Meta-analysis confirms common painkillers increase risk of heart problems and death but suggests size of these risks can

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NSAIDs have been the cornerstone in managing pain in people with inflammatory disorders like rheumatoid arthritis, and are some of the most commonly used drugs worldwide. Earlier research has linked their use with an increased risk of serious gastrointestinal complications, while a new generation of NSAIDs (coxibs) developed to reduce these gastrointestinal side effects have come under scrutiny for increasing the risk of heart attacks and death.

This new study now shows that higher dose regimens of older NSAIDs, such as diclofenac 150mg and ibuprofen 2400mg daily, are associated with similar risks of heart disease.

As such, for every 1000 individuals with a moderate risk of heart disease allocated to 1 year of treatment with high-dose diclofenac or ibuprofen, about three would experience an avoidable heart attack, of which one would be fatal.

In addition, all NSAIDs double the risk of heart failure and produce a 2-times increased risk of serious upper gastrointestinal complications such as bleeding ulcers.

The Coxib and traditional NSAID Trialists' (CNT) Collaboration combined data on outcomes of over 353 000 patients comparing one NSAID with another NSAID or placebo.

The meta-analysis of patient data from 639 randomised trials shows that the size of these risks can be predicted, which may help physicians decide which types of patient are best suited to which NSAID regimen.

Importantly, the increased risk of heart attacks from individual NSAIDs seemed to be proportional to a patient's underlying risk of such heart attacks, so that the risk is highest in those with a previous history of heart disease or those with cardiac risk factors such as raised blood pressure or cholesterol.

According to lead author Professor Colin Baigent from the Clinical Trial Service Unit and Epidemiological Studies Unit, University of Oxford, UK, "Whilst NSAIDs increase vascular and gastrointestinal risks to a varying extent, our analyses indicate that the effects of different regimens in particular patients can be predicted, which may help physicians choosing between alternative NSAID regimens to weigh up which type of NSAID is safest in different patients."

Writing in a linked Comment, Marie Griffin from Vanderbilt University Medical Center in the USA says, "The meta-analysis offers considerable certainty about relative and absolute major vascular risks of high doses of the most commonly prescribed NSAIDs, but leaves large gaps about risks associated with lower NSAID doses, longer durations of use, and residual effects after stopping treatment."

She adds, "Identification of safe and effective strategies for chronic pain is sorely needed. In the meantime, long-term use of high dose NSAIDs should be reserved for those who receive considerable symptomatic benefit from the treatment and understand the risks."

More information:
www.thelancet.com/journals/lan … (13)60900-9/abstract

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