Medical Xpress

Common painkillers combined with other drugs may cause high risk of GI bleeding

October 2 2014

Nonsteroidal anti-inflammatory drugs (NSAIDs)—such as ibuprofen and aspirin—increase one's risk of upper gastrointestinal bleeding. When taken in combination with other drugs, this risk is significantly higher, according to new research appearing in the October issue of *Gastroenterology*.

"These findings may help clinicians tailor therapy to minimize upper gastrointestinal bleeding, and are especially valuable in elderly patients who are likely to use multiple drugs at the same time," said Gwen Masclee, MD, lead study author from Erasmus Medical Center in Rotterdam, the Netherlands. "Defining risk factors is a critical step towards improving care and decreasing NSAID-associated complications and deaths."

Researchers performed a self-controlled case series analysis of data from 114,835 patients with upper GI bleeding. Drug exposure was determined based on prescriptions of NSAIDs, cyclooxygenase 2 (COX-2) inhibitors—such as Bextra, Celebrex and Vioxx—or low-dose aspirin, alone and in combination with other drugs that affect risk for internal bleeding. This study identified that:

- Single therapy with non-selective NSAIDs (the commonly found NSAIDs, which contain both COX-1 and COX-2 enzymes) is more likely to cause upper GI bleeding than single therapy with COX-2 inhibitors or low-dose aspirin.
- Combination therapy significantly increases the risk for internal

bleeding, with simultaneous use of non-selective NSAIDs and steroid therapies increasing the risk to the greatest extent.
- The risk of upper GI bleeding is always higher for drug combinations with non-selective NSAIDs than that for low-dose aspirin or COX-2 inhibitors.
- Simultaneous use of non-selective NSAIDs or low-dose aspirin, but not COX-2 inhibitors, with corticosteroids, aldosterone antagonists (diuretic drugs) or anticoagulants (which prevent the blood from clotting) produces significant excess risk of upper GI bleeding.

In patients with increased risk, the researchers recommend first reassessing the need for NSAID therapy (or for the concomitant medication). If feasible, discontinuation of NSAIDs is the preferred strategy in high-risk patients. When NSAIDs are necessary, they should be used at the lowest effective dose for the shortest possible duration.

"Importantly, we found that risk varies dramatically from patient to patient based on underlying characteristics, necessitating careful review to assess risk in each individual using NSAIDs," added Dr. Masclee.

NSAIDs act as pain relievers and fever reducers. Prescription NSAIDs can also work to reduce inflammation. There are currently more than 500 over-the-counter and prescription NSAIDs, including ibuprofen (Advil®, Motrin IB®), naproxen sodium (Aleve®) and aspirin (Bayer®).

More information: Masclee, et al. Risk of Upper Gastrointestinal Bleeding From Different Drug Combinations. *Gastroenterology* 2014: 147(4): 784-792.e9. www.gastrojournal.org/article/S0016-5085