

The Application of a Simplified Checklist for Evaluating Non-Vaccinated and Vaccinated Individuals during the Current COVID-19 Pandemic, in Areas that are Endemic for Lyme and Related Tick Borne Diseases

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Quotation: “simplified evaluation tables will provide physicians who practice in areas endemic for Lyme and Related Tick with a practical simple checklist system to aid in the diagnostic process which now also includes COVID-19”.

The diagnosis treatment of Lyme and related tick-borne diseases is a difficult undertaking [1]. This is associated with the knowledge that tick borne diseases often involve several different pathogens transmitted to the victim as a result of a tick bite [1-3].

Tick Borne Diseases weaken the immune system[1,2]. The appearance of Coronavirus COVID-19 adds new complications to patients whose already weakened immune systems are in engaged in a already doing battle with Tick Borne Pathogens and other pre-existing conditions [2,3].

The literature cites that fact Tick Borne Diseases can produce clinical symptoms that can resemble: a)fibromyalgia, b)Multiple Sclerosis, c) Alzheimer’s Disease, d) Amyotrophic Lateral Sclerosis, e) brain fog, f) brain fog, g)cognitive diseases, and h)anxiety [4].

Chinese investigators had found that COVID-19 can produce a vast array of neurological pathology [5,6]. In some pediatric cases there occurred only neurological manifestations [7,8].

There has recently arisen scenarios where a patient has manifesting manifested lingering symptoms of COVID-19 infection long after their viral carriage PCR tests were negative [9,10]. This group of individuals who displayed a persistence of COVI-19 symptoms have been termed “Long Haulers” [10,14].

Borrelia burgdorferi, is a bacterial causative agent for Lyme disease. The viral agent CoV-3 causes COVID-19 infections. What is most interesting about these two disease states is that at early onset of illness they share common symptoms.

In regions where there is a seasonal occurrence of tick borne diseases physicians now also have to beware of the additional occurrence of COVID-19.

Physicians in endemic areas need to additionally address issues of Long Hauler Status, and the immune status of an individual (normal or immunocompromised) and whether or not the patient has or has not been vaccinated against COVID-19 [14-16].

The literature has noted that the current antibody tests cannot be utilized to determine the protective status of a COVID-19 vaccine preparation in individuals with normal immune functions [14-16].

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The Federal Drug Administration currently “does not recommend” that an individual with normal immunity have antibody titre tests performed in order to ascertain if the vaccine had conferred immunity to COVID-19 [14-16].

The current school of thought is that the production of T-cells seems to be a better indicator of vaccine protection [14-16]. The jury is still out, however, as to an established correlation between vaccine protection to the level of T-cell produced with vaccine related immunity to COVID-19 [14-16].

Immunocompromised could have received a COVID-19 vaccine preparation but, had produced suboptimal levels of antibodies to COVID-19 [14-16]. The picture of immunology to COVID-19 via a vaccine is now thought to not only involve humoral immunity but, also involves the creation of T cells in response the vaccine preparation [14-16].

The literature also cites the fact of the possibility that an individual can have no antibodies to COVID-19 but, could have produced adequate levels of T-cells, and therefore this person could be protected against COVID-19 [14-16].

It has been suggested by some members of the medical community that it would be useful to test immuno-impaired-individuals for the presence of neutralizing antibodies, titre levels of neutralizing levels. and also for T-cell concentration [14-16].

What is needed therefore is to develop a standard and simplified system for evaluating patients in areas also endemic for Tick Borne Diseases.

Cited below are the “Simplified Tables for Evaluating Patients for COVID-19 in Areas also Endemic for Lyme and Related Tick Borne Diseases.

It is my hope that these simplified evaluation tables will provide physicians who practice in areas endemic for Lyme and Related Tick with a practical simple checklist system to aid in the diagnostic process which now also includes COVID-19.

Simplified tables for evaluating patients for COVID-19 in areas also endemic for lyme and related tick borne diseases

Non vaccinated patients

Conditions	TBD's	Non TBD Infections	Non-Infectious	COVID Negative	COVID Positive
Pre-existing Conditions					
COVID-19 Status					

Non-vaccinated patients

Tests	Negative Reaction	Positive Reaction	Negative Viral Carriage	Positive Viral Carriage
Exposure to COVID-antigens				
COVID viral carriage via PCR				

Non-vaccinated patients

Tests	Negative Long Hauler Status	Positive Long Hauler Status
T- Cell Test to determine past infection to COVID-19 (Long Hauler Status)		

Vaccinated patients

Conditions prior to vaccination

Conditions	Tick Borne Disease (TBD)'s	Non TBD Infections	Non-Infectious	COVID Negative	COVID Positive
Pre-existing Conditions					
COVID-19 Status					

Vaccinated patients

Vaccine Preps	Number of Doses Given for Complete Vaccination	Partial Vaccination	Complete Vaccination
Pfizer Vaccine	2		
Moderna Vaccine	2		
J&J Vaccines			

Vaccinated patients

Lingering Symptoms Prior to Vaccination	Negative Long Hauler Status	Positive Long Hauler Status
Long Hauler Status		

Vaccinated patients

Tests to Determine Efficacy of Vaccination	Presence of Neutralizing Antibodies	Titre of Neutralizing Antibodies	Presence of T-cells post vaccination
Neutralizing Antibodies to Covid			
Strength of Neutralizing Antibodies			
T-cell testing			

Vaccinated patients

COVID Infections after having received a Vaccination	Specific Vaccine Preparation Received	Absence of Post Vaccination COVID Infection	Patient Sustained a Post Vaccination COVID Infection
Post Vaccination COVID Infection Status			

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