

The Heightened Risk of Acquiring a Deadlier Coronavirus COVID-19 Respiratory Infection in Individuals with Pre-existing Lyme and Related Tick Borne Infections

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The literature cites the fact that 4 - 60% of patients with Lyme disease (LD) were additionally co-infected with Babesia, Anaplasma or Rickettsia [1,2]. Garg., et al also make it quite clear that ticks harbor many different pathogenic organisms [1]. A tick-borne infection is thus a multi-pathogenic event and is not a classic case of one pathogen one disease [1].

In a research investigation derived from mouse and human studies, it was discovered that pathogenesis associated with tick borne organisms could cause immune dysfunction [1,3,4]. Tick Borne Disease victims must therefore produce immune responses to various tick related pathogens [1].

The victims of tick bites also have to deal with non-tick bite related opportunistic pathogens as well [1]. The tick-borne pathogens that can be transmitted to the victim in addition to the Lyme disease organism *Borrelia burgdorferi* are: *Babesia* spp., *Bartonella* spp, *Brucella* spp., *Ehrlichia* spp., *Rickettsia* spp., tick-borne encephalitis, and Powassen virus [1,2].

In this scenario of immune dysfunction or suppression, the infection involve both multiple tick-borne infections and also non-tick borne opportunistic infections (ie Chlamydia spp. Coxsackievirus, Cytomegalovirus, Epstein-Barr virus, Human parvovirus B1924 and Mycoplasma spp, etc) resulting in a weakening of the immune system [1,3,4].

The weakened immune system of a tick bite victim must therefore now deal with a heavy pathogen load burden consisting of Lyme disease and related tick borne pathogens, as well as, non-tick borne opportunistic infections [1,3,4].

Thus, with the arrival of the newly emerging Coronavirus strain COVID-19 which commonly manifests itself as a respiratory infection, tick borne disease patients who already have an overburdened and impaired immune system, must now deal with an additional new and deadly non tick related viral opportunistic pathogen [1-5].

The appearance of the Coronavirus COVID-19 viral pathogen further complicates an already difficult treatment regiment necessary for the victims of the multi-pathogenic diseases scenario known as Tick Borne Diseases, and also now puts these individuals in a higher risk category for developing a more serious and deadlier Coronavirus COVID-19 respiratory disease process [1-5].

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Bibliography

1. Garg K., *et al.* "Evaluating polymicrobial immune responses". *Scientific Reports* 8 (2018): 15932.
2. Ollar RA. "Powassan Virus, a Deadly Tick Borne Neuropathogen whose Potential Presence Must be Always Considered in Endemic Areas of the USA and Canada". *EC Neurology* 11.8 (2019): 695-696.
3. Bailey P. "Lyme disease subverts immune prevents future protection". *Human and Animal Health* (2015).
4. Horowitz RI. "How Can I Get Better: An Action Plan for Treating Resistant Lyme and Chronic Disease". St. Martin's Griffin, New York (2017): 166-169, 174-176.
5. CDC Health Alert Network, Jan 17, 2020, 2030, CDCHAN-00426.

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