

Lyme Borreliosis: Clinical Manifestations and Treatment (Recommendations of the Swiss Society for Infectious Diseases)

Summary Part II (Full review articles in German [1-3] or French [4-6])

Treatment of Lyme disease is recommended to shorten the duration of symptoms, to prevent progression and the occurrence of residual symptoms. Choice of drug, route of administration and duration of therapy have always to be made according to the most advanced manifestation, e.g. neuroborreliosis. Generally intravenous treatment offers no advantage over oral therapy, and is reserved for neuroborreliosis, with the exception of Bell's palsy in adults. Children with Bell's palsy should always receive intravenous treatment due to the high frequency of affection of the central nervous system. Wherever possible first line drugs should be used, as second line drugs like cephalosporins are more expensive and macrolids less efficient. In children treatment should be according to weight. Doxycycline is contraindicated below the age of eight.

Response to treatment is favorable, but symptoms can take weeks to months to resolve and are not a sign of treatment failure. Residual symptoms are associated with duration of symptoms for more than 3 weeks to 3 months before start of treatment. But few of these symptoms interfere with activities of daily life.

Diagnosis and treatment of Lyme disease can be troublesome. Certain diagnostic and therapeutic pitfalls should be avoided. Erythema migrans has to be differentiated from allergic reactions to tick saliva, which occur within hours of the tick bite and disappear after 48 hours. Multiple Erythema migrans are either caused by multiple tick bites or are a sign of dissemination. As the affection of other organs influence the choice and duration of treatment, other potential manifestations should always be sought. Atypical localized or treatment refractory lymphocytomas warrant biopsy to rule out malignancy. Only a minority of patients will show the complete triad of Bujadoux-Bannwarth-Syndrome, consisting of radiculitis, meningitis and cranial neuritis. The pathognomonic occurrence of a bilateral facial palsy occurs mostly in children and is rare. Atrioventricular blocks resolve over several weeks, therefore permanent pacemakers are normally not necessary. As a reaction to antibiotic treatment, atrioventricular blocks can progress to atrioventricular block III°. All patients with PQ-Intervalls >0.3 seconds or atrio-ventricular blocks II° should be monitored during treatment. Chronic arthralgias and polyarticular manifestations are not a feature of chronic Lyme disease, but can precede the typical mono- or oligoarthritis. Symptoms of arthritis can be slow to resolve. Persisting symptoms for over 3 months after completion of treatment together with a negative follow up pcr can be seen in autoimmune triggered and degenerative joint diseases. Acrodermatitis chronica atrophicans runs a biphasic course, with a first of inflammatory changes phase followed by an atrophic phase. Treatment in the earlier inflammatory phase can reverse manifestations but treatment in the later atrophic phase can only forestall further progression. As any other infection of the central nervous system, Lyme disease can be responsible for residual symptoms. The occurrence of these depends on the time from the start of symptoms to the start of treatment. Response to treatment takes 2 to 6 months. Normalization of the cerebrospinal fluid changes should occur within 6 months.

Versions in German:

1. Evison J, Aebi C, Francioli P, Péter O, Bassetti S, Gervaix A, Zimmerli S, Weber R (2005) Abklärung und Therapie der Lyme-Borreliose bei Erwachsenen und Kindern: Empfehlungen der Schweizerischen Gesellschaft für Infektiologie. Teil 1: Epidemiologie und Diagnostik. Schweiz. Ärztezeitung 86:2332-2338.
2. Evison J, Aebi C, Francioli P, Péter O, Bassetti S, Gervaix A, Zimmerli S, Weber R (2005) Abklärung und Therapie der Lyme-Borreliose bei Erwachsenen und Kindern: Empfehlungen der Schweizerischen Gesellschaft für Infektiologie. Teil 2: Klinik und Therapie. Schweiz. Ärztezeitung 86:2375-2384.
3. Evison J, Aebi C, Francioli P, Péter O, Bassetti S, Gervaix A, Zimmerli S, Weber R (2005) Abklärung und Therapie der Lyme-Borreliose bei Erwachsenen und Kindern: Empfehlungen der Schweizerischen Gesellschaft für Infektiologie. Teil 3: Prävention, Schwangerschaft, Immundefizienz, Post-Lyme Syndrom. Schweiz. Ärztezeitung 86:2422-2428.

Versions in French:

4. Evison J, Aebi C, Francioli P, Péter O, Bassetti S, Gervaix A, Zimmerli S, Weber R. Borréliose de Lyme. 1ère partie: épidémiologie et diagnostic. Rev Med Suisse 2006;2:919-24.
5. Evison J, Aebi C, Francioli P, Péter O, Bassetti S, Gervaix A, Zimmerli S, Weber R. Borréliose de Lyme. 2e partie: clinique et traitement. Rev Med Suisse 2006;2:925-34.
6. Evison J, Aebi C, Francioli P, Péter O, Bassetti S, Gervaix A, Zimmerli S, Weber R. Borréliose de Lyme. 3e partie : prévention, grossesse, états d'immunodéficience, syndrome post-borréliose de Lyme. Rev Med Suisse 2006;2:935-40.