Can NSAIDs Really Be This Dangerous?

By Josh Bloom — December 29, 2020

It's no secret that NSAIDs come with a host of side effects. But how often? And how bad are they? A presentation at the 2020 PAINWeek Conference gives us some numbers. If taken at face value they are horrifying.

Before we get started please note that this study is not from a peer-reviewed journal. In fact, it's not even in a journal article. This information comes from an abstract from one of the presentations at the 2020 PAINWeek Virtual Conference [2], which was summarized [3] in the December 28th issue of Anesthesia News. So, beware of over-interpreting the data.

That said, a study about what happens to people who take prescription NSAIDs for arthritis of the knee and/or hip is eye-opening because the side-effects are so pronounced. Often these drugs are the only option for people who have been stripped of the option of using opioid analgesics for pain by the anti-opioid zealots. You know who they are.

The data from the presentation by Stuart Silverman, MD, a clinical professor of medicine and rheumatology at Cedars-Sinai Medical Center, are rather disturbing – probably more than you'd expect. Are NSAIDs more dangerous than opioids, or is it the other way around? Right now I have no idea.

There are well-known risks in taking the family of drugs which includes aspirin, Advil, Aleve, and Celebrex (1). But the magnitude of these risks surprised the hell out of me. Of course, the decision
to take any drug should be balanced by comparing its benefits and risks. But if its risk becomes high enough, then the decision of whether or not to take it becomes difficult. Here is a summary of the data from Dr. Silverman’s presentation. Not for the faint-hearted.

Silverman and colleagues conducted a retrospective analysis of 19 million people between January 2012 to March 2017 (2). Inclusion criteria were; 1) Two or more diagnoses of arthritis of the knee and/or hip; 2) at least one prescription for a 90+ day supply of an NSAID during a three-year period after the arthritis was diagnosed.

**Gastrointestinal Adverse Effects**

Those who took the drugs had a 393% increase in all gastrointestinal adverse effects. In particular, there was a 667% increase in gastrointestinal hemorrhages.

**Cardiovascular Adverse Effects**

Unsurprisingly, cardiovascular events were 74% higher in people who took NSAIDs. Heart attacks increased by 600% and high blood pressure by 74%.

**Effects on Kidneys**

Renal toxicity increased by 433%, A 740% increase in acute renal failure was the biggest contributor to renal toxicity. Most people who have kidney damage, as a result of disease or prior NSAID use cannot take NSAIDs at all.

**General Adverse Effects**

Hospital admissions for the NSAID group rose by 236%. Emergency room visits were 294% higher. Healthcare costs were also ~30% higher in the group that took NSAIDs.

**Conclusion**

Keep in mind that as in the case with all retrospective studies based on information from large databases, the inclusion criteria can make a substantial difference in the outcome. For example, if the group also searched for patients with other types of arthritis such as shoulders or hands, and found no adverse events but chose to report only the data from people with arthritic knees and hips, it would skew, and perhaps nullify, the results. (I’m not at all suggesting that any data manipulation occurred in this study. Unfortunately, it’s very common with retrospective studies.)

That said, there is no mention of unreported results and if there are other biases they are not obvious. Given the magnitude of the side effects in the study, I believe that it is unlikely that we are seeing artifactual data arising from biases.

Let’s wrap this up with the author’s own words:

> This study found that patients with knee/hip OA who were prescribed NSAIDs experienced an increase in negative clinical outcomes and costs. These findings suggest that there is
a need for newer treatments with improved clinical outcomes and less costs to patients with OA of the hip and/or knee.

S. Silverman, et. al., 12/28/20

NOTES:

(1) Although Celebrex is an atypical NSAID (COX-2 selective) it can also cause some of the symptoms listed.

(2) Data were obtained from the database of Optum Healthcare Solutions (private records).

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