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SENIOR HEALTH

Anti-Inflammatories and OA: Are the Rewards Worth the Risks?

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WHAT YOU NEED TO KNOW

- Osteoarthritis (OA) is the most common of all joint diseases, affecting more than 30 million Americans.
- Rather than bombard an arthritic joint with potentially harmful anti-inflammatories, a safer approach is to encourage regular exercise and recommend simple dietary changes.

Osteoarthritis (OA) is the most common of all joint diseases, affecting more than 30 million Americans. In the next few decades, the number of people suffering with osteoarthritis is expected to skyrocket, as people are living longer and the percentage of the population that is overweight continues to increase.

NSAIDS: Commonly Used for OA – But Lacking Research Support

A common treatment intervention for osteoarthritis is anti-inflammatory medication (NSAIDs) such as aspirin, ibuprofen,and naproxen. Given their widespread use in the management of OA, you would think there would be an abundance of scientific evidence suggesting these drugs are actually useful. This is not the case.

In a six-year study of nearly 1,700 people with hip and knee arthritis, researchers from The Netherlands determined that individuals who routinely took NSAIDs for pain management had a 240% increase in the development of hip arthritis and a 320% increase in the development of knee arthritis compared to individuals who rarely used these drugs.[1] The authors state, “Whether this occurs because of a true deleterious effect on cartilage or because of excessive mechanical loading

following pain relief remains to be investigated."

Putting aside the accelerated development of arthritis, routine use of NSAIDs to manage joint pain significantly increases the risk of GI bleeds, hypertension, coronary artery disease, atrial fibrillation, and even congestive heart failure.[2] Disturbingly, 14% of high-school and college football players take nonsteroidals daily despite the proven health risks.[2]

Corticosteroids Aren't Any Better

To reduce potential side effects, physicians frequently prescribe short-term oral corticosteroids (i.e., less than two weeks) with the belief that the complication rates will be extremely low due to the short duration of treatments.

To test this theory, researchers from Taiwan looked at 2.6 million people who received a short steroid burst during the study period.[3] These were all low-risk people with an average age of 38. Regardless of their overall health and young age, the rates of GI bleeds, sepsis and heart failure were alarmingly high, with 2.7% of the treated population developing GI bleeds, and 1.3 per thousand suffering heart failure.

The authors of this study acknowledge that these numbers may represent an *underestimation*, because they excluded people over the age of 64, who are at high risk for complications following corticosteroid interventions.

Another common treatment intervention for osteoarthritis is to inject corticosteroids directly into the arthritic joint. In spite of the popularity of this treatment intervention, the relative safety of intra-articular corticosteroids has not been adequately studied.

In 2019, doctors from Boston University injected 459 patients presenting with hip and knee arthritis with intra-articular corticosteroids.[4] Over the next two to 15 months, 8% of these patients developed serious complications, the most common being accelerated joint destruction.

While an 8% percent complication rate is high, the authors only followed up on 241 of the 459 individuals injected, so the complication rates were most likely appreciably *higher*. The authors of this study were surprised by the high prevalence of adverse events, but a recent study of 70 patients by Simeone, et al.,[5] showed that the 44% of patients receiving intra-articular corticosteroid injection had accelerated progression of osteoarthritis and a shocking 17% developed articular surface collapse.

Note that the Simeone, et al., study was controlled in that the authors compared outcomes between two groups with similar degrees of arthritis. One group received the intra-articular corticosteroid and the other group did not. In the group that did not receive the injection, 24% had radiographic progression of arthritis, but only 1% suffered joint collapse.

Although the exact mechanism for adverse events remains unclear, there is some evidence that corticosteroid injections, especially when combined with an anesthetic, can be toxic to cartilage.[6]

Preferred Options for OA

Rather than bombard an arthritic joint with potentially harmful anti-inflammatories, a safer approach is to encourage regular exercise (which has been proven to reduce pain) and recommend simple dietary changes.

In a 2013 study evaluating the effectiveness of diet, diet plus exercise, or exercise alone in the management of osteoarthritis in overweight and obese, elderly individuals, nearly 90% of the 454 people who began this 18-month study had significant reductions in pain and achieved more than 10% loss in body mass.[7]

Not surprisingly, the combination of diet and exercise achieved the best outcomes, as these individuals had less pain, better function, faster walking speeds, and a better self-reported quality of life than the diet alone group. The diet and exercise group also had greater reductions in interleukin-6, which is a marker of systemic inflammation that correlates strongly with the progression of osteoarthritis.

Clinical Takeaway

The bottom line with all of these studies is that the most effective way to manage osteoarthritis is not with medication, but with diet and exercise. While many people would argue that diet and exercise interventions are too difficult to follow and compliance is low, it still has to be presented as an option, as the risks associated with pharmacological management are too great.

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