

COVID-19 and the role of chiropractic in the healthcare arena with nonpharmaceutical prevention, early treatment, and care for those with Long COVID syndromes:

Series disclaimer

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Disclaimer

W ith the rapidity of evidence being uncovered moment by moment about Covid 19, this article that used the most up to date published information in the months prior to its formulation, is most likely dated and may be read with historical caution. Only time will tell us if the information in this article is applicable to the current iteration of COVID-19, the Omicron variant. What we need to determine is are the cases we are seeing currently the COVID-19 of the 2020s, the 2021's, or the more current Omicron of the 2022s?

If we are dealing with predominately the Omicron variant then some of the preventative and early treatment suggestions in this article that focused more on the Delta variant may not be appropriate. The most recent research suggests that the Omicron is very contagious but not as serious of an illness.

The evidence suggests that vaccines and even having a prior Covid infection may not convey immunity. The danger of the Omicron variant is that it is contagious and therefore is affecting many people with comorbidities that are vulnerable to any type of flu presentation. Like the seasonal flu it appears that Covid similarly mutates and is continually per-mutating, meaning that what works for one variant may not be appropriate for another one.

However it is hoped this article and Parts 2 and 3 will aid our search for trends of prevention and treatment so we can prepare and cope with Covid as it changes through the years. For instance as of this date we are not sure if the Omicron variant might lead to any Long COVID/ Hauler type syndromes such as what we found with the other variants.

One thing we can confidently say is that we will continually learn more with the tincture of time.



COVID-19 and the role of chiropractic in the healthcare arena with nonpharmaceutical prevention, early treatment, and care for those with Long COVID syndromes:

Part Two - Early treatment

Charles Blum

Abstract: Early treatment of COVID-19 starts with becoming aware of possible patient symptoms and encouraging any patient who may have come in contact with anyone with COVID-19 to be tested since asymptomatic patients are still capable of transmitting the virus.

Patients with comorbidities should be handled very carefully with a discussion that if their symptoms worsen that allopathic co-treatment is immediately considered since waiting for a serious condition to improve is not a viable or optimal option.

However if the patient does not have comorbidities, is asymptomatic or only has mild symptoms then the discussed low-risk (mostly) non-pharmaceutical interventions are worthy of consideration and may prevent worsening of symptoms, improve vaccination response, and limit progression of a possible long hauler COVID-19 syndrome

Indexing Terms: chiropractic; immunity; COVID; early treatment; comorbidity.

Introduction

 ${f T}$ he first most important aspect of early treatment of COVID-19 is detecting the possibility that the patient may have been infected. This process is challenging since sometimes patients may have an asymptomatic presentation and in these instances it is important that the patient is aware of social interactions and likelihood that they might have been exposed. Any possible exposure should be taken seriously and the patient should be tested, both for their protection and for anyone they might be around. For those who are symptomatic there are various tell tale signs worry of consideration:

The three most critical symptoms of possible COVID-19 are fever, shortness of breath/difficulty breathing/pressure in your chest, and a severe cough. Shortness of

... Patients with comorbidities should be handled very carefully with a discussion that if their symptoms worsen that allopathic cotreatment is immediately considered assist immune function. ...'



breath can mean shortness of breath at rest or even shortness of breath during daily activities.

There are other types of symptoms a patient might experience though they might have one, a few, or none (if asymptomatic) of the following:

- Runny nose, sneezing
- Sudden onset of marked fatigue
- Loss of energy, malaise
- Body aches, muscle aches, headaches
- Cough, though in Covid 19 the cough is usually a dry. They may not produce mucus (sputum). Color of sputum is not necessarily a reliable indicator of severity or type of illness.
- If the cough is causing increased shortness of breath or interfering with sleep pattern, this could mean the disease is worsening.
- Feeling 'feverish,' even if fever (defined as temperature >101 degrees) is not present. Clinically it has been found that many patients are running temperatures below 98 degrees so even a temperature at 98.6 degrees (often considered normal) they might be struggling with their internal temperature.
- Chills at night
- Sudden onset of sweats during the day that are unrelated to exercise
- Loss of taste or smell (tends to occur after the other symptoms have been there 1-3 days, but can occur earlier or later)
- Loss of appetite, nausea, GI upset. Diarrhea may occur, though is not common. However it can quickly lead to dehydration and electrolyte imbalances when it does happen.
- After about day 5, if the inflammation worsens, there may be chest heaviness or tightness, difficulty breathing, shortness of breath.
- Drop in blood oxygen concentration (less than 90% as measured with a finger pulse oximeter) indicates a respiratory condition warranting concern. (Ed: Normal is around 95-98%)
- Rapid heart rate, palpitations
- Loss of focus, difficulty with concentration and memory

A 'wait and see' approach is <u>not adequate</u> for high-risk patients (those with comorbidities). 'Waiting and seeing' if the condition progresses is a factor contributing to the high death rate of infected patients in the United States.

This is because COVID-19 can very rapidly become a critical illness for two primary reasons. The COVID-19 virus triggers TWO responses in the body much worse than the seasonal flu:

- 1. An exaggerated inflammatory response causing damage to critical organs, and
- 2. An exaggerated blood-clotting response leading to multiple blood clots in the lungs, brain and other organs. Some patients have even been found to have blood clots in large arteries such as the aorta.

Even if a patient does not have comorbidities or is in high risk arenas it is important to follow recommendations from the Centers for Disease Control (CDC) (1) and World Health Organization (WHO) (2) to reduce viral spread to others. If a patient suspects they have COVID-19 or test positive, they should isolate themselves to minimize spread of the virus. Quarantine time can be from 7-14 days, depending on symptoms or until they have a negative test.

Some standard patient safety behaviors include but are not limited to:

- When quarantining a patient should wear a mask at all times when around their family members or caregivers.
- To help reduce any contact infection an infected patient should remember to wash hands and body with soap and water.
- Maintain good disinfecting procedures throughout room/home of infected individual.

When possible, a patient's exposure to sunlight, fresh air, and good air circulation can be key to good health and to help fighting COVID-19.

Hydration

Patients should be drinking plenty of fluids - preferably water, not beverages with sugars and additives - since adequate hydration is crucial. Understandably the amount of fluid will vary by body weight, but a good rule of thumb is their urine should be the color of pale straw. If their urine is dark yellow or gold, the patient is likely not drinking enough water. If the urine is colorless, they are likely drinking too much plain water, which could contribute to lightheadedness or confusion due to electrolyte imbalance.

Elevated Temperature

Fever is both a warning of infection that could be serious, and one of our body's defences against infection. Fever may signal a superinfection that needs aggressive antibiotic treatment, not just a fever-reducing medicine. Because of the risk of blood clots with COVID-19, most physicians recommend aspirin (white willow bark) (3) for treatment of fever, since it also reduces risk of developing a blood clot.

A crucial aspect of the early treatment of COVID-19 patients begins with determining if they have any comorbidities as discussed in the prevention section of this article.

A patient with comorbidities or a worsening of symptoms should immediately be referred to an allopathic physician specializing in COVID-19 care and **not** relegated to a 'wait and see approach.

However if a patient does not have comorbidities and symptoms are mild and responsive to early interventions then there are a several non-pharmaceutical or over the counter approaches worthy of consideration.

Early Outpatient Treatment

Mouth and Nasal Washes

The following washes can be used early during the viral replication stage. They can also be used as post-exposure prophylaxis. These washes contain antiseptic and virucidal agents that will kill the virus where it starts, in the mouth, throat, and nose. There are various studies discussing the use of different substances for mouthwash and gargling (NOT for swallowing) for treatment and prevention from COVID-19 in the mouth and throat. The following are some samples of various types utilized in different combinations that have support for their efficacy:

- B-Cyclodextrin and Citrox (bioflavonoids) (4)
- Povidone-Iodine and Cetylpyridinium Chloride (5, 6)
- Cetylperidinium Chloride, Chlorhexidine and Hexetidine (7)
- Cetylpyridinium Chloride (8)
- Cetylpyridinium Chloride Plus Zinc Lactate and Chlorhexidine (9)
- Octenidine Dihydrochloride (10)

Commonly found over the counter mouthwashes that contain cetylpyridinium include *Scope, ACT*, and *Crest* brands, and others. There is also anecdotal evidence supporting mouthwashes containing essential oils such as eucalyptol, thymol, and menthol, which include *Listerine*, among others, which may also be helpful.

- Diluted Hydrogen Peroxide (9, 11)
- Silver Nanoparticles (12)

A study investigating appropriate plant-based mouthwash prevention and/or treatments identified 'ingredients (Glycyrrhizin, Withanone, Aloe-emodin, Rhein, Emodin, Chrysophanol, Physcion, Kaempferol, Progallin A, Gallic acid, Naringin, Quercetin, Luteolin, and Apigenin) having antiviral, antibacterial and antifungal properties. This may inhibit the coronavirus spreading to the lungs of infected persons and at the same time may reduce the risk of viral transmission to other susceptible persons through micro-droplets originating from the oral cavity of the infected person.' (13)

Nasal Washes

- Povidone-Iodine (10% povidone-iodine solution diluted in water or saline) (14, 15)
- Silver Nanoparticles (12, 16)
- Low pH Hypromellose (Taffix) nasal powder spray (17)
- Steam inhalation therapy utilizing phytochemicals from selected traditional herbs (18)

Nutrition and Supplements and Early Treatment

Poor nutrition has been implicated on immune function and the body's ability to prevent and deal with early onset of COVID-19. A study surveying the use of dietary supplements by dietitians attempting to avoid COVID-19 found that '94.5 % of the dietitians used dietary supplements, 46.1% herbal medicines and 34.9% functional foods during the pandemic. The most commonly used dietary supplement was fish oil (81.9 %), functional food was vegetables and fruits (80.5 %) and the herbal medicine was cinnamon (63.5 %).' (19)

Of importance there are various nutrients (e.g. zinc, B12, vitamin D, and vitamin C) that have been found to be deficient in patients who have a severe response to the COVID-19 infection and it appears that both prophylactic and early supplementation for those infected can prevent the progress of this illness. These vitamins and minerals can be relatively easily assessed for deficiency, such as zinc with a simple taste test20 and Vitamins B12, D, and C can be assessed with blood tests. Interestingly even after vaccination supplementing patients with low zinc and melatonin status may improve their vaccination response. (21, 22)

The following are some nutritional supplements that can be used for both prevention and early treatment of COVID-19. Since many of the studies evaluated different combinations, they are listed based on the study referenced:

- Vitamin D, zinc, and selenium (23, 24)
- Vitamin B12, D, and zinc (25)
- Vitamins A, B, C, D, and E (26)
- Vitamin A, C, D, N-Acetyl Cysteine, and Omega Three Oils (27)
- Vitamins A, D, E, and K (28)
- Vitamins C, D, E, zinc, selenium and the Omega 3 Fatty Acids (29)
- Vitamins A, E,C, D, and D (30)
- Vitamin D (31)

- Vitamin C (32, 33, 34)
- Quercetin (35, 36, 37,38)
- Polyphenols (39)
- Zinc (40, 41, 42)
- Melatonin (43, 44, 45)

Gut dysbiosis

Good nutrition is also important in promoting a diverse gut microbiota, which in turn supports the immune system. The importance of nutrition in supporting the immune response also applies to assuring robust responses to vaccination. (24) It is believed that 'the treatment of gut dysbiosis involving an adequate intake of prebiotic dietary fiber and probiotics could turn out to be an immensely helpful instrument for immunomodulation, both in COVID-19 patients and prophylactically in individuals with no history of infection.' (46)

Herbal remedies and early treatment

Due to the worldwide attempt of controlling and preventing COVID-19 international herbal remedies and non-allopathic or pharmaceutical approaches have had greater exposure and study. The following are some of the recent herbal therapeutic applications showing promise for early onset treatment of COVID-19

- Allium Sativum, Curcumin, Nigella Sativa, Zingiber Officitale (47)
- Black Seeds, Garlic, Ginger, Cranberry, Orange, Omega-3 and -6 Polyunsaturated Fatty Acids (48)
- Persian Polyherbal Formulations (49)
- Kabasura Kudineer (Poly-Herbal Siddha Medicine) (50)
- Coronil (Tri-Herbal Medicine with Withania Somnifera, Tinospora Cordifolia, and Ocimum Sanctum) (51)
- Liquorice and Pelargonium Sidoides for prophylaxis and treatment (52)
- Lianhuaqingwen capsules and Jinhua Qinggan granules can be useful as a complementary therapy to conventional treatment (52)
- Shufeng Jiedu capsules (SFJDC), a patented herbal drug composed of eight medicinal plants (53)
- Green Tea Catechin Epigallocatechin Gallate (EGCG) (54, 55, 56, 57)
- Cannabis for its Anti-Inflammatory Properties (58, 59)

Preventive Chinese medicine (CHM) mainly has four functions for the treatment of COVID-19 and can be utilized orally or applied externally. 'CHM that kill pathogens (Realgar [Xionghuang], Cyrtomium Fortunei J. Sm [Guanzhong]) were commonly used externally for disinfection in ancient prevention while CHM tonifying Qi (Astragali Radix [Huangq], Glycyrrhizae Radix et Rhizoma [Gancao]) are used for modern prevention. Taking CHM that expel pathogens (Realgar [Xionghuang], Lonicerae Japonicae Flos[Jinyinhua]) and CHM eliminating dampness (Atractylodis Rhizoma [Cangzhu], Pogostemonis Herba[Guanghuoxiang]) have been commonly used from ancient times to COVID-19. Damp toxins are a common characteristic of infectious diseases such as SARS and COVID-19. Thus, taking CHM expelling damp toxins and tonifying Qi are the main methods for SARS and COVID-19 prevention.' (60)

Lastly of the various interventions used to mitigate a serious outcome from COVID-19 one of the most curious one is the effect of 5G wireless communication radiation. A study by Rubik and

Brown recommended that all people, particularly those suffering from a COVID-19 infection, reduce their exposure to 5G wireless communication radiation as much as reasonably achievable until further research better clarifies the systemic health effects associated with chronic wireless communication radiation exposure. (61)

Conclusion

Early treatment of COVID-19 starts with becoming aware of possible patient symptoms and encouraging any patient who may have come in contact with anyone with COVID-19 to be tested since asymptomatic patients are still capable of transmitting the virus.

Patients with comorbidities should be handled very carefully with a discussion that if their symptoms worsen that allopathic co-treatment is immediately considered since waiting for a serious condition to improve is not a viable or optimal option.

However if the patient does not have comorbidities, is asymptomatic or only has mild symptoms then the discussed low-risk (mostly) non-pharmaceutical interventions are worthy of consideration and may prevent worsening of symptoms, improve vaccination response, and limit progression of a possible long hauler COVID-19 syndrome.

Part Three of this series will discuss the role of the chiropractic profession in the treatment of patients suffering from Long COVID syndromes.



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