198 More of Everything: Characteristics of Those Seeking Opinions Regarding Lyme Disease

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Introduction

Some with unexplained symptoms including chronic fatigue or pain are diagnosed with Lyme disease (LD) or are worried about this infection. Non-FDA approved laboratory-developed tests (LDT) are not usually clinically validated for LD and may lead to misdiagnosis and unnecessary antibiotic therapy. We compared patient characteristics of those who previously had LDTs to those without any LDT history.

Methods

We retrospectively reviewed 1261 patients referred between 2000-2013 for a presumptive diagnosis or concern for LD. Persons age 12 or greater were included. Subjective and objective findings were abstracted from electronic medical charts to obtain demographics, clinical and laboratory information, treatments and clinical outcomes. Diagnosis of Lyme disease followed CDC criteria. Patient characteristics were compared using Chi-square or Wilcoxon sum rank tests.

Results

LDT use was identified in 257/1261 (20.4%). Mean age of patients with LDTs was 45.8, and 45.7 in those without LDTs (P=0.899). While age, gender, and race were similar in both groups (P>0.05), patients previously tested with LDTs had longer symptom duration (median 986d vs 480d, P<0.0001), longer prior antibiotic duration (median 63d vs 40d, P<0.001), more frequent infection-related testing (4 times vs 2 times, P<0.0001), higher prior co-infection diagnoses (25% vs 8%, P<0.0001) and less likely to result in diagnosis of Lyme disease diagnosis at our facility (24.5% vs. 8%, P<0.001).

Conclusions

Patients seen at an academic medical center for concern of LD who were previously tested with Lyme LDTs had substantially longer durations of symptoms, longer antibiotic treatment and greater testing burden while less likely to meet traditional criteria for any Lyme-related diagnosis. In this population, Lyme LDT use is not uncommon and lacks correlation with LD which reinforces warnings against their use. Efforts to enhance regulation of LDTs requiring clinical validation may reduce misdiagnosis and over treatment.

Prior LDT use 257/1261(20.4%)	**Non-FDA approved laboratory-developed tests**

Symptom Duration (days)	Median	25th perc.	75th perc.	P value
No LDT (n=1004)	480	158	1333.5	<0.001
LDT (n=257)	**986**	393	2113	

History of putative co-infection	No	Yes	P value
No LDT	928(92%)	76(8%)	< 0.001
LDT	194(75.5%)	**63(24.5%)**	

Testing frequency	Median	25th perc.	75 perc.	P value
No LDT	2	1	4	<0.001
LDT	**4**	3	6	

Lyme Status	No LD	LD	P value
No LDT	824	**166**	<0.001
LDT	236	19	

Antibiotic Duration	LDT	No LDT	P value
no antibiotic	26 (10.1%)	139 (13.8%)	< 0.001
1 - 30 days	64 (24.9%)	345 (34.4%)	
31-90 days	78 (30.4%)	335 (33.4%)	
91-182 days	**39 (15.2%)**	97 (9.7%)	
>183 days	**44 (17.1%)**	80 (8.0%)	
unknown	6 (2.3%)	8 (0.8%)	

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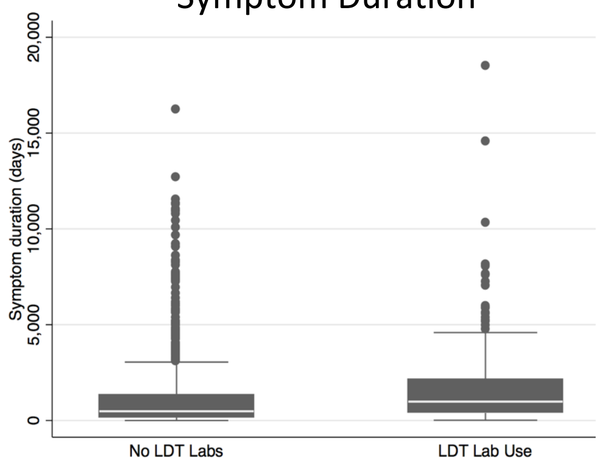
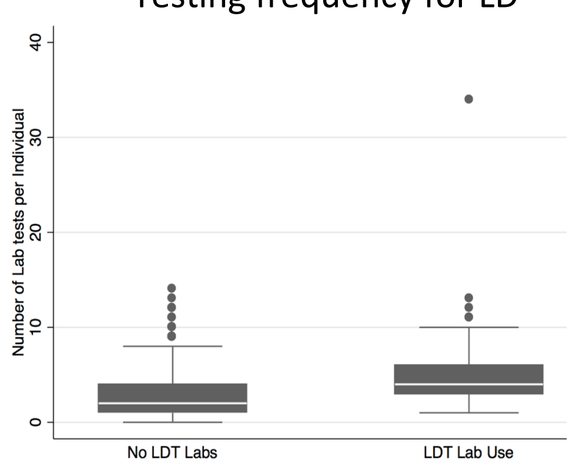
Symptom Duration



Testing frequency for LD



Antibiotic Duration