

A Newly Emerging Deadly Duo Scenario of Tick Borne Neuropathogenic Powassan Virus Plus Coronavirus COVID-19

Robert-A Ollar^{1,2*}

¹*Clinical Assistant Professor of Neurology, Department of Neurology, New York Medical College Valhalla, New York, USA*

²*Director of Research, TBD Support Network Inc, Milford, Pennsylvania, USA*

***Corresponding Author:** Robert-A Ollar, Clinical Assistant Professor of Neurology, Department of Neurology, New York Medical College Valhalla, New York, USA.

Received: June 30, 2020; **Published:** July 10, 2020

The Powassan virus is a Tick Borne Neuropathogen that is deadlier than Lyme Disease due to the fact that it has a rapid onset of neurological symptoms, and also has a brief transmission time of 15 minutes after the attachment of a tick to its victim [1-4]. It is the only flavivirus that is associated with ticks, and that is also found to occur in the Western Hemisphere [1].

The symptoms associated with the Powassan virus can start to manifest after a period from 7 days to one month [1]. This virus can often cause encephalitis and meningitis, as well as, fevers, seizures, neurological deficits, hemiplegia, and such neurological consequences as: mental status changes, visual deficits, hearing impairments, and chronic motor difficulties [1-4]. The literature cites the fact that ten percent of the cases of Powassan virus have fatal outcomes [1]. The scenario is far worse in those individuals who have pre-existing conditions [1-5]. At this time there aren't any vaccines or other therapeutic regimens as concerns either the prevention or treatment of infections caused by the Powassan virus [1].

The Coronavirus COVID-19 is a viral respiratory infection that is caused by severe respiratory syndrome 2 or SARS-CoV-2 [5,6]. COVID-19 is a respiratory droplet infection that is spread from person to person via coughing, sneezing or speaking [5,6].

The classic symptoms associated with COVID-19 infections are: fever, dry cough, fatigue, and shortness or breath [5,6]. The symptoms associated with this viral pathogen can begin to appear from around 2 to 14 days from the time of exposure [5,6]. Most of the cases of COVID-19 infection are associated with mild symptoms but, the literature also cites the fact that this infection can develop into pneumonia, as well as, multi-organ failure [5,6]. Recently, the literature has also reported that COVID-19 has also been associated with many different neurological manifestations [7-9].

The literature has also cited the fact that Individuals with pre-existing Lyme and related Tick Borne Diseases are at higher risk than members of the normal population, as relates to acquiring a deadly case of COVID-19 infection [5].

I recently received a personal communication from a colleague who is an Internist that practices in Northern New Jersey and North-eastern Pennsylvania about a newly emerging disease scenario, namely, a patient with the Tick Borne Neuropathogenic Powassan Virus, and also with a simultaneous infection due to Coronavirus COVID-19 [10].

My colleague reported that a 68 year old male patient with an eight year history of pre-existing low grade Chronic Lymphocytic Leukemia had expired due to "Powassan virus. Additional testing of this patient also revealed the presence of the Coronavirus COVID-19 [10].

This case is the earliest citing in the literature from the United States and perhaps elsewhere in the Western Hemisphere of an individual with a simultaneous case of a deadly Tick Borne Neuropathogenic Virus, the Powassan Virus, and in addition a simultaneous case of the Coronavirus COVID-19 [10].

This is the first time that a deadly tick borne infection has been linked with the simultaneous presence of the equally deadly Coronavirus COVID-19 in an individual who also had a pre-existing non-infectious condition (i.e. Chronic Lymphocytic Leukemia).

Thus, in areas endemic for Tick Borne Diseases, physicians must now also consider not only the possible presence of a Tick Borne Pathogen but, also the additional presence of the Coronavirus COVID-19. This is especially warranted in those cases where an individual also has a pre-existing condition.

Bibliography

1. 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.
2. Powassan (POW) Virus Disease Fact Sheet.
3. Fatmi SS, et al. "Powassan Virus A New Re-emerging Tick Borne Virus". *Frontiers in Public Health* 5 (2017): 342.
4. Horowitz RI. "How Can I Get Better: An Action Plan for Treating Resistant Lyme and Chronic Disease". St Martin Griffin, New York (2017): 156.
5. Ollar RA. "The Heightened Risk of Acquiring a Deadlier Coronavirus COVID-19 Respiratory Infection in Individuals with Pre-existing Lyme and Related Tick Borne Infections". *EC Pulmonary and Respiratory Medicine* 9.4 (2020): 92-93.
6. Coronavirus disease. Wikipedia (2019).
7. Mao L., et al. "Neurological Manifestations of Hospitalized Patients with Coronavirus 2019 in Wuhan, China". *JAMA Neurology* 77.6 (2020): 683-690.
8. Fields RA. "Neurological Implications of COVID-19 Raiser Concerns. Brain Infections may contribute to respiratory failure in COVID-19". *Psychology Today* (2020).
9. Ollar RA. "A Brief Overview of Neurological Ramifications Observed in Patients with Coronavirus COVID-19 Infection". *EC NEUROLOGY* 12.7 (2020): 46-47.
10. Geralyn Ponzio. "Personal Communication" (2020).

Volume 12 Issue 8 August 2020

©All rights reserved by Robert-A Ollar.