Scientific references by Dr Horowitz, and other authors on persistence of Lyme borreliosis:

Dr Horowitz Publications /Abstracts:

Book:


Why Can’t I Get Better?

Richard Horowitz, M.D.


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Soigner Lyme et les maladies chroniques inexpliquées Broché – 12 juin 2014

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Scientific Publications of Dr Horowitz:


Mycoplasma Species in Ticks. Sapi, E, Horowitz, R: Awaiting Publication


High Dose Trimethoprim-Sulfamethoxazole Therapy: A Useful Adjunct to Combination Therapy in the Treatment of Resistant Babesiosis. Horowitz, R.I.,

Chronic Persistent Babesiosis after Acute Treatment with Cleocin and quinine, and Atovaquone and Azithromycin Horowitz, R.I., M.D. 12th International Conference on Lyme Disease and Other Spirochetal and Tick-Borne Disorders, April 9-10, 1999. New York, New York


Rationale for Long Term Treatment and Studies on Persistence:

Regarding treatment, some physicians believe that there is no reason to be treating patients beyond the 30 day course routinely recommended by the IDSA guidelines; however there are high rates of treatment failure for all stages of Lyme disease. According to the CDC, as many as 20% of patients remain ill after the short term treatment protocol recommended by the IDSA (http://www.cdc.gov/lyme/treatment/).

Other studies suggest the treatment failure rate for early Lyme disease may be as high as 36%:
In late Lyme disease, treatment failure rates may exceed 50%:


Why do patients fail short term therapy? The peer reviewed medical literature shows chronic persistent infection despite intensive antibiotics:

- Donta, ST, Tetracycline therapy in chronic Lyme disease. Chronic Infectious Diseases, 1997; 25 (Suppl 1): 552-56
• Fried MD et al, Borrelia burgdorferi persists in the gastrointestinal tract of children and adolescents with Lyme Disease, JNL of Spirochetal and Tick-borne Diseases, Spring/Summer 2002; 9:11-15


Chronic persistent infection with Bb despite intensive antibiotics was also proven in two recent Xenodiagnostics studies. The first was in mice:


Results confirmed previous studies: Bb could not be cultured from tissues, but low copy numbers of Bb flaB DNA were detectable in tissues up to 8 months after completion of treatment & RNA transcription of genes was seen with visualized spirochetes.

In humans, a recent NIH study by Dr Marques showed that among ten patients who had high levels of antibodies against B. burgdorferi after antibiotic treatment, two of those patients had “indeterminate results”, and one patient with Post Treatment Lyme disease syndrome (PTLDS) had a positive result, confirming evidence of ongoing Borrelia DNA in these patients:


Some physicians feel that there is no evidence of prolonged antibiotics helping symptoms. We know that:

Short term antibiotics fail in 25%-71% of patients with late stage disease:
These frequent treatment relapses and failures with short term therapy are documented by other authors:

- Logigian (1990): After 6 mo’s of therapy, 10/27 patients treated with IV AB’s relapsed or had treatment failure.
- Pfister (1991): 33 patients with neuroborreliosis were treated with IV AB’s. After a mean of 8.1 months 10/27 were symptomatic and borrelia persisted in the CSF in 1 patient.
- Shadick (1994): 10/38 pts relapsed (5 with IV) within 1 year of treatment, and had repeated AB treatment.
- Asch (1994): 28% relapsed w/ major organ involvement 3.2 years after initial treatment

Many doctors use IDSA guidelines to base their conclusions to not treat sick patients with long term antibiotics. However only three NIH-funded trials have been conducted on the treatment of chronic Lyme disease:


These were inadequate treatment trials as sample sizes were extremely small, ranging from 37 to 78 patients. Critics have pointed out that studies this small lack sufficient statistical power to measure clinically relevant improvement:


Nevertheless, two of the three clinical trials demonstrated that retreatment improved some patients’ measures, such as fatigue and pain (Krupp, Fallon). Others have shown improvement in cognitive function, in those with Lyme encephalopathy (Fallon).


The medical literature does in fact show a benefit to using longer treatment regimens for disseminated Lyme Disease:

Rocephin + 100d of Amoxicillin and Probenecid, 83% improved w/ Rocephin, then 100 days of cephadroxil


- 3. Oksi, J et al., Comparison of oral cefixime and intravenous ceftriaxone followed by oral amoxicillin in disseminated Lyme borreliosis. Eur J Clin Microbiol Infect Dis, 1998. 17(10) :p 715-9→ 30 pts w/ chronic Lyme disease were treated for 100 days, and 90% had good or excellent responses

- 4. Oksi, J., et al. Borrelia burgdorferi detected by culture and PCR in clinical relapse of disseminated Lyme borreliosis. Ann Med, 1999. 31(3):p.225-32→32/165 patients with disseminated Lyme were treated for 1 or more months of antibiotics, and showed that even more than 3 months of treatment may not eradicate the spirochete, and that longer term therapy may be necessary.

This last study detected chronic persistent Lyme by both PCR and culture, the “gold standard” for proving chronic infection.

In conclusion, the scientific literature shows: unreliable blood tests, persistence of borrelia despite short term treatment, and peer reviewed clinical trials showing benefit of longer term antibiotic therapies. It is therefore incumbent on the physician to use their best clinical judgment in treating their patients.

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