

COLCHICINE

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Introduction

Colchicine is an anti-inflammatory drug used for the treatment of acute gout and other inflammatory conditions such as Mediterranean fever, Behcet's disease, myocarditis¹ and pericarditis².

Mechanism of Action

Colchicine exerts its anti-inflammatory function by blocking the cytoskeletal function of the cell.³ The first step in the life cycle of SARS-CoV-2 in the host is attachment.⁴ The virus enters the cell by binding of the viral protein S with the cellular receptors of the host cells. What follows is penetration whereby the virus enters the host cells through endocytosis or membrane fusion. By inhibiting β -tubulin polymerization into microtubules, colchicine decreases endocytosis thereby decreasing the viral infection of the host cells.⁵ Furthermore, direct anti-inflammatory effects have been shown by inhibiting the NLRP3 inflammasome and other pro-inflammatory cytokines.⁶

Clinical Studies

As of this writing, there are no published results of any clinical trial involving colchicine in the treatment of COVID-19. There are ten registered clinical trials using colchicine, either alone or in combination with standard treatment.

Recommended Dose

The recommended dose of colchicine used in the actively recruiting clinical trials is colchicine 1-1.5 mg loading dose followed by 0.5mg tab BID for 7-28 days.⁷

Adverse Reactions

Colchicine is generally well-tolerated. The most frequent adverse reactions involve the gastrointestinal tract such as diarrhea, nausea, vomiting and abdominal pain. Other reported adverse reactions include myelosuppression, disseminated intravascular coagulation, and injury to the cells of the renal, hepatic, circulatory and central nervous systems.

Conclusion

There are no completed clinical trials for colchicine in COVID-19. Results of the ongoing clinical trials will clarify the role of colchicine as a treatment option in the management of COVID-19.

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