

Atypical dermatological manifestations of Lyme borreliosis

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SUMMARY

Lyme borreliosis (LB) is a multisystemic infectious disease involving the skin, joints, nervous system, heart, and eyes. Today at least three subtypes pathogenic for humans have been identified: *Borrelia burgdorferi* sensu stricto, *Borrelia garini*, *Borrelia afzelii*. Different genospecies strains of *Borrelia* have been associated with different clinical manifestations. LB is classically described as having three clinical stages or, similarly to syphilis, an early phase and a late one. The early infection corresponds to the first stage, the late infection includes the second and the third stages. LB skin manifestations could be divided into five classes. Erythema migrans, lymphadenosis benigna cutis, and acrodermatitis chronica atrophicans are proven skin manifestations of LB. Lichen sclerosus et atrophicus, morphea, scleroderma, scleredema Buschke, atrophodermia of Pierini and Pasini, Parry-Romberg progressive facial hemiatrophy, and Shulman fasciitis are controversial LB manifestations. Granuloma annulare, atypical persistent pityriasis rosea, and pityriasis lichenoides are skin lesions occasionally related to LB. Urticaria, erythema nodosum, and papular acrodermatitis (Giannotti Crosti disease) are reactive LB skin manifestations. Nodular panniculitis (Pfeifer-Weber-Christian), B-cell cutaneous lymphoma, and juvenile chronic myeloid leukemia are exceptional skin manifestations of LB.

KEY WORDS

Lyme borreliosis skin, atypical manifestations,

In the last years, there have been numerous and important advances of many aspects of Lyme borreliosis (LB). However, it appears that many questions concerning this disease remain unanswered. It is not clear, how spirochetes behave when they enter into the human body. They can produce pathognomonic lesions, skin manifestations mimicking other diseases, or clinical pictures that can be induced also by other etiologic agents.

We became aware of the complexity of this disease since genetic studies can identify different species of

Borrelia burgdorferi (Bb) sensu lato responsible for human infections: *Bb* sensu stricto, *B. garinii* and *B. afzelii*. In Japan a new species was recently described, *B. japonica*, which does not appear to be a human pathogen. In future, additional species of *Borrelia* will probably be identified. The recurrent fever also is caused by several species of *Borrelia*, and the vectors are different ticks (*B. recurrentis* transmitted by *Pediculus sp.* in epidemic relapsing fever, *B. caucasica*, *B. crocidurae*, *B. duttonii*, *B. hermsii*, *B. hispanica*, *B. mazzottii*, *B.*

