

ASPIRIN

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Introduction

Nonsteroidal anti-inflammatory drugs (NSAIDs), with Aspirin (ASA) as the prototype, are widely used as a first line minor pain medication and also for their antipyretic effects in acute febrile infections. In addition to their anti-inflammatory function they often may have also complex immunological effects on cell proliferation, migration, antibody, and cytokine production.¹

Mechanism of Action

There are several proposed mechanisms by which ASA can enhance the immune response to viral infections. These include the following: prostaglandin (PG) inhibition via the cyclooxygenase pathway, altered leukocyte migration, activation of complement components, and induction of interferon.²

In the light of hyperinflammation, sometimes presenting with cardiac dysfunction and hypercoagulability in COVID-19 cytokine storm, aspirin may have a potential as an immunomodulatory agent. Aspirin has the triple effects of inhibiting virus replication, being an anticoagulant and an anti-inflammatory. Its use is expected to reduce the incidence of severe and critical patients, shorten the length of hospital duration and decrease the incidence of cardiovascular complications. However, it has not received attention in the treatment and prevention of COVID-19 pneumonia.³

Clinical trials

There are no published studies on the efficacy and safety of Aspirin for the management of patients with COVID-19. Clinical trials on Aspirin are currently registered for the treatment of COVID-19.

Recommended Dose

No recommended dose yet. However, in the ongoing trials of Aspirin in COVID-19 treatment, 75 to 100 mg of ASA is used.^{3,4,5,6,7}

Adverse Effect

The commonly reported side effects include dyspepsia, bleeding and bruising. Some may also experience hypersensitivity reactions that may range from urticaria to anaphylactic shock. Transient elevation of liver enzymes, hepatitis, Reye's syndrome, hepatic insufficiency, renal insufficiency and hearing loss and tinnitus (at very high doses) have also been reported.⁸

Conclusion

Given the current lack of existing evidence, no firm scientific conclusion can be made on the efficacy and safety of Aspirin to treat COVID-19 infection. Results of ongoing clinical trials should help to clarify if ASA will have widespread clinical value in prevention and perhaps in the treatment of viral diseases like COVID-19.

REFERENCES

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