

# KLINIČKE KARAKTERISTIKE I ISHODI LEČENJA PACIJENATA SA AKUTNIM MIOKARDITISOM

## CLINICAL CHARACTERISTICS AND TREATMENT OUTCOMES OF PATIENTS WITH ACUTE MYOCARDITIS

Saška Grbić<sup>1</sup>

1 Medicinski fakultet Univerziteta u Prištini - Kosovska Mitrovica, Srbija

### SAŽETAK

**Uvod:** Miokarditis je zapaljensko oboljenje koje se ispolja različitom kliničkom slikom. Demografske i kliničke karakteristike bolesnika hospitalizovanih zbog miokarditisa u populaciji naše zemlje nisu detaljno opisane.

**Cilj:** istraživanja je da se opišu demografske i kliničke karakteristike, ispita savremeni pristup dijagnostici i lečenju i utvrde prediktori komplikacija i mortaliteta kod bolesnika hospitalizovanih zbog akutnog miokarditisa.

**Materijal i metode:** retrospektivna studija kojom su iz elektronske baze podataka prikupljeni podaci o bolesnicima hospitalizovanim zbog miokarditisa od januara 2021. do januara 2024. u Klinici za kardiologiju Univerzitetskog kliničkog centra Srbije. Analizirane su kliničke karakteristike, dijagnostika, mere lečenja, kao i ishodi hospitalizacije (kombinovana analiza intrahospitalnog mortaliteta, kardiogenog šoka, potrebe za mehaničkom ventilacijom i malignih poremećaja srčanog ritma).

**Rezultati:** Uključen je 51 bolesnik (žene 29,4%), srednje starosti  $34,2 \pm 11,9$  godina. Pre prijema febrilnost je imalo 54%, a simptome respiratorne/gastrointestinalne infekcije 36%. Bolovi u grudima su bili prisutni kod 72%, malsakslost 44%, nedostatak vazduha 28%, sinkopa 16% i komorske ekstrasistole 20%. Kod svih bolesnika su urađeni elektrokardiografski, ehokardiografski i laboratorijski pregledi, kao i magnetna rezonancija srca (52%) i Holter srčanog ritma (62%). Biopsija miokarda je obavljena kod 3 bolesnika. Bolesnici su otpušteni sa aspirinom (26,5%), beta-blokatorima (84%), ACE inhibitorima (29%), inhibitorima aldosterona (16%) i SGLT2 inhibitorima (18%). Registrovane su sledeće komplikacije: kardiogeni šok 6 bolesnika (11,8%), mehanička ventilacija 4 (7,8%), maligni poremećaji ritma 7 (13,9%) i smrtni ishodi 3 (6%). Kao prediktori komplikacija u multivarijantnoj regresionoj analizi izdvojili su se srčana insuficijencija pri prijemu (odnos rizika, 4,54; 95% interval poverenja 2,31-13,89,  $p=0,004$ ) i ejekciona frakcija leve komore  $\leq 40\%$  (odnos rizika 10,2; 95% interval poverenja 6,22-14,58,  $p<0,001$ ).

**Zaključak:** Miokarditis se najčešće ispoljava bolovima u grudima, simptomima srčane slabosti, sinkopom i aritmijama. Prediktori nepovoljnih ishoda bolničkog lečenja su srčana slabost ispoljena pri prijemu i snažena ejekciona frakcija leve komore.

**Ključne reči:** miokarditis; bol u grudima

### ABSTRACT

**Introduction:** Myocarditis is an inflammatory condition with various clinical presentation. Demographic and clinical characteristics of patients admitted with myocarditis in our population have not been extensively described.

**The Aim:** of the study was to describe demographic and clinical characteristics, assess contemporary approach to diagnosis and treatment, and determine predictors of complications/mortality in patients hospitalized for acute myocarditis.

**Material and Methods:** This was a retrospective analysis of electronic data-records of patients hospitalized for myocarditis (January 2021 to January 2024) at the Department of Cardiology, University Clinical Center of Serbia. Clinical characteristics, diagnostics, treatments, and hospitalization outcomes (combined analysis of in-hospital mortality, cardiogenic shock, need for mechanical ventilation, and life-threatening cardiac arrhythmias) were analyzed.

**Results:** A total of 51 patients were included (29.4% female, mean age of  $34.2 \pm 11.9$  years). Before admission, fever was present in 54% of cases, while symptoms of respiratory/gastrointestinal infection were present in 36%. Chest pain was present in 72%, fatigue in 44%, dyspnoea in 28%, syncope in 16%, and ventricular ectopic beats in 20%. All patients underwent electrocardiographic, echocardiographic, and laboratory examinations, as well as cardiac magnetic resonance imaging (52%) and Holter monitoring (62%). Myocardial biopsy was performed in 3 patients. Patients were discharged with aspirin (26.5%), beta-blockers (84%), ACE inhibitors (29%), aldosterone inhibitors (16%), and SGLT2 inhibitors (18%). The following complications were recorded: cardiogenic shock in 6 patients (11.8%), mechanical ventilation in 4 (7.8%), life-threatening arrhythmias in 7 (13.9%), and mortality in 3 (6%). In multivariable regression analysis, heart failure on admission (odds ratio, 4.54; 95% confidence interval 2.31-13.89,  $p=0.004$ ) and left ventricular ejection fraction  $\leq 40\%$  (odds ratio 10.2; 95% confidence interval 6.22-14.58,  $p<0.001$ ) predicted complications/mortality.

**Conclusion:** Myocarditis most commonly presents with chest pain, heart failure, syncope, and arrhythmias. Predictors of adverse hospital outcomes include heart failure on admission and reduced left ventricular ejection fraction.

**Keywords:** myocarditis; chest pain