

The gastrointestinal side effects and toxicity associated with nonsteroidal anti-inflammatory drugs (NSAIDs)

Abstract:

Nonsteroidal anti-inflammatory drugs (NSAIDs) are commonly used to alleviate pain, but unfortunately, they are associated with significant gastrointestinal complications that give rise to considerable clinical and public health challenges. In this literature review, we aim to explore the gastrointestinal side effects and toxicity tied to NSAID use by investigating the underlying mechanisms and examining potential approaches for minimizing these risks. NSAIDs inflict harm by inhibiting cyclooxygenase enzymes, disrupting prostaglandin synthesis, and diminishing gastric mucosal protection. This disruption can result in gastric ulcers, bleeding, or even perforation; however, their severity depends on several factors, including the specific type of NSAID used, the dosage administered, and characteristics unique to each patient. Various risk factors have been identified, such as advanced age, previous history of gastrointestinal complications, concurrent medication usage, and infection with *Helicobacter pylori*. An understanding of these particular mechanisms and an appreciation for associated risk factors serve as a foundation upon which tailored preventive measures can be developed to optimize patient outcomes. With this review acting as a catalyst for further research endeavors, we hope that interventions to promote safer pain management will be realized to address better the prominent clinical implications behind NSAID use within our society.