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Diclofenac linked to increased risk of *C. difficile*

Amidst concerns about the potential of diclofenac to increase the risk of heart disease and stroke in patients with pre-existing conditions, (*PLoS Medicine* (2013;10:e1001388), a second study indicates that the popular nonsteroidal anti-inflammatory drug (NSAID) can increase the risk of contracting *Clostridium difficile* (*Br J Clin Pharmacol* 2012;74:370-5).

The highly contagious and antibiotic-resistant superbug can cause intestinal infections, which are severe in about 10% of cases and fatal in about 5% of cases.

According to the study in the *British Journal of Clinical Pharmacology*, patients who had been prescribed diclofenac in hospital were 35% more likely to contract *C. difficile*-associated disease than those not using the drug. In patients who had not been hospitalized, the risk increase was an even higher 43%. There were no other NSAIDs found to have the same correlation. In Canada, about 1.3 million prescriptions for diclofenac were dispensed in 2009.

Colonization with *C. difficile* doesn't always result in symptoms, but in people who have taken antibiotics, or have weakened immune systems, it is easier for it to grow out of control because of the lack of healthy bacteria to fight it. There have been several outbreaks of *C. difficile* across Canada in the past few years, most recently in Ottawa and St. Catharines, Ont.

Although *C. difficile* can also be acquired in the community, it is most frequently acquired at hospitals and long-term care facilities.

The *Br J Clin Pharmacol* study advises physicians to avoid prescribing diclofenac to those who are at risk for *C. difficile*. Study author Dr. Paul Brassard, assistant professor in the Department of Medicine at McGill University Health Centre, Montréal, Quebec, says the study began as a result of case reports linking diclofenac and *C. difficile*. Brassard says they found a "small increase in risk."

Brassard did not see this increase in risk as a reason to immediately delist the medication. "One has to look at the risk-benefit of using this medication, and see what the best usage of the medication would be," he says.

"You don't expect just one study to change practice," said Brassard. "The findings have to be consistent and reproducible over time so it finally gets into the field and eventually changes the practice. And that always takes a number of years." — Sarah Spitz, *CMAJ*

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