



V 29 German investigation on Lyme borreliosis: evaluation of therapeutic and diagnostic cost (GILEAD)

M.H. Freitag, I. Müller, G. Poggensee, E. Scharnetzky, K.P. Hunfeld

Institut für Allgemeinmedizin, Universitätsklinikum Jena, Robert Koch-Institut, Berlin, DAK, Hamburg, Zentralinstitut für Laboratoriumsmedizin, Krankenhaus Nordwest, Frankfurt/Main, INSTAND e.V., Düsseldorf

Lyme borreliosis (LB) is a multisystem tick-borne disorder caused by the spirochete *Borrelia burgdorferi*. In Germany alone, the number of incident cases is estimated to range between 40,000 and 60,000 annually. LB diagnosis remains a primarily clinical diagnosis, but in most cases laboratory support is essential because of the non-specific nature of many clinical manifestations. LB is generally responsive to antimicrobial chemotherapy, but the variable clinical picture, persisting symptoms following treatment in some patients, and ongoing problems with the quality and standardization of diagnostic tests actually complicate the medical management of LB patients. Unfortunately, little is known on the resulting economic impact of LB on the German health care system. The GILEAD project is focused on a better characterization of the burden of disease and the medical costs of LB in Germany. Here, we analyzed in- and outpatient data concerning diagnostics and laboratory testing as provided by a German health insurance company covering healthcare for approximately 6.6 million members. Medical, epidemiological, and economic data (ICD- and EBM-codes) for 2007 are currently under investigation to identify the total number of cases with definite or suspected LB and to analyze the number of diagnostic tests and antibiotic treatments in these patients. Initial results of this analysis suggest that in 2007 alone the diagnosis LB was coded in 23,310 out of 6.6 million insured members (0.35%). At the same time, the number of hospitalized patients with suspected or definite LB accounted for 762 cases. The number of diagnostic tests ordered turned out to be 29,616 EIAs and 16,832 immunoblots. Moreover, a total number of 35,665 antibiotic treatments were administered. Concerning the outpatient sector, our investigations also revealed that for 2007 a total number of 203,871 EIAs and 58,737 immunoblots were reimbursed to the health care providers. Our study is the first investigation of the medical and economical burden of LB for the German healthcare system and suggests a high amount of inappropriate healthcare services. The findings coming from the GILEAD project will help assess the economics of current and future disease management and prevention programs.