Dr Donta's Guidelines to Diagnosis and Treatment of Lyme Disease

Diagnosis

1-Primarily clinical presentation
2-In early Lyme disease, rashes present in 50%, typical rash 50%
3-In chronic or post-treatment Lyme disease, presence of ongoing symptoms likely due to persisting infection.
4-Currently no laboratory direct detection test; current PCR-DNA test rarely positive
5-Lyme screening tests for antibodies (ELISA, EIA) helpful when positive; negative results do not exclude diagnosis
6-Lyme Western Blots (IgM, IgG) best currently available indirect, antibody-based, test. It's not numbers of bands, but which bands are present; ie 23kd, 39kd, 83/93kd highly specific-their presence establishes exposure. 41kd reaction most common, albeit not as specific. IgM reactivity-even to only 23kd or 39kd protein correlates with ongoing symptoms in lieu of any direct test. IgM reactivity is not false positive in ongoing symptoms.

Treatment

1-Treatment results should be based on clinical outcome; no available test to determine infection gone.
2-Early Lyme disease: 3-4 weeks of doxycycline 100mg bid, amoxicillin 500mg bid, or cefuroxime 500mg bid until symptoms resolved (not just improved); continue treatment additional 2-4 weeks if still symptoms.
3-If symptoms persist or recur, treatment with doxycycline, amoxicillin, or cefuroxime rarely helpful or curative; one of following regimens much more effective:

a-tetracycline 500mg tid or 750mg bid 20min before or 1hr after breakfast & supper
b-combination of a macrolide antibiotic (eg clarithromycin-500mg bid, erythromycin-500mg bid, azithromycin-500mg qd) and hydroxychloroquine (Plaquenil) 200mg bid with food (eg breakfast, supper, or lunch and supper).
The purpose of the hydroxychloroquine is to alkalinize an acidic intracellular compartment (eg lysosome) in which the Lyme bacteria likely reside, without which the macrolide antibiotic will not be effective. Hydroxychloroquine itself will not relieve the symptomatology, and is not beneficial when added to doxycycline or tetracycline, as those antibiotics are effective in an acidic milieu.
c-no supplemental B or C vitamins (including multivitamin) or antioxidants (vitamin E, CoQ10) during the treatment period; vitamin C will keep the intracellular compartment acidic and diminish the effectiveness of the macrolide antibiotic, supplemental B vitamins might assist the survival of the bacteria as it does not synthesize its own B vitamins, antioxidants will antagonize the effects of the body's own attempts to oxidize the bacteria, and the bacteria produce antioxidants. There need be no changes or restrictions in diets themselves.

4-the total treatment duration for persistent or recurrent symptoms may vary from a few weeks to several months or more, depending on the clinical response. In patients with symptoms for less than 1-2 years, 3-6 months of treatment with one of the two above regimens is usually sufficient. In patients with ongoing/more severe symptoms for more than 2-3 years, 12-18 months, sometime longer, of treatment may need to resolve most, if not all symptoms. In these cases, it seems useful to alternate the two antibiotic regimens every 6 months or so, the tetracycline regimen usually in the non-sunny months.

References:

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3. Donta ST. Macrolide Therapy of Chronic Lyme Disease. Med Sci Monit 9:136-142, 2003
4. Donta ST: Issues in the Diagnosis and Treatment of Lyme Disease. Open Neurology Journal, 6:140-145, 2012.