Cardioboreliosis – our experiences

Alma Sijamija-Haskić[1]*,
Aida Hadžigrahić[2],
Mirsad Selimović[2]

[1]General Hospital Travnik, Travnik, Bosnia and Herzegovina
[2]Clinical Center University of Tuzla, Tuzla, Bosnia and Herzegovina

KEYWORDS: myocarditis, Lyme disease, cardioborreliosis.

CITATION: Cardiol Croat. 2022;17(9-10):182. | https://doi.org/10.15836/ccar2022.182

***ADDRESS FOR CORRESPONDENCE**: Alma Sijamija-Haskić, Javna ustanova Bolnica Travnik, ul. Kalibunar bb, 72270 Travnik, Bosnia and Herzegovina. / Phone: +387-61-780-085 / E-mail: alma.sijamija@hotmail.com

ORCID: Alma Sijamija-Haskić, https://orcid.org/0000-0003-2818-0501 • Aida Hadžigrahić, https://orcid.org/0000-0003-3406-4996 Mirsad Selimović, https://orcid.org/0000-0002-6945-7784

Introduction: Lyme disease is a tick-borne spirochetal infection caused by Borrelia burgdorferi. Although the disease is often manifested with clinical signs of erythema migrans, it can present a multisystem disorder. In about 2-10% of patients infected with the Borrelia burgdorferi cardiac symptoms, transient character will usually occur. Cardioborelliosis may manifest primarily as AV conduction disturbances, and very rare as myocarditis and pancarditis, which represents the second stage of Lyme borreliosis. Complete AV block occurs in 15% of patients, associated with syncope, usually transitory in character.[1-3] For diagnosis beside clinical presentation and data about tick bites serological confirmation is needed. Cardioborreliosis treatment with antibiotics is useful for all stages of the disease but is most successful in the first stage if it is recognized.

Case report: We present two cases of cardioboreliosis hospitalized with clinical manifestations of acute carditis and arrhythmias, AV block II and grade III. *Case 1*: Patient male, 30-years-old, was hospitalized to epigastric pain, feeling short of breath. ECG on admission: AV block type Wenckebach, ventricular rate 43/BPM (**Figure 1**). ECHO signs of marked dilatation of the left ventricle and both atria. *Case 2*: 30-years-old female patient admitted to the intensive care unit because of the crisis of consciousness, vertigo, headache, fever, ECG verified third degree AV block, and ECHO verified small pericardial effusion. Data on skin changes, erythema migrans were obtained subsequently. Diagnosis was based on clinical manifestation, and on positive serologic tests to Borrelia. They were treated with antibiotic therapy. The recovery was very good, and cardiac disturbances were resolved.

Conclusion: It is necessary to think of cardioborreliosis in all patients with cardiac symptoms unexplained etiology. Early treatment with antibiotics according to recommended protocols leads to complete to the of Lyme myocarditis healing.

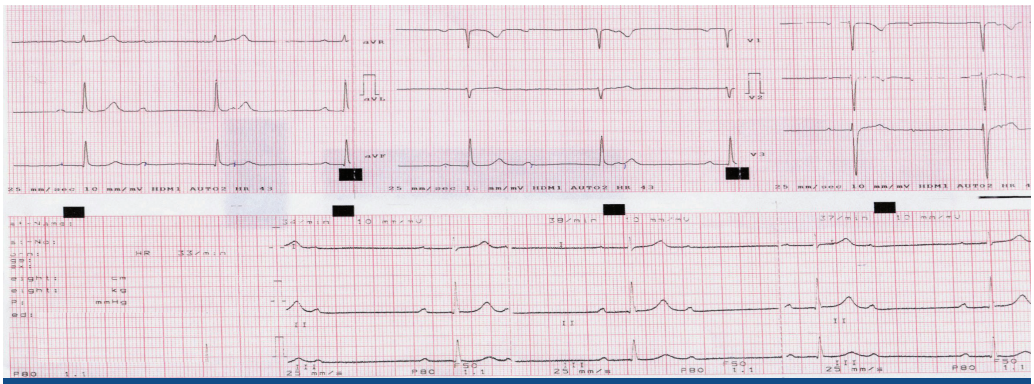

FIGURE 1. 12-lead electrocardiogram on admission: second-degree AV block type Wenckebach. Control electrocardiogram on the next day: second-degree AV block type Mobitz.

RECEIVED:
November 3, 2022

ACCEPTED:
November 10, 2022

LITERATURE

1. Cooper LT Jr. Giant Cell Myocarditis. In: Crawford HM (ed). Valvular heart disease. New York: Mc Graw Hill; 2003; pp. 196.
2. Wilske B, Preac-Mursic V. Microbiological diagnosis of Lyme borreliosis. In: Webwr K, Burgdorfer W. Aspects of Lyme borreliosis. Berlin: Springer; 1993. pp. 267-300.
3. Dattwyler RJ, Luft BJ, Kunkel MJ, Finkel MF, Wormser GP, Rush TJ, et al. Ceftriaxone compared with doxycycline for the treatment of acute disseminated Lyme disease. N Engl J Med. 1997 Jul 31;337(5):289-94. https://doi.org/10.1056/NEJM199707313370501