- Medicine / Virus

Why you should always talk to your doctor before taking any medication

Here are the latest medications against COVID-19

CLINICAL MATTERS
DR. EDSEL MAURICE T. SALVANA

Try this, it might work!

Early in the pandemic, doctors desperate to improve the chances of their patients surviving COVID-19 were willing to use whatever treatment showed some promise. The number of drugs tried as potential cures for COVID-19 was quite bewildering. Everything from anti-malarial drugs, worm medication, gout drugs to antipsychotics have been tested and offered as possible cures. Unfortunately, some of these drugs were misused despite flimsy evidence of efficacy. After nearly two years of frantic research, effective medications against COVID-19 have been found. Here are some remedies that have been proven to work against COVID-19.

Vaccines

These are by far the most effective and safe interventions against COVID-19. All COVID-19 vaccines with emergency approval are very good at preventing severe disease. With the rise of immune-evading variants like Beta and Omicron, more breakthrough infections have been seen. These breakthrough infections, however, are almost always mild and the protection against hospitalization and death remains. Some transmission blocking and prevention of infection efficacy persists, even if transmission does not go down to zero. It is still much better than in those who are unvaccinated. Breakthrough infection in fully vaccinated and boosted persons results in hybrid immunity after recovery. Hybrid immunity is especially robust in protecting against different variants of concern. In contrast, natural infection without vaccination does not induce predictable immunity. Reformulated vaccines specific to variants of concern, multivalent vaccines targeting multiple variants at the same time, and universal vaccines which work for all variants are in the works and should be available soon. In the meantime, the current vaccines continue to protect against severe infection and boosting helps.

1. Dexamethasone

This was the first medication to definitively decrease deaths among patients with severe COVID-19. Judicious use of dexamethasone has saved countless lives. It has a downside too. Steroids like dexamethasone can suppress the immune system, increasing the risk of acquiring other infections. Dexamethasone is useless and potentially harmful in patients with asymptomatic or mild COVID-19. It should only be used in persons with severe COVID-19 who need oxygen. Combined with antivirals and immunomodulators, dexamethasone and other steroids have become a mainstay for the treatment of severe COVID-19.

2. Remdesivir

Remdesivir was the first antiviral drug proven to work against COVID-19. Remdesivir for severe COVID-19 does not significantly decrease the risk of dying, but it does shorten the duration of illness.

After nearly two years of frantic research, effective medications against COVID-19 have been found. Here are some remedies that have been proven to work against COVID-19.

Recently, remdesivir was used in a randomized controlled trial for treatment of high-risk COVID-19 patients with mild symptoms, resulting in an 87 percent decreased risk of hospitalization and death if given within seven days of symptom onset. The main disadvantage of remdesivir is that it is an intravenously administered drug, which makes it logistically challenging to give.

3. Tocilizumab

Tocilizumab is a monoclonal antibody, a kind of artificial antibody that decreases the amount of inflammation caused by COVID-19. Since it interferes with a component of the immune system, only those with severe enough COVID-19 at risk for further progression should be given this medication. It is potentially harmful in those with mild or asymptomatic COVID-19 since it can affect the immune system without providing clear benefit. Tocilizumab is available only for intravenous administration and should only be given in the hospital.

4. Baricitinib

Baricitinib is a drug that works similarly to tocilizumab by altering the immune response. It is only indicated for those with severe COVID-19 at risk for progression. It is an oral medication but should not be used by those with only mild symptoms since it can increase the risk for different kinds of infections.

5. Molnupiravir

Molnupiravir is an antiviral drug indicated for mild to moderate COVID-19 in patients at high risk for progression, typically the elderly or those with significant comorbid conditions. This drug needs to be given within five days of onset of symptoms. Properly used, it can decrease the risk of progression and death by up to 30 percent in the correct patient population. It has no role in the non-vulnerable population. It is not useful in patients with severe or critical disease. Molnupiravir has mutagenic potential in animals and should not be used for more than five days as this may cause unpredictable side effects. It should not be used as prophylaxis against COVID-19. It should only be used under proper supervision by a competent physician.

6. Paxlovid

Similar to molnupiravir, this is an antiviral drug indicated for mild to moderate COVID-19 in patients at high risk for progression, typically the elderly or those with significant comorbid conditions. This drug needs to be given within five days of onset of symptoms. Properly used, it can decrease the risk of progression and death by up to 89 percent in the correct patient population. It has no role in the non-vulnerable population. It is not useful in patients with severe or critical disease. Paxlovid is made up of two different drugs, nirmatrelvir and ritonavir. Ritonavir can interact with many drugs, and so a thorough review of concurrent medications should be done before starting the drug. Drugs with potentially unsafe interactions with ritonavir include anticholesterol medications such as simvastatin, lovastatin, atorvastatin; anti-tuberculosis medications such as rifampicin and rifapentine; and erectile dysfunction drugs such as sildenafil and vardenafil, among many others. It should not be used as prophylaxis against COVID-19. It should only be used under proper supervision by a competent physician.

7. Casirivimab-imdevimab

This is a combination of two monoclonal antibodies that have been successfully used as prophylaxis for high-risk patients exposed to COVID-19, as well as treatment to prevent progression to severe COVID-19. Unfortunately, recent studies have shown that it does not work very well against the Omicron variant. The most recent sequencing data shows over 90 percent of infections in the Philippines are Omicron. Therefore this drug now has a limited role for treatment of COVID-19 locally. There is one monoclonal antibody, Sotrovimab, that continues to be useful against Omicron to decrease the risk of severe COVID-19 in patients with mild disease at high risk for progression. It is not yet available locally.

Most fully vaccinated patients who develop COVID-19 will not need any of these medications. The risk of dying from COVID-19 outside the vulnerable population in a fully vaccinated individual is about 0.1 percent, which is the same as the flu. Rest and symptomatic relief are all that will be needed, and 99.9 percent of patients can recover safely at home. For the vulnerable population with mild or moderate disease, antivirals like Paxlovid, molnupiravir, or remdesivir can decrease the risk of progression. Finally, for those who end up admitted with severe COVID-19, antivirals, steroids, and immunomodulators are the way to go.

There are other medications being studied but stronger data are needed before these can be recommended. Antimalarial medication, anti-worm medication, and gout medication have not shown any evidence of working and should no longer be used at this time. There are enough vaccines and medicines proven to work such that unproven remedies need not be used, especially ones that may turn out to be harmful. The key to ending the pandemic remains vaccination, and the impending rollout of vaccines in the five- to 11-year-old age group will further decrease the impact of COVID-19 on our lives. Vaccination is the way out of the pandemic, and each shot is one less person in danger of dying.

STILL THE BEST SOLUTION Getting vaccinated against COVID-19 is still the main recommendation of health practitioners (Juan Carlos De Vela)