

COVID-19 2022 Update: Treatment

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Bonsall, Lisa

Hi, this is Lisa Bonsall, senior clinical editor for Lippincott NursingCenter. I am speaking with Dr. Anne Dabrow Woods, the Chief Nurse for Wolters Kluwer Health Learning, Research and Practice. Anne is also a critical care nurse practitioner for Penn Medicine, Chester County Hospital, and clinical adjunct faculty for several universities in the Philadelphia area.

On May 12th, 2022, we held our webinar “Navigating the Wake of COVID.” Today Anne will be answering questions from our attendees related to the management and treatment of COVID-19.

Hi, Anne. Thank you so much for joining me today.

Can you talk about outpatient medications that are currently available for patients who are high risk?

Dabrow-Woods, Anne

Sure. So some of the outpatient medication therapies that we're currently using in the outpatient setting to prevent high risk individuals from being hospitalized with COVID are using the drugs ritonavir boosted nirmatrelvir. And these drugs are a protease inhibitor. So they prevent the binding to the SARS CoV-2 and proactive site. This is one of the drugs that we use. It's actually an oral agent and it's gonna be given for five days is the recommended dose and then we have to reduce the dose if the patient has a low glomerular filtration rate. Key thing about that drug is that has significant drug-drug interaction. So you need to be a little careful with that. So the health care provider would have to look at all the meds that patients on before they actually prescribed that med. Another drug that we can use for outpatient therapy for a patient who has COVID is remdesivir and remdesivir binds to viral RNA of the SARS CoV-2 virus and is given intravenous. The dose of remdesivir in the outpatient setting is 200 milligrams IV on day one, followed by 100 milligrams IV on days two and three.

We also can use dexamethasone in these patients if they have COVID and they're discharged from the ED on oxygen therapy. Dexamethasone is a steroid and its mechanism of action is to decrease the inflammatory response; it's given as an oral drug 6 milligrams orally once a day for up to 10 days or while the patients are on oxygen therapy. There are some alternative outpatient therapies that can be given to help the patient who's at high risk from getting worse. So bebtelovimab has an emergency use authorization. It's a monoclonal antibody, it's given intravenously and the dose is 175 milligrams one time for those at high risk of disease or hospitalization or death. There's also another drug out there called molnupiravir. It's an oral monoclonal antibody and it's given 800 milligrams twice a day for five days. And then there's another drug, sotrovimab. However, it's a monoclonal antibody, however, it was pulled for the use in Omicron, the BA2 variant. So it's no longer in use for that.

And then you know, there's new drugs that are being looked at all the time for emergency use authorization. So I'd recommend that you check the NIH website to see what is currently recommended for outpatient treatment in patients that are high risk for hospitalization or death.

Bonsall, Lisa

Thank you, Anne, can you also talk about what inpatient therapies are currently being used?

Dabrow-Woods, Anne

Sure. So there are some inpatient therapies we use, certainly dexamethasone is a drug that we use. As I said, it's a steroid and it's indicated for patients who are admitted with COVID who are receiving supplemental oxygen therapy. It can be given either IV or orally and the dose is 6 milligrams for 10 days. And if dexamethasone isn't available, the provider can use prednisone, methylprednisolone, or hydrocortisone as an alternative steroid.

We do use remdesivir in patients and remdesivir, as I said, it binds to the viral RNA of the code SARS CoV-2 virus. So it's gonna inhibit viral replication and we look at this to be used in patients who are requiring supplemental oxygen therapy. And we do some pre lab testing before we prescribe that drug and as long as their liver function tests are OK, their coagulation studies are right and their creatinine and their glomerular filtration rate are OK, we can use this in these patients. The dose in an inpatient of who's receiving remdesivir 200 milligrams IV per day one and then 100 milligrams IV daily for four days. So they get a total of five days of therapy. And we just closely watched their liver function tests in these patients.

Some other drugs that we use in inpatient are a drug called baricitinib,. Baricitinib, is actually a janus kinase inhibitor. You might have heard this called a JAK inhibitor and it has been shown to decrease mortality and it is for use in patients who require supplemental oxygen or noninvasive or invasive mechanical ventilation or even ECMO. And this drug is given orally as a pill or if they are intubated we may have to put that down the OG tube and it's 4 milligrams once daily for 14 days or until discharge. And we do have to adjust the dose if they've got renal or hepatic impairment, but it is not recommended in people who have end stage renal disease. It is used in combination with steroids and/or remdesivir and the key thing with this structure, you gotta watch for clotting. We also use another drug called tocilizumab.

And tocilizumab is an interleukin 6 inhibitor, so it's gonna block the interleukin 6 receptor. It has an emergency use authorization for people who have COVID who have progressive pulmonary involvement. But besides that, they have to have a pulse ox less than 93% and a PaO₂:FiO₂ ratio less than 300 along with three of the following: either a CRP greater than 10 times normal, a ferritin level greater than a 100,000 nanograms per milliliter, a D-dimer greater than 10 times the normal, or an LDH greater than two times the upper limit. In these patients, we also have to check to see if they have hepatitis B, hepatitis C, HIV, and then we also check for TB using Quantiferon TB gold test.

The dose of tocilizumab it's a one time a dose it's 8 milligrams per kilogram with a max dose of 800 milligrams and it's given intravenously as an infusion over 60 minutes. Now if tocilizumab is not available, there's some other drugs that can be considered. There's a drug called a tofacitinib or Xelanz and it's an oral agent. And this drug is a JAK inhibitor and that is given as 10 milligrams PO twice a day for up to 14 days or discharge and the dose does have to be reduced if the patient has an acute kidney injury.

Also, another drug that can be considered if tocilizumab is not available is a drug called sarilumab or Kevzara. It is a monoclonal antibody, interleukin 6 inhibitor and it is given intravenously 400 milligrams in 100 mLs of normal saline and that is given over 60 minutes. So those are the things that we're currently using in the inpatient setting.

Bonsall, Lisa

Thank you, Anne. Are there any recommendations for vitamins, zinc or other supplements to prevent or treat COVID?

Dabrow-Woods, Anne

So you know, that's a really good question, Lisa. And I think that the best thing to do is to look at a source called the Functional Medicine Approach to COVID-19. You can find that at www.ifm.org to see what nutraceuticals and botanicals could be considered. So these things are proposed. They don't have a lot of evidence or any evidence behind them, but this is what they're thinking based on how these agents work. So one of them is vitamin C 500 milligrams twice a day. As you know, vitamin C is an antioxidant; it's gonna limit inflammation in the tissues, and so it's going to help to decrease the damage due to the immune response. Also, there is an agent called corceptin it's an extract from green tea. What they're looking at is 250 to 500 milligrams twice a day. Again, acts as an anti-inflammatory, antioxidant approach. Zinc is also being looked at 75 to 100 milligrams daily.

And they're looking at zinc because it seems to help decrease the severity of symptoms and help prevent people from getting other coronaviruses. So remember there's other coronaviruses besides COVID and coronaviruses we see, we commonly call them the common cold.

So zinc's being considered and also melatonin up to 3 milligrams per day seems to decrease that vascular permeability, which is a big issue in COVID-19.

Bonsall, Lisa

Anne, we also received some questions about previously recommended treatments such as hydrochloroquine or Plaquenil. Can you speak to the changes we've seen over the past two plus years in recommendations for managing COVID-19?

Dabrow-Woods, Anne

Basically, we don't recommend those anymore because the research on hydrochloroquine came up that it really didn't do anything to help with COVID-19 once a person has it or even to prevent it. So hydrochloroquine is not recommended anymore. We also saw some studies such as convalescent plasma which was being used in some patients in the beginning of COVID where we actually gave plasma from patients who had COVID-19. The problem what we found with the convalescent plasma is that it really depended on the antibody level of the patient who donated the plasma and you didn't know what those antibody levels were. So as a treatment for COVID-19, it didn't seem to work because it wasn't consistent in the antibody level. There is some studies that are currently going on, but it's not used as a recommended therapy for patients who have COVID-19.

Bonsall, Lisa

Anne, thank you so much for your time today. For our listeners, remember that you can access the full webinar on demand at Lippincott Nursing Center. Thank you.

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