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To all medical professionals around the world:

The current sensitivity and specificity of the RT-PCR nasal swab test for Covid-19 is 99% and 66%, respectively.[1] In simple terms, when the test is positive, it is very accurate to diagnose patients with Covid-19. However, when the test is negative it is wrong 33% of the time.

In most outpatient situations, the RT-PCR Covid-19 test takes two to three days to get the results. This is unacceptable since it is imperative to initiate treatment for viral infections as soon as possible.[2] This clinical principle is derived from the recommendations of treatment for other viral infections (i.e. influenza, herpes zoster, HIV, etc).

According to the CDC, symptoms of Covid-19 may appear 2-14 days after exposure to the virus. The clinical symptoms of Covid-19 are:[3]

- Cough and/or shortness of breath
- Fever or chills (with or without rigors)
- New loss of taste or smell
- Myalgia
- Headache and/or sore throat
- Diarrhea

Given the urgency of the situation, I recommend initiating treatment based on clinical suspicion as soon as possible, even without confirmatory testing.

I developed the following treatment protocol for the prehospital setting and have seen very positive results:

1. Any patient with shortness of breath is treated.
2. Any patient in a high-risk category with mild symptoms is treated.

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[1] medrxiv.org/content/10.1101/2020.04.05.20053355v2.full.pdf+html
[2] cdc.gov/flu/professionals/antivirals
[3] cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html

3. Young, healthy and low risk patients even with symptoms are not treated (unless their circumstances change and they fall into category 1 or 2); as is well known, these patients likely self resolve.

My outpatient treatment regimen is as follows:

1. Hydroxychloroquine 200 mg twice a day for 5 days
2. Azithromycin 500 mg once a day for 5 days
3. Zinc sulfate 220 mg once a day for 5 days

The rationale for my treatment plan is as follows. I combined the data available from China and South Korea with the recent study published from France (cites available on request). We know that hydroxychloroquine helps Zinc enter the cell. We know that Zinc slows viral replication within the cell. The use of azithromycin prevents secondary bacterial infections and has antiviral effects.[4] These three drugs are well known and usually well tolerated, hence the risk to the patient is low.

Since 3/15/20, my team has seen approximately 1450 patients in Monroe, New York with either test proven or clinically suspected coronavirus infection. The majority of the patients were treated with only supportive care. The patients with shortness of breath or who are in the high risk category were treated with the above regimen (approximately 405 patients at this point).

Of this group and the information provided to me by affiliated medical teams, we have had two deaths, six hospitalizations for pneumonia, and four intubations (all extubated now). In addition, to my knowledge there have not been any negative side effects other than approximately 10% of patients with temporary nausea and diarrhea.

In sum, **my urgent recommendation is to initiate treatment in the outpatient setting as soon as possible** in accordance with the above. Based on my direct experience, it prevents acute respiratory distress syndrome (ARDS), prevents the need for hospitalization and saves lives.

With much respect,

Dr. Vladimir (Zev) Zelenko M.D.

[4] pubmed.ncbi.nlm.nih.gov/32302411/