

Treatment of COVID-19 with colchicine

Summary:

Colchicine is an anti-inflammatory agent approved for the management of gout. Use in gout is sometimes limited by the occurrence of GI side effects (abdominal cramps, diarrhea, nausea, vomiting). It is thought the actions of colchicine may reduce the inflammatory response and COVID-19-related complications seen in some patients.¹ Trials have suggested a benefit when colchicine is used, but as management evolves it is not yet clear whether colchicine has any role in the treatment of COVID-19.

Discussion:

Several research groups are investigating whether colchicine is beneficial in the management of COVID-19. The results of some trials using colchicine as a component of treatment are described here.

In a cohort of 122 patients admitted to an Italian hospital with a diagnosis of COVID-19 pneumonia, treatment with colchicine 1 mg daily was added to standard of care.² Compared to a group of historical controls, the survival rate at 21-day follow-up was better in the colchicine-treated patients (84.2% vs. 63.6%, $p=0.001$).

A prospective, open-label, multicentre trial enrolled 105 patients diagnosed with SARS-CoV-2 confirmed by laboratory test and exhibiting signs of infection.³ Patients were randomized to standard medical treatment or a 1.5 mg colchicine loading dose followed by 0.5 mg after 60 min and a maintenance dose of 0.5 mg twice daily. Patients were treated until hospital discharge or to a maximum of 21 days. The primary clinical endpoint was time to deterioration by 2 points on a 7-point assessment scale. Clinical deterioration was significantly reduced in the colchicine group compared to control (1.8% vs. 14%, $p=0.02$). Diarrhea was the adverse effect reported more frequently in the colchicine group (45.5% vs. 18%, $p=0.003$).

The preliminary results of a single-centre, randomized, double-blinded trial have been made available.⁴ In this trial, patients received placebo or colchicine 0.5 mg three times a day for 5 days, then 0.5 mg twice a day for 5 days. The first colchicine dose was 1 mg in patients weighing ≥ 80 kg. Thirty-five patients hospitalized with moderate to severe COVID-19 completed the trial. Median time of the need for supplemental oxygen was reduced in the colchicine group. The median duration of hospitalization was 6 days in the colchicine group and 8.5 days with placebo. Diarrhea was again reported more frequently with colchicine (24% vs. 6%, $p=0.17$), but no other adverse effects.

The prepublication results of the COLCORONA trial have been released.⁵ This placebo-controlled trial enrolled 4488 nonhospitalized patients within 2 days of COVID-19 diagnosis, regardless of symptoms. Patients were >40 years of age with comorbidities placing them at higher risk of developing complications related to COVID-19. Colchicine 0.5 mg was taken twice daily for the first 3 days then once daily for 27 days. The primary endpoint of death or hospitalization due to COVID-19 by day 30 did not differ between patient groups (4.7% vs. 5.8%, $p=0.08$). There were 5 deaths (0.2%) in the colchicine group and 9 (0.4%) in the placebo group. Diarrhea was reported more frequently in the colchicine group (13.7% vs. 7.3%).

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References

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