

PALLIATIVE CARE PHARMACY PHAST PHACT



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If you have a topic you
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TODAY'S QUESTION: Do NSAIDs Worsen COVID-19?

Background:

The COVID-19 pandemic has recently infiltrated all aspects of life and patient care. Many patients are asked to self-quarantine and take over-the-counter agents for symptoms, if exposed to the virus. However on March 19th, the [FDA sent out special communication advising patients on the use of NSAIDs for COVID-19](#) after a letter published in [The Lancet](#) presented a hypothesis that patients with cardiac diseases, hypertension or diabetes, or treated with ACE₂-increasing drugs (e.g. lisinopril, losartan and especially ibuprofen), are at higher risk for severe COVID-19 infections. This is because COVID-19 appears to binds to target host cells through ACE₂, which is increased in certain comorbidities and medications like NSAIDs. Therefore, NSAID use would increase the chances COVID-19 can bind to host cells. At the time of the communication, the FDA was not aware of scientific evidence connecting the use of NSAIDs with worsening symptoms, however they strongly encouraged health care professionals to report adverse events or quality problems to the [MedWatch Adverse Event Reporting program](#).

Importance:

NSAIDs often utilized by palliative care providers to treat inflammatory related symptoms. It is important for palliative care providers to be aware of such a negative correlation, to best treat patients.

The Literature:

- [Lancet Respir Med. 2020;. doi:10.1016/S2213-2600\(20\)30079-5](#)

Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study.

- Methods: Single-centered, retrospective, observational study of 52 critically ill adults with COVID-19 admitted to one ICU within Wuhan China between 12/2019 and 1/2020
- Results: The mean age of the 52 patients was 59.7 (SD 13.3) years, 35 (67%) were men, 21 (40%) had chronic illness, and 51 (98%) had fever. Thirty-two (61.5%) patients had died at 28 days, and the median duration from admission to the intensive care unit (ICU) to death was 7 (IQR 3-11) days for non-survivors.
- Conclusion: "The mortality of critically ill patients with SARS-CoV-2 pneumonia is considerable. The survival time of the non-survivors is likely to be within 1-2 weeks after ICU admission. Older patients (>65 years) with comorbidities and ARDS are at increased risk of death."
- Discussion: This was one of the studies the authors of the Lancet letter cited for the support of their hypothesis. In this study, a considerable amount of patients suffered from cerebrovascular diseases and DM.

So... What does this all mean Jenn?

- As with previous COVID-19 focused PCP Phast Phacts, I worry about providing a specific recommendation due to rapid changing literature base but nonetheless...
- As of today, it appears that while there may be a pharmacological association between NSAID use and worsening COVID-19 symptoms, NSAIDs may not statistically or clinically change COVID-19 outcomes. This risk may also be true with steroid use
- We need to remember it is possible NSAIDs may mask the symptoms of infection, which could delay diagnosis or health care interventions due to severity. However this is true of all infections, and may not be specific to COVID-19
- There are other reasons to avoid NSAIDs; such as increased risk of kidney injury or GI bleeding
- Of note, other countries have decided to recommend acetaminophen use ahead of NSAIDs. For example, French health officials recommend APAP instead of NSAIDs despite "no scientific evidence" that NSAIDs worsen the disease. They have also decided to place restrictions on the sales of both agents. Acetaminophen and NSAIDs are both no longer available over-the-counter
- Overall, NSAIDs should be used with caution, but are not currently recommended against in COVID-19 patients. Consider these points when caring for your patients

CLINICAL PEARL:

There appears to be a pharmacological association between NSAID use and worsening COVID-19 symptoms, but no definitive data exists to support a blanket warning.