



INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

CARDITIS-RELATED ATRIAL FIBRILLATION: AN EXCEPTIONAL MANIFESTATION OF EARLY DISSEMINATED LYME DISEASE

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Background: Lyme carditis is rare and usually involves conduction abnormalities. Atrial fibrillation (AF) is a very rare manifestation of Lyme carditis, previously reported in only 3 cases. We report AF and persistent myocarditis as an exceptional complication of early disseminated Lyme borreliosis.

Observation: A 54-year-old man had travelled to the USA in June 2017. During his trip, erythematous macules on the trunk appeared without history of tick bite. Back to France 19 days later, he was admitted in our department. Clinical examination showed: apyrexia, tachycardia, multiple erythematous ring macules and facial palsy. EKG and Holter EKG showed AF with paroxysmic flutter and type 1 AV block. Troponin and NTproBNP were raised. Cardiac MRI revealed myocarditis. Borrelia serology was positive. Culture of skin biopsy identified *Borrelia burgdorferi sensu stricto* (Bbss). The patient was treated with ceftriaxone 2g/d 14 days followed by doxycycline 200mg/d 7 days, ramipril and bisoprolol. Five days after, cutaneous lesions resolved and cardiac enzymes normalized. At 3 months, facial palsy resolved but cardiac MRI showed persistent subclinical myocarditis leading to a 2nd course treatment (doxycycline 200mg/d, 6 weeks). At 1 year, myocarditis persisted on MRI associated with dyspnea NYHA2. However, Borrelia PCR was negative.

Key message: We report an early disseminated Lyme disease due to Bbss contracted in the northeastern USA. Multiple erythema migrans is common in USA, unlike Europe. The frequency of rhythm abnormalities related to cardiac involvement seems very rare. Prognosis of Lyme carditis is usually favorable after intravenous antibiotics. Only one case of persistent asymptomatic myocarditis on MRI was previously reported. Control Disease Center of Lyme Disease (USA) reported no similar case during the same period and area. We report an exceptional manifestation of carditis during Lyme disease, revealed by AF. Dermatologists may be on the front line of these potentially fatal events.

