

Mini-Review Article: Erroneous uses of NSAIDs in patients with COVID-19, Dengue, and Chikungunya

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Abstract

NSAIDs are considered the mainstay of current therapies for viral arthropathies, albeit they frequently only offer partial relief. Numerous studies have documented widespread abuse of NSAIDs among Covid-19, Dengue, and Chikungunya patients. NSAIDs can be used to treat severe arthralgia, however the WHO advises against doing so in suspected Chikungunya patients until it has been determined that they do not have dengue. Acetaminophen is recommended by consensus guidelines for treating Dengue fever from the WHO and CDC, although NSAIDs are contraindicated due to a possible increase in bleeding risk, which could result in thrombocytopenia as a side effect.

Keywords: pain management; cautions with SSRIs; hypertensive patients; viral fever; misuse of NSAIDs; NSAIDs in kidney-compromised patients

Introduction

Maintaining the body hydration level is more crucial than bringing down the temperature with painkillers, especially in Dengue or Covid-19 patients. In children, using too much paracetamol syrup or suppositories might irritate the stomach, preventing proper digestion, leading to vomiting, and even necessitating hospitalization. With very few exceptions, the majority of hospitalizations or ICU admissions among those individuals might be avoided by just avoiding dehydration at home with saline and fruit juice or by simply drinking more water.

At least 165,000 fatalities, 650,000 hospitalizations, and 30% of ADR related hospital admissions worldwide are attributable to NSAIDs, mostly as a result of bleeding, heart attacks, strokes, and renal impairment [1,2]. Additionally, overusing this class of medications can result in kidney damage, and kidney patients may experience its side effects at a 3–4 times higher rate [3]. This is particularly crucial because clinical experience and publications have shown that kidney involvement was found up to 75% of the patients with COVID-19 [4].

Hypertension or cardiac involvements was the most common pre-existing comorbidities in fetal cases of Covid-19 and Chikungunya patients [5,6]. NSAIDs have numerous potentially deleterious effects

on immune function and they interact with many drugs which are used in patients with cardio- or cerebrovascular disorders: They attenuate the effects of diuretics, beta-blockers, ACE inhibitors and AT-2 blockers, thus leading to uncontrolled hypertension or aggravation of heart failure [7].

Patients with Covid-19 who have trouble sleeping make up 40% of the population. The use of benzodiazepines is contraindicated with various antiviral medications, increases the risk of delirium and respiratory depression. However, physicians should recognize that concurrent use of Selective Serotonin Reuptake Inhibitors (SSRIs) and NSAIDs was related with a 75% increased risk of upper GI bleeding and should advise patients appropriately if they choose to utilize SSRIs for the same [8]. This is particularly concerning because NSAIDs are frequently taken daily or sometimes many times per day, and SSRIs are typically prescribed for daily usage.

Conclusion and Recommendations

Finally, it is recommended that pain modulation therapy, especially with NSAIDs, is important for the management of outpatients with early symptoms of COVID-19. Co-administration of NSAIDs with low-dose systemic corticosteroids has been advised to reduce pain

and improve quality of life in patients with Chikungunya, only if the benefits outweigh the risks. In both of these cases, other comorbid situations should be carefully considered. NSAIDs are contraindicated in Dengue fever. In addition to recommending daily follow-up, Dengue patients who are being followed as outpatients must be counseled on appropriate home care and on attending to warning signs warranting an earlier return to the clinic for re-evaluation. Along with tepid sponging, acetaminophen is advised for fever relief.

Abbreviations:

Angiotensin-converting enzyme (ACE) inhibitors

Angiotensin II receptor type 2 (AT-2) blockers

Adverse Drug Reaction (ADR)

Non-steroidal anti-inflammatory drugs (NSAIDs)

US Centers for Disease Control and Prevention (CDC)

World Health Organization (WHO)

Declaration: The study does not promote use of steroid painkillers in any forms in any of the stated viral conditions

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