Understanding the Lyme Disease, Classification and Codes

Jose Lapenta*

Department of Dermatology and Post graduated from University of Carabobo, Venezuela

*Corresponding author: Jose Lapenta, Department of Dermatology and Post graduated from Carabobo University, Researcher, Venezuela; Website: www.dermagicexpress.blogspot.com

Abstract

Hello friends of the network dermagic brings you today another interesting topic about the very well known erythema migrans or lyme disease, transmitted by the bite of a tick, of the ixodes genus being the causal agent an spirochete, well known as borrelia burgdorferi, described for the first time by willy burgdorfer in the year 1981, and previously known as lyme arthritis. Today I bring you the codes of lyme’s disease.

Introduction

Currently worldwide lyme disease has become a major public health problem, due to the annual increase in cases, which in the United States amounts to about 380,000, new cases annually, 2 times more than breast cancer and 6 times more than aids, and beyond this, the lack of modernization of the disease codes at the software or digital level, them do not appear currently and they need to be recognized so that patients to be and treated in time. The events that I present below they are highly related to this lack of “CODIFICATION” of the Lyme disease and its different ways of manifesting itself clinically:

Difficulty to make the diagnosis:

It is well known that some test, to diagnose the disease, result in “NEGATIVE” due to the ability of the causative agent, the spirochaete borrelia to “hide (Biofilm) before the diagnostic tests” Many patients with symptoms of different diseases such as meningitis, arthritis, and recurrent fever, in late stages it is discovered that they are lyme “positive” after having multiple tests for the diagnosis, losing a valuable time to initiate an adequate treatment, and the worse thing is that the chronic development of these symptoms, impar the quality of life of patients who are unattended because they do not have a specific diagnosis.

Resistance to conventional treatment:

Another aspect to consider is that borrelia and its species over time have developed a “great resistance” to conventional therapy with the usual antibiotic treatments: minocycline, doxycycline, amoxicillin, cefuroxime, and many others, leading patients to the despair at the occurrence of the codification of the symptoms. LYME disease has four stages classically known: Initial (I), Secondary (II), Late (III) Chronic (IV).

The lack of modernization of the codes for the Lyme disease:

In this modern and globalized world, digitalization and information technology have become essential elements and everything or almost everything has a code, even diseases at the software level, and in the case of lyme disease these must be updated, and this is done based on the evidence reports, studies and publications of the different manifestations of the disease.

Then you will be asking why the Lyme disease needs the update of its codes? If you enter in the World Health Organization (WHO) and look for lyme disease, you will only find two (2) mentions in the subject ZOONOSES, transmission by ticks: lyme disease and recurrent fever (borreliosis), and the latest relevant reports in terms of studies of the disease by WHO date from the years 1993 and 1995:

-  WHO Workshop on Diagnosis and Surveillance of Lyme Borreliosis. Warsaw, Poland, 20 - 22 June 1995, Ref.: WHO / CDS / VPH / 95.141:
-  The countries involved were: Austria, Bulgaria, Czech Republic, Denmark, Yugoslavia, France, Hungary, Ireland, Japan, Holland, Poland, Russia, Sweden, Switzerland, United Kingdom and the United States.
The countries involved: Germany, Slovakia and the United States. If you read those reports you will notice that they are totally out of date regarding the reality of Lyme disease today.

And I will always give you the answer.

I will place here more than 276 bibliography references classified based on the different manifestations of Lyme disease or borreliosis that are sufficient to recognize that beyond “Lyme Disease” and recurrent fever (Borreliosis) there are other manifestations of the borreliosis that should be codified, digitalized, to give a total coverage to the disease and search of its clinical manifestations.

This “Absence” of codes causes that many patients carrying lyme are not treated adequately, because they do not “Appear in the system” with their respective consequences.

Here I ask the innocent question, what happens is “Unknown” or “Intentioned”? Because to recognize all these IMPLIED CODES means more public spending by the State and the insurance companies.

1) Congenital Lyme Disease: Potential infection of the foetus with possibility of death[1-15]:
- Lyme borreliosis in pregnant women.
- Ehrlichiosis and Borrellosis in Pregnant Women.
- The Infectious Origins of Stillbirth.
- Intrauterine Transmission of Borrelia Burgdorferi in dogs.

2) Lyme Disease: Primary Infection[16-20]:
- Newborn dead woman pregnant with Lyme disease.
- Lyme borreliosis, implication for the foetus.
- Fetal borreliosis, texmia of pregnancy and fetal death.
- Eritema migrans in pregnancy.
- Fetal maternal transmission of lyme disease.
- Borrelia burgdorferi in newborn.

A.) Primary infection and erythema migrans.
- Primary and secondary erythema migrans.

B.) Primary seronegative infection[21-26],
- Negative antigens against borrelia burgdorferi in cerebrospinal fluid in neurologic lyme disease.
- Seronegative Lyme disease.
- Seronegative chronic relapsing neuroborreliosis.

3) Lyme disease, persistent infection in secondary and late stage[27-30],
- Persistent infection with antibiotics doxycyline and amoxicillin.
- Isolation of borrelia burgdorferi from ocular iris.
- Survival of borrelia burgdorferi after therapy with antibiotic.

4) Lyme disease, persistent infection in secondary and late stage[31-40],

A.) Cutaneous Manifestations:
- Borreial Lymphocytoma (BL).
- Acrodermatitis atrophicans[41-45]
- Annulare granuloma[46-48],
- Morphea[49-51],
- Localized scleroderma[52-54],
- Lichen sclerosus and atrophicus[55-57],

B.) Other Cutaneous manifestations[58-62]:
- Benign lymphocytic infiltration of jessner kanof.
- Infantile acrodermatitis of gianotti-crosti.
- Atypical erythema multiforme.
- Urticarial vasculitis.

5) Lyme disease of skin and mucous membranes[63-65]:
- Association of Lyme disease with morgellons disease.
- Diffusel alopecia[66-69],
- Scleroderma in cup de sabre.
- Pseudopelade of brocq.

6) Lyme disease and other lesions[70-72]:
- Anetoderma.
- Primary and secondary erythema migrans in children.

7) Lyme disease late stage: meningitis, oculopathy, iridocyclitis, iritis, uveitis[73-83]
A.) Lyme Meningitis.
B.) Lyme Oculopathy.
C.) Lyme Iridocyclitis, Iritis and Uveitis.

8) Lyme disease secondary and late stage: Nephritis, Hepatitis, Lymphadenopathy, Myositis and Other[84-107]
A.) Lyme Nephritis.
B.) Lyme Hepatitis.
C.) Lyme Lymphadenopathy.
D.) Lyme Myositis.
E.) Other Conditions:
- Perplexing Symptoms.
- Pancytopenia.
- Eye Symptoms.

9) Lyme disease late stage and cardiovascular disease[108-128]
A.) Aortic Aneurysm.
B.) Aneurysm of Coronar Arteries.
C.) Late Endocarditis.
D.) Carditis.
E.) Atroventricular Block.

10) Lyme disease late stage, neuro-borreliosis, neuritis or neuropathy, meningovascular, nb with cerebral infarcts, lyme Parkinsonism, lyme encephalitis[129-182]
A.) Neuro Borreliosis (NB) Late Symptoms.
B.) Neuritis or Late Neuropathy.
C.) Neuro Borreliosis (NB) Meningovascular with Cerebral Infarcts.
D.) Intracranial Aneurysm.
E.) Parkinsonism.
F.) Late Encephalitis.
G.) Stroke due to Neuro borreliosis.
H.) Neuro Borreliosis (NB) Unspecific Symptoms:
- Late Lyme disease (Neuro Borreliosis: Comparison and Evidence of the Spirochetes and late Neurosyphilis).
- Evidence between the infection of spirochetes and Alzheimer’s
disease.

11.) **Lyme Disease**: Neuroborreliosis, Late Lyme Meningoencephalitis or Meningomyeloencephalitis[183-212].

12.) **Lyme Disease Late Stage**: Atrophic form of Meningoencephalitis with Dementia, Subacute presenile dementia and neuropsychiatric manifestations[213-243].

13.) **Lyme Disease**: Late Stage: Bone, Joint and Musculoskeletal Manifestations[244-252]

14.) Lyme Disease, Late Stage: Oculopathy, Liver, Kidney and respiratory manifestations[253-267].

A.) Oculopathy.
B.) Liver and other visceras.
C.) Kidney and ureter.
D.) Bronchia and Lungs.

15.) Lyme Disease, Latent Stage, Unspecified[268-281].

A.) Infection of the Central Nervous System.
B.) Simple Herpes Type 1.
C.) Diseases by Spirochetes of the Central Nervous System.

This classification that you have just read is a summary of the 276 bibliographic references that I describe below which you can find in the best scientific databases such as Pubmed, Medscape, Lilacs etc, if you have some doubt copy and paste of any of them, put it in your browser and you will get the exact information on the mentioned databases.

![Borrelia Burgdorferi](image)

**References**


**Conclusion**

As you can see, there are enough evidences, to update the codes of Lyme disease in all the databases systems of the planet, to give a total coverage to the diagnosis and treatment of this disease that in my particular way of seeing is becoming the new plague of the 21st century. But this does not end here, suddenly you think that some details are missing, some or several questions, which I will explain in the next edition: Lyme’s Disease, Syphilis and Leprosy, the missing link.

Do not miss it!!!

PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others


PubMed | Crossref | Others
mology 111(5): 1023-1028.
-
99) Brtkova, J., Jirickova, P., Kapla, J., et al. Borrelia arthritis and
ic characteristics of Lyme disease treated at the Infectious Disease in
mmmunic shock suggesting acute coronary syndrome as initial manifesta -
genic shock suggesting acute coronary syndrome as initial manifesta-
112) Xu, L., Heath, J., Burke, A. Ascending aortitis: a clinicopathologi-
cal study of 21 cases in a series of 300 aortic repairs. (2014) Pathology
46(4): 296-305.

95) Zaidi, S.A., Singer, C. Gastrointestinal and Hepatic Manifestations

103) Sauer, A., Speeg-Schatz, C., Hansmann, Y. Two cases of orbital
myositis as a rare feature of lyre borreliosis. (2011) Case Rep Infect
Dis 2011:372470.


105) Salzman, B.E., Stonehouse, A., Stud cufford, J. Late Diagnosis of
Early Disseminated Lyme Disease: Perplexing Symptoms in a Garden-

BMJ Case Rep 2014.

107) Sathiamoorthi, S., Smith, W. The eye and tick-borne disease in the

108) Cuisset, T., Hamilos, M., Vanderheyden, M. Coronary aneurysm
c72–e73.


110) Hinterseher, I., Gäbel, G., Corvinus, F., et al. Presence of Borrel-
ia burgdorferi sensu lato antibodies in the serum of patients with abdom-
781-789.

111) Watzinger, N., Fruhwald, F.M., Schaf halter, L., et al. [Coronary
aneurysm in a 69-year-old patient. Transthoracic echocardiography].

112) Xu, L., Heath, J., Burke, A. Ascending aortitis: a clinicopathologi-
ocal study of 21 cases in a series of 300 aortic repairs. (2014) Pathology
46(4): 296-305.

113) Clinckaert, C., Bidgoli, S., Verbeet, T., et al. Peripero cardio-
genic shock suggesting acute coronary syndrome as initial manifesta-

114) Bacino, L., Gazzarata, M., Sirci, G., et al. [Complete atrioventric-
ular block as the first clinical manifestation of a tick bite (Lyme disease)].

115) Dernedde S., Piper C., Küh l U, et al. [The Lyme carditis as a rare
differential diagnosis to an anterior myocardial infarction] [in German].

116) Guenther, F., Bode C, Faber, T. [Reversible complete heart
block by re-infection with Borrelia burgdorferi with negative IgM-antibod-

tution ad integrum documented by cardiac magnetic resonance imaging.

118) Kostic, T., Momcilovic, S., Perišić Z.D., et al. Manifestations of

119) Kubanek, M., Šramko, M., Berenová, D., et al. Detection of Bor-
relia burgdorferi sensu lato in endomyocardial biopsy specimens in in-

90) Papineni, P., Doherty, T., Pickett, T., et al. Membranous glomer-
ulonephritis secondary to Borrelia burgdorferi infection presenting as

91) Rawal, B., Rovner, L., Thakar, C., et al. MPGN and Nephrotic
Dis 51(4): B83.

92) Comstock, L.E., Thomas, D.D. Penetration of endothelial cell
monolayers by Borrelia burgdorferi. (1989) Infect Immun 57(5): 1626-
1628.


the severe combined immunodeficiency (scid) mouse manifests pre-
811-820.

95) Zaidi, S.A., Singer, C. Gastrointestinal and Hepatic Manifestations
34(9): 1206-1212.

96) Blazejewicz-Zawadzinska, M., Brochocka, A., Lisinska, J., et al. A
retrospective analysis of 973 patients with Lyme borreliosis in Kuyavi-

during Lyme borreliosis is caused by spirochete migration-induced spe-

98) Vukadinov, J., Canak, G., Brkic, S., et al. Clinico-epidemiolog-
ic characteristics of Lyme disease treated at the Infectious Disease in

99) Brtkova, J., Jirickova, P., Kapla, J., et al. Borrelia arthritis and
chronic myositis accompanied by typical chronic dermatitis. (2008)

100) Carvounis, P.E., Mehta, A.P., Geist, C.B. Orbital myositis associat-
ed with Borrelia burgdorferi (Lyme disease) infection. (2004) Ophthal-
mology 111(5): 1023-1028.

eyelid region: report on five cases with one complication of the orbital
220-224.

Rheum 54(8): 2697-2700.


Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others

Pubmed | Crossref | Others
Classification and Codes, Understanding the Lyme disease


