atrial fibrillation in a prospective community based population. The study involved 8,423 participants without atrial fibrillation at baseline. The mean baseline age of the study population was 68.5 years. Follow-up averaged 12.9 years.

6) Current use of NSAIDs increased the risk of atrial fibrillation by 76% compared with never-use.

7) Recent use (within 30 days after discontinuation of NSAIDs) was associated with an increased risk of atrial fibrillation by 84% compared with never-use.

8) "In this study, use of NSAIDs was associated with an increased risk of atrial fibrillation."

9) Higher dosages of NSAIDs appeared to be associated with a higher risk of atrial fibrillation.

10) "Our results suggest that NSAID use is associated with a higher risk of AF. Current use and recent past use were associated with a higher risk of AF, adjusted for age, sex and cardiovascular risk factors."

11) The risk of AF was strongest for COX-2 inhibitors. [Celebrex]

12) NSAIDs damage the kidneys, increasing blood pressure and thus increasing risk of AF.

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13) "In conclusion, we found that use of NSAIDs is associated with an increased risk of AF. Current use and recent past use were especially associated with a higher risk of AF, adjusted for age, sex and cardiovascular risk factors."

COMMENTS:
Over the years we have reviewed a number of studies showing adverse effects to NSAID pain medications, including these:

KIDNEY DAMAGE

Article Review #50-10
Risk of Kidney Failure Associated with the Use of Acetaminophen, Aspirin, and Nonsteroidal Antiinflammatory Drugs
New England Journal of Medicine, December 22, 1994

GASTROINTESTINAL BLEEDING

Article Review #33-1999
GASTROINTESTINAL TOXICITY OF NONSTEROIDAL ANTIINFLAMMATORY DRUGS
The New England Journal of Medicine, June 17, 1999

Article Review #21-06
Omega-3 Fatty acids (fish oil) as an anti-inflammatory: an alternative to nonsteroidal anti- inflammatory drugs for discogenic pain
Surgical Neurology, April 2006

HEART ATTACK / STROKE

Article #30-06
NSAID use and the risk of hospitalization for first myocardial infarction in the general population
European Heart Journal, May 26, 2006

Article Review #13-12
Cardiovascular safety of non-steroidal anti-inflammatory drugs British Medical Journal, January 11, 2011

Article Review #33-12
Duration of Treatment With Nonsteroidal Anti-Inflammatory Drugs and Impact on Risk of Death and Recurrent Myocardial Infarction in Patients With Prior Myocardial Infarction
Circulation; May 21, 2011

DEMENTIA / ALZHEIMER'S

Article Review #29-10
Risk of dementia and AD with prior exposure to NSAIDs Neurology, April 22, 2009

HEARING LOSS

Article Review #5-12
Analgesic Use and the Risk of Hearing Loss in Men The American Journal of Medicine; March 2010

ERECTILE DYSFUNCTION

Article Review #17-12
Regular Nonsteroidal Anti-Inflammatory Drug Use & Erectile Dysfunction Journal of Urology; April 2011

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