

Clinical course is predictable.

<i>Days</i>	<i>His observations</i>	<i>My comments</i>
<i>2-11 days after exposure (day 5 on average) flu like symptoms start</i>	<i>Common are fever, headache, dry cough, myalgias(back pain), nausea without vomiting, abdominal discomfort with some diarrhea, loss of smell, anorexia, fatigue.</i>	Start Groundhog Acute Vitamin C to bowel tolerance – 10 grams every hour Sniff iodine 5-10 sniffs every 2 hours Do not symptom suppress with drugs Order a nebuliser (or atomiser) in case things worsen Purchase Epsom salts for possible use in the nebuliser should you worsen Purchase bicarbonate of soda 100 grams
		Contact trace. Tell EVERYONE with whom you have had ANY contact over the past 14 days to: Use the iodine salt pipe 5-10 sniffs twice daily, apply iodine oil to hands and face regularly take 5 grams of vit C little and often through the day Cut out sugars and carbs from the diet
<i>Day 5 of symptoms</i>	<i>increased SOB, and bilateral viral pneumonia from direct viral damage to lung parenchyma.</i>	Carry on with all the above Use the Roth breathing test (as above) to estimate your oxygen sats If these fall you may need hospital admission
	<i>81% mild symptoms, 14% severe symptoms requiring hospitalization, 5% critical.</i>	However I would expect all the above to prevent progression to a cytokine storm
<i>Day 10</i>	<i>Cytokine storm leading to acute ARDS and multiorgan failure. You can literally watch it happen in a matter of hours.</i>	Anticipate Get yourself to hospital At this stage you will need anti-inflammatory drugs, oxygen and possibly ventilation
		During this time vitamin C is used up and patients have scurvy levels of vitamins C. My guess is these scurvy patients progress to cytokine storm
<i>Patient presentation is varied</i>	<i>Patients are coming in hypoxic (even 75%) without dyspnoea. I have seen Covid patients present with</i>	The multiple organ failures are explained by poor oxygen carrying capacity of the blood. This is because CV19 proteins split iron off haemoglobin. Without iron, Hb cannot hold oxygen.

	<i>encephalopathy, renal failure from dehydration, DKA.</i>	
		This explains why chloroquine, a malaria treatment, is effective in covid 19. It prevents iron splitting off from the haemoglobin molecule. Indeed this is the same mechanisms by which it works for malaria.
	<i>I have seen the bilateral interstitial pneumonia on the X ray of the asymptomatic shoulder dislocation or on the CT's of the (respiratory) asymptomatic polytrauma patient. Essentially if they are in my ER [Emergency Room], they have it. Seen three positive flu swabs in 2 weeks and all three had Covid 19 as well. Somehow this * has told all other disease processes to get out of town.</i>	In EVERY case the pneumonia is bilateral. The damage arises from the iron which has been split off from haemoglobin. Unbound iron is very dangerous stuff!
<i>China reported 15% cardiac involvement</i>	<i>I have seen covid 19 patients present with myocarditis, pericarditis, new onset heart failure and new onset atrial fibrillation. I still order a troponin, but no cardiologist will treat no matter what the number in a suspected Covid 19 patient. Even our non</i>	A combination of no oxygen in the blood PLUS the pro-oxidant stress of unbound iron causes multi-system damage

	<p><i>covid 19 STEMI</i>s [ie suspected heart attacks] <i>at all of our facilities are getting TPA</i> [clot busters] <i>in the ED and rescue PCI</i> [percutaneous coronary intervention ie stents] <i>at 60 minutes only if TPA fails.</i></p>	
<i>Diagnostic</i>	<p><i>CXR- bilateral interstitial pneumonia (anecdotally starts most often in the right lower lung so bilateral on CXR is not required). The hypoxia does not correlate with the CXR findings. Their lungs do not sound bad. Keep your stethoscope in your pocket and evaluate with your eyes and pulse ox.</i></p>	<p>The hypoxia does not correlate with the CXR because the problem is not in the lungs but in the blood – it has lost its ability to carry oxygen</p>
	<p><i>Labs- WBC low, Lymphocytes low, platelets lower than their normal, Procalcitonin normal in 95% CRP and Ferritin elevated most often.</i></p>	<p>WCC and platelets are low due to the bone marrow suppression of iron poisoning and hypoxia The ferritin is high because the body is trying to mop up the free iron that has been split off from haemoglobin CRP high due to inflammation and free radical stress (More recently it has been noticed in the early stages that the haemoglobin is unusually high - this is because in response to hypoxia the bone marrow increases output of red cells in an attempt to increase oxygen carrying capacity of the blood)</p>
	<p><i>CPK, D-Dimer, LDH, Alk Phos/AST/ALT commonly elevated. Notice D-Dimer- I would be very careful about CT</i></p>	<p>The free iron is highly damaging to the liver, kidney and bone marrow (this is akin to haemochromatosis – chronic iron poisoning) IVI contrast adds to the toxic load and may trigger renal failure</p>

	<p><i>PE these patients for their hypoxia. The patients receiving IV contrast are going into renal failure and on the vent sooner. Basically, if you have a bilateral pneumonia with normal to low WBC, lymphopenia, normal procalcitonin, elevated CRP and ferritin- you have covid-19 and do not need a nasal swab to tell you that.</i></p>	
	<p><i>A ratio of absolute neutrophil count to absolute lymphocyte count greater than 3.5 may be the highest predictor of poor outcome. the UK is automatically intubating these patients for expected outcomes regardless of their clinical presentation.</i></p>	<p>Numbers of lymphocyte “officers” are falling compared to the neutrophil “foot soldiers”. It is lymphocytes which are mainly involved in fighting viruses. This means the bone marrow cannot keep up with demands.</p>
	<p><i>An elevated Interleukin-6 (IL6) is an indicator of their cytokine storm. If this is elevated watch these patients closely with both eyes. Other factors that appear to be</i></p>	<p>The cytokine storm can be greatly mitigated with anti-oxidants Print off the paper below and take this with you to the hospital. Show it to your doctor Ask for intravenous vitamin C If time.....you must check for glucose 6 phosphate dehydrogenase deficiency or you risk a haemolytic anaemia with vit C. This is the only potential side effect. About 400 million people have the condition globally. It is particularly common in certain parts of Africa, Asia,</p>

	<p><i>predictive of poor outcomes are thrombocytopenia and LFTs 5x upper limit of normal.</i></p>	<p>the <u>Mediterranean</u>, and the <u>Middle East</u>.] Males are affected more often than females. Caucasians rarely affected. https://isom.ca/wp-content/uploads/2020/03/IVAA-COVID19-Hospital-Use-Anderson-03.24.2020.pdf?fbclid=IwAR2ZVsCe-h81YC_r6X50WnQebRjuVdNqXg5DRrR43JUPdt6lzXMoUhQOKzE ALL covid 19 patients with treated with ivi vitamin C recovered</p>
Disposition	<p><i>I had never discharged multifocal pneumonia before. Now I personally do it 12-15 times a shift. 2 weeks ago we were admitting anyone who needed supplemental oxygen. Now we are discharging with oxygen if the patient is comfortable and oxygenating above 92% on nasal cannula. We have contracted with a company that sends a paramedic to their home twice daily to check on them and record a pulse ox. We know many of these patients will bounce back but if it saves a bed for a day we have accomplished something. Obviously we are fearful some won't make it back.</i></p>	<p>If you are severely ill and discharged home then you are on your own! Desperate times call for new methods. The below is completely safe, cheap and easy albeit unproven. Use the nebuliser to inhale:</p> <ol style="list-style-type: none"> 1. vitamin C and sodium bicarbonate The recipe is 100grams of ascorbic acid and with 50 grams of sodium bicarbonate dissolved in one litre of spring water. It bubbles and carbon dioxide is released. You are left with a clear solution. Nebulise 10 ml every hour. The idea is to kill virus in the lungs. 2. Magnesium, which is an excellent anti-inflammatory and bronchodilator To make up a 1% solution of magnesium take 50 grams of Epsom salts and dissolve this in 500mls of spring water (this may seem a lot but Epsom salts is an MgSO4 heptahydrate-molecular wt of this is 246g/mol and pure magnesium is 24 so Epsom salts is 10% magnesium!). Nebulise 10mls of this at a time and this delivers 100mgs of magnesium. The idea is that magnesium has a marked anti-inflammatory action in the lungs. At this stage do take anti-inflammatory drugs such as paracetamol, aspirin, NSAIs.
		<p>Continue to sniff iodine – if you can smell the iodine then you have a therapeutic dose. There are NO serious interactions</p>

		<p>between vit C and iodine. However they work best taken apart from each other. This is because vit C kills as a reducing agent (it donates electrons) and iodine kills because it is an oxidising agent (it mops up electrons).</p>
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It MAY be that iodine additionally helps by chelating up these dangerous free iron molecules for excretion. This process is further helped by vitamin C