Kenneth Liegner, MD – Lyme & TBD: Where Are We, 2021?

May Awareness LDA Guest Blogger

Dr. Kenneth Liegner is a Board Certified Internist with additional training in Pathology and Critical Care Medicine, practicing in Pawling, New York. He has been actively involved in diagnosis and treatment of Lyme disease and related disorders since 1988. He has published articles on Lyme disease in peer-reviewed scientific journals and has presented poster abstracts and talks at national and international conferences on Lyme disease and other tick borne diseases. He has cared for many persons seriously ill with chronic and neurologic Lyme disease. His work has focused on the serious morbidity and (occasional) mortality that can eventuate from this aspect of the illness. He has emphasized the urgent need for widespread clinical availability of improved methods of diagnostic testing and for development of improved methods of treatment for Lyme disease in all its stages. He holds the first United States patent issued proposing application of acaricide to deer for area-wide control of deer-tick populations as a means of reducing the incidence of Lyme

disease. He has authored **In the Crucible of Chronic Lyme Disease – Collected Writings & Associated Materials**, a documentational history of the struggle to characterize the nature of Lyme disease in the late 20th and early 21st centuries, published November 2015 (www.inthecrucibleofchroniclymedisease.com).

He served two terms on the Board of Directors of The International Lyme and Associated Diseases Society (www.ilads.org), is on the Scientific Advisory Board of the Lyme Disease Association (www.lymediseaseassociation.org), and is a member of the American Medical Association (www.ama-assn.org), the Westchester County Medical Society (www,wcms.org), the Medical Society of the State of New York (www.mssny.org) and The American Association of Physicians and Surgeons (www.aapsonline.org). He is on the staff of Northern Westchester Hospital Center in Mount Kisco, New York (Northwell Health System) and the Sharon Hospital in Sharon, Connecticut (Nuvance Health System).

He was the first physician to apply disulfiram in the treatment of Lyme disease and published his experience with his first three patients in the peer-reviewed journal ***Antibiotics***, May 2019 (https://www.mdpi.com/2079-6382/8/2/72) and reported his first 3 years' experience with the drug in December 2020 (***Antibiotics* 2020**, 9(12), 868; https://doi.org/10.3390/antibiotics9120868) He was co-author on a landmark pathologic study of tissues from a person with chronic Lyme disease (https://www.mdpi.com/2079-6382/8/4/183) and co-author of the ILADS evidence-based definition of chronic Lyme disease (https://www.mdpi.com/2079-6382/8/4/269).

Lyme & Tick- & Vector-Borne Disease: Where Are We, May 2021?

The COVID-19 Pandemic has overwhelmed the U.S. of A. and the world and has temporarily overshadowed another 'shadow on the

Land’* – the global pandemic of Lyme disease.

As city denizens flee for more rural areas in efforts to minimize the risks of acquiring COVID-19, they may be less mindful of the risks ticks pose. Deer tick bites often go unnoticed, yet they can transmit the agent of Lyme disease and a range of other infectious diseases: non-Lyme borrelioses (e.g. tick-borne relapsing fever due to the spirochete *Borrelia miyamotoi*), Powassan virus, anaplasmosis (a Rocky Mountain Spotted Fever-like illness) and babesiosis. Bartonellosis may also occur in persons with Lyme disease (whether tick- or flea-transmitted or due to a cat scratch), complicating the clinical picture. Onset of Lyme disease can be insidious and tests not always reliable so there can be delays in diagnosis which allow borrelial infections to become deeply entrenched and more difficult to treat.

The HHS Tick-borne Diseases Working Group with very significant input by patients, advocates and some treating clinicians has developed important perspectives to the problems posed by tick-borne infections and is serving to ‘move things forward’.

Although there has been some increased Federal funding for Lyme and other tick-borne diseases recently, as well as influx of funds from charitable foundations and private donors, the total commitment to solving these complex problems had been inadequate: consistent funding for H.I.V./A.I.D.S. greater than $1 billon/year for decades has enabled real progress in diagnosis and therapy. An infection that was basically a death sentence is now eminently manageable with oral anti-viral agents. Affected individuals can enjoy a good quality of life with a life-span approximating those not infected. Annual funding for Lyme disease by comparison, has been paltry.

Sadly, despite decades of advocacy we still lack a clinically available, well-validated and reproducible direct detection

test for Lyme disease that can measure ‘borrelial load’ (analogous to measures of ‘viral load’ so very useful in the management of H.I.V./A.I.D.S.).

Likewise, attention to the development of improved therapeutics has been grossly inadequate at the Federal level, progress stymied by the damaging dogma: chronic Lyme disease does not exist.

In the past decade and largely due to funding from private foundations and patient advocacy groups, innovative forays in to repurposing of FDA-approved agents already in the United States Pharmacopeia and novel combinations of pharmaceutical as well has herbal-derived principles *in vitro* have identified promising new approaches which are beginning to be explored clinically, mostly by individual practitioners.

This ought to be vastly expanded and undertaken as systematic and formal clinical trials against ‘comparator’ agents such as ‘standard’ recommended antibiotherapies. Such trials are costly, however, would lead to more ‘robust’ data that are more than merely ‘anecdotal’. This merits funding with Federal dollars. Academic medical centers are well-equipped and well-accustomed to running such randomized controlled trials. However, such trials could also be undertaken ‘in the community’ through clinicians actually caring for patients with chronic tick-borne illnesses.

I have likened practitioners caring for patients with the ‘big 3’ B’s of tick- and vector-borne diseases (Borreliosis, Babesiosis and Bartonellosis) to playing 3 simultaneous games of chess in 3 dimensions against 3 opposing Grandmasters. It is a great challenge for practitioners. It is not boring! But when one successfully enables patients to improve their quality of life and sometimes (with shared decision-making, luck, skill and patient & practitioner perseverance) to make a full or substantial recovery, well, it is very gratifying.

Lots of work remains to be done! Let us all resolve to do that work! Let’s cooperate! Let’s get busy!

*the title of United States Public Health Service Surgeon General (1936-1948) Thomas Parran’s influential book concerning syphilis

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