Key Points

1. NSAID's are a widely used group of drugs that have analgesic, anti-inflammatory, and anti-pyrectic action.
2. NSAID's work by affecting certain chemicals in the body that cause inflammation, the prostaglandins.
3. Despite their widespread use, NSAID's can cause serious side effects, including severe gastrointestinal problems; thousands of people die each year from complications due to NSAID's
4. Study showed that peptic ulcers were a common occurrence in people taking an average dose of NSAID's on a daily basis
5. NSAID's can also affect other medical conditions such as asthma, high blood pressure, kidney problems, and liver problems.
6. When using NSAID's people should be aware of the side effects and discuss the benefits and risks with their doctor

Definitions

analgesic - a drug that relieves pain

anti-pyretic - something that reduces fever

cerebellar tonsils - portion of the cerebellum located at the bottom, so named because of their shape

cerebellum - part of the brain located at the bottom of the skull, near the opening to the spinal area; important for muscle control, movement, and balance

cerebrospinal fluid (CSF) - clear liquid in the brain and spinal cord, acts as a shock absorber

Chiari malformation (CM) - condition where the cerebellar tonsils are displaced out of the skull area into the spinal area, causing compression of brain

Understanding The Risks Of Common Painkillers

October 10, 2004 - At some point, most people dealing with Chiari or syringomyelia have reached into their medicine chests for an over-the-counter painkiller to help them get through the day. And if they're like 30 million other people in the world, they chose an NSAID, or non-steroidal anti-inflammatory.

NSAID's are a widely used group of drugs that have analgesic, anti-inflammatory and antipyrectic action. They are very similar to aspirin and are used extensively in treating everything from post-operative pain, arthritis, inflammation, back pain, sciatia, and migraines to pain associated with menstruation. There are many brand names in the NSAID family, including: Advil (ibuprofen), Aleve (naproxen), Excedrin IB, Celebrex (Cox-2), Haltran, Naprosen, and Vioxx to name a few.

Despite the drugs' popularity, many users are unaware of the side effects that NSAID's can cause and the serious risks using them every day can entail. It it well documented in the medical literature - but not commonly discussed in the doctor's office - that daily use of NSAID's can result in gastro-intestinal problems, lead to sudden bleeding, and cause life-threatening health problems. It's a little known fact that thousands of people die every year from complications due to NSAID use.

A recent study, published in the August, 2004 issue of the journal Gastroenterology, drives home the risks of using these "everyday" type drugs. The study examined the rates of ulcer formation in 1,615 osteoarthritis patients who took a standard daily dose of either a placebo, low-dose aspirin, rofecoxib (Vioxx) combined with aspirin, or ibuprofen, over a 12 week period.

The trial was administered to a select group of patients, aged 50 and over, with a confirmed diagnosis of osteoarthritis. Each patient had to meet strict health standards and be without ulcers or erosive esophagitis (verified by endoscopy) to be included in the study. The trial was conducted by Loren Laine of the University of S. California School of Medicine, and a team from Merck Research Laboratories in West Point, Pennsylvania, led by Eric S. Maller.

The patients were randomly split into four groups and given the average daily dosage of each specific drug, with one group taking a placebo, one group taking 81 mg of enteric-coated aspirin a day, one group taking 25 mg rofecoxib combined with the aspirin every day, and one group taking 800 mg of ibuprofen a day. Repeat endoscopies were performed at 6 weeks and 12 weeks. Patients who developed ulcers were discontinued from the study and received ulcer treatment.

The results were striking and clearly show the inherent risk of using NSAID's on a daily basis. Low-dose aspirin did not significantly increase ulcer incidence; in fact, after 12 weeks, only 27 of the patients had ulcers greater than 3mm. But with the addition of 25 mg. of Vioxx, the number jumped to 58. In the ibuprofen group, 62 people - about 15% - developed ulcers after only 12 weeks of use.

A peptic ulcer is a sore that forms in the lining of the stomach or the beginning of the small intestine, the duodenum. Ulcers can cause a gnawing, burning pain in the upper abdomen, accompanied by nausea, vomiting, a loss of appetite and weight loss. NSAID's work by affecting chemicals in the body that cause inflammation, the prostaglandins. Unfortunately, this same group of chemicals is also involved in the activity of the stomach. Thus, NSAID's interfere with the stomach's ability to protect itself from the acid used to digest food and tend to cause indigestion, and in some cases, even ulcers.

Normally the stomach has three defenses against digestive juices: the mucus that coats the stomach lining to protect it from acids, the chemical bicarbonate which neutralizes these acids, and blood circulation to the stomach lining that aids in cell renewal and repair. NSAID's hinder all of these protective mechanisms, and with the stomachs defensives down, the natural digestive juices frequently cause the problems seen in this study.

It should be noted that the harmful effects of NSAID's can occur quickly. In this study, most of the increase in the number of erosions actually had occurred by the week 6 check-up. It should also be noted that while aspirin caused less problems than ibuprofen, it did cause significantly more problems than the placebo.

Although NSAID's can work well as pain-relievers, their benefits should be carefully weighed against their side effects. The finding in this study is in line with other estimates which state that 15%-30% of long term NSAID users develop peptic ulcers. That's a significant number when you consider that peptic ulcers can involve life-threatening complications, such as bleeding and perforation.

The risks of NSAID's don't stop with ulcers either. NSAID's can affect medical conditions such as asthma and high blood pressure, and can even impact the liver and kidneys. In fact, just before this issue was posted, Merck

tissue and disruption of CSF flow

control group - in a study, a group of subjects who are used as a basis for comparison; the control group is usually healthy or does not receive the treatment the experimental group does

endoscopy - inspection of body organs or cavities by use of the Endoscope, a device consisting of a tube and optical system

enteric coated - a type of drug formulation in which tablets or capsules are coated with a special compound that will not dissolve until the pill or tablet is exposed to the fluids in the small intestine

NSAID - non-steroidal anti-inflammatory; class of pain relieving drugs which includes ibuprofen, naproxen (Alleve), and others

placebo - a fake medicine - which has no effect - used in scientific studies as a control

syringomyelia (SM) - neurological condition where a fluid filled cyst forms in the spinal cord

syrinx - fluid filled cyst in the spinal cord

voluntarily pulled their blockbuster drub, Vioxx, off the market due to concerns about side effects involving the heart (see Merck Pulls Vioxx Off The Market)

Despite the lack of awareness regarding the risks of NSAID's, the research is clear. Given this, it is important to discuss NSAID use - especially daily, long-term use - with your doctor, so that together you can evaluate the potential benefits and risks and make an informed, intelligent healthcare decision.

-- *Julie Carter*

Sources

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