Short report

LYME DISEASE IS SPREADING TO THE SOUTH-EAST
Skin manifestations in Croatia 1988-90

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ABSTRACT

An evaluation of the characteristic skin lesion caused by Borrelia burgdorferi in Croatia was attempted. Informations on erythema chronicum migrans (ECM), lymphocytoma cutis (LCC) and acrodermatitis chronica atrophicans (ACA) were evaluated. During the years 1988, 1989 and the first half of 1990, 965 cases were reported: 907 of ECM (94 %), 42 of LCC (4,3 %) and 16 of ACA (1,7 %). The regional distribution showed that skin manifestations of Lyme disease are not rare in the woody areas of Western and Central Croatia, but the disease is rare in Istria and Dalmatia.

KEY WORDS:
Lyme disease, skin manifestations, Croatia, 1988-1990 period

INTRODUCTION

Lyme disease (Lyme borreliosis) is spread over large parts of the world. It has been described in North America, Europe, China, Japan, Australia and in the former Soviet Union. However it is not evenly distributed but occurs more frequently in certain areas. In the U.S.A. Lyme disease is often diagnosed in three districts: in the Northeast from Massachussets to Maryland, in Midwest in Wisconsin and Minnesota and in the West in California and Oregon (1). A number of cases has been reported also from Texas (2).

There is a little doubt that all European states are involved in the transmission of Borrelia burgdorferi. Natural foci seem to be in certain woody areas of West Germany, Switzerland, France, Austria, Scandinavian countries, Slovenia and others (3, 4). Lyme disease occuring in Europe may be milder and more likely to be characterized by erythema chronicum migrans (multiple lesions included) but less likely to have arthritic complications as compared to the cases observed in the U.S.A. (5), but an elevated number of arthritis cases was reported from Switzerland (4).

Tick bites are not rarely observed in the Zagreb and other Croatian areas. For this reason an attempt to obtain informations on Lyme disease in Croatia was made. Erythema chronicum migrans (ECM), lymphocytoma cutis (LCC) and acrodermatitis chronica atrophicans (ACA) are well known dermatological entities and if typical they are easy to diagnose. As these dermatological entities are usually caused by Borrelia burgdorferi (Bb), ECM, LCC and ACA were chosen

as parameters to be used in order to assess the occurence of the Lyme disease in Croatia. The years 1988, 1989 and the first half of 1990 were covered. The unfavorable political situation later on did not allow to carry on this study. Dermatologists from all dermatological departments and dermatological outpatient services in Croatia have cooperated. It was agreed before the study started that reports would be sent in for each year separately.

RESULTS

During the two and a half years 965 cases of ECM, LCC and ACA were registered. Details are presented in table 1. ECM cases are representative of the first and LCC usually of the second stage of the early phase of the Lyme disease, whereas ACA is typical manifestation of the late phase.

The regional distribution of 788 cases observed during the years 1988 and 1989 is presented in figure 1. As it can be seen skin manifestations characteristic of the Lyme disease were observed in elevated numbers in cities situated near larger woody areas like Zagreb, Zabok, Koprivnica, Virovitica, Sisak, Karlovac and Ogulin. The above mentioned cities are in the Central and Northern Croatia. In contrast to this there were few cases of ECM, LCC and ACA observed in Istria and Dalmatia, which are known tourist areas. An exception are the surroundings of Šibenik including the Krka river where such clinical manifestation were not rare.

The data presented include only skin symptoms and may

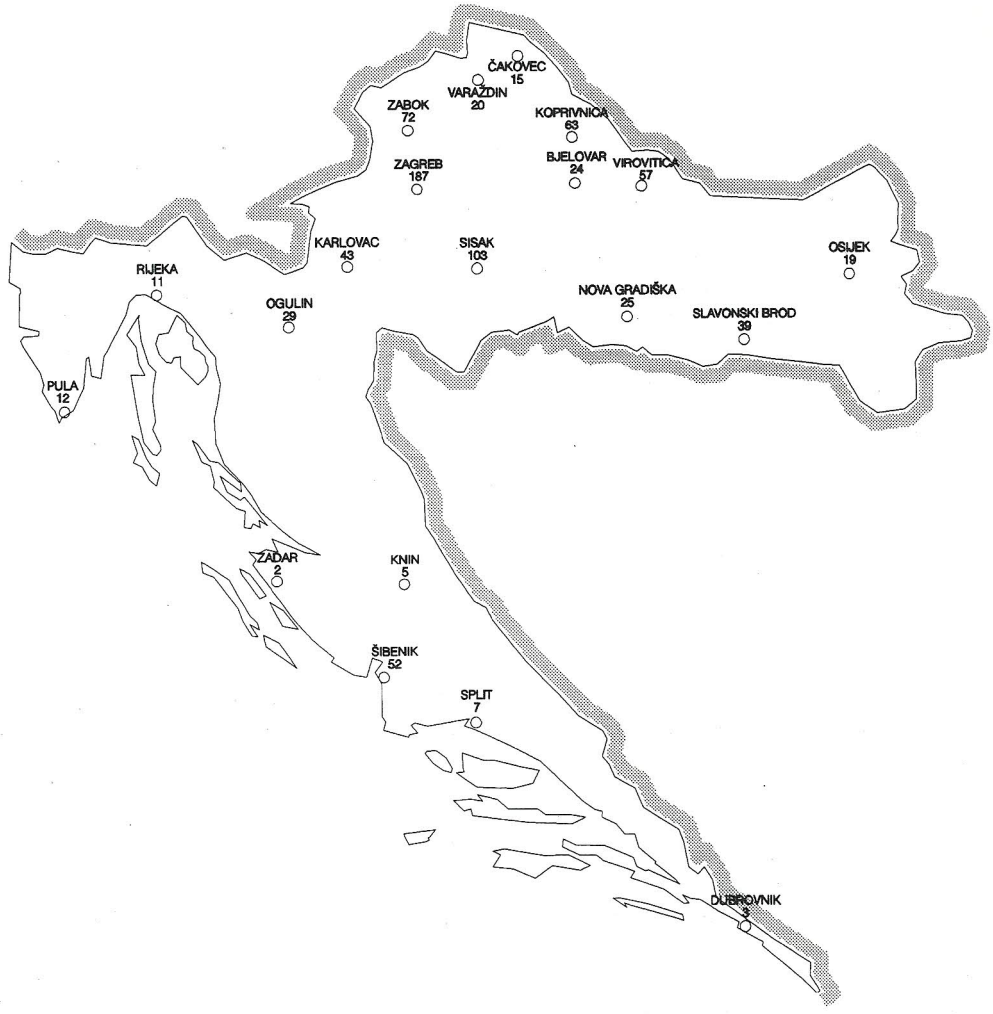

Figure1. Frequency of skin manifestations of Lyme-disease in Croatia in the years 1988 and 1989

be considered as a rather rough estimate of Lyme disease manifestations in Croatia. The observation of so many ECM, LCC and ACA cases shows however inequivocally that in the woody areas of Zagorje, Kalnik, Western Slavonija, Banija and Gorski Kotar skin manifestations caused by Bb are rather frequent. The conclusion is justified that the Lyme disease is not only limited to Central and Northern Europe, as it has been assumed. The general physicians, rheumatologists and doctors of other specialties should be aware ot these characteristic skin manifestations in order to recognize and successfully treat patients with Lyme disease.

Table 1 Skin manifestations of Lyme disease in Croatia

Year	Diagnosis			Total number	%
	ECM	LCC	ACA		
1988	377	20	10	407	94,0
1989	365	13	3	381	4,3
1990	165	9	3	178	1,7
total number	907	42	16	965	100,0

ECM - Erythema chronicum migrans
LCC - Lymphocytoma cutis
ACA - Acrodermatitis chronica atrophicans

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