

PHARMACOTHERAPY AND RISK FACTORS OF INTERMITTENT CLAUDICATION IN PATIENTS WITH PERIPHERAL ARTERIAL DISEASE

Ivana Damnjanović¹, Nikola Stefanović¹, Zoran Damnjanović²,
Aleksandra Catić-Đorđević¹, Radmila Veličković – Radovanović³

¹ University of Niš - Faculty of Medicine, Department of Pharmacy, Niš, Serbia

² Vascular Surgery Clinic, University Clinical Center of Nis, Serbia

³ University of Niš - Faculty of Medicine, Department of Pharmacology and Toxicology, Niš Serbia

The most common symptom of lower extremity peripheral artery disease is intermittent claudication (1). The drugs used in peripheral artery disease can be directed at specific treatment of the claudication, in order to achieve increased walking distance, or at the secondary prevention of cardiovascular events, thus achieving a better vital prognosis of the disease (2,3). The aim of this study is to evaluate the therapeutic effects of drugs (acetylsalicylic acid, cilostazol, pentoxifylline) in combination or monotherapy and risk factors (smoking, dyslipidemia, diabetes, hypertension, use of beta blockers) on intermittent claudication in patients with peripheral artery disease. According to the inclusion criteria, 71 patients (48 male and 23 female) with peripheral artery disease symptoms were included in a prospective cross sectional study. Data were collected using the questionnaire based on demographic data, patient medical history, medication review and intermittent claudication distance. The positive outcome of therapy, regarding the increase of the intermittent claudication distance was recorded in 64.79% of the subjects. By analyzing the mean and absolute claudication distance after having started the therapy, the greatest improvement was noticed in the group of subjects who simultaneously used acetylsalicylic acid and cilostazol ($p=0.083$). However, the presence of diabetes ($p=0.033$) and the use of beta blockers ($p=0.015$) significantly reduced the effectiveness of therapy. The combined therapy of acetylsalicylic acid and cilostazol is more effective than monotherapy for treatment of intermittent claudication in patients with peripheral artery disease. Therapeutic effects are significantly reduced in diabetic patients and patients treated with beta blockers.

References:

1. Shu J, Santulli G. Update on peripheral artery disease: Epidemiology and evidence-based facts. *Atherosclerosis*. 2018; 275:379–381.
2. Halliday A, Bax JJ. The 2017 ESC Guidelines on the diagnosis and treatment of Peripheral Arterial Diseases. *European Journal of Vascular and Endovascular Surgery*. 2018; 55:301-302.
3. Atturu G, Homer-Vanniasinkam S, Russell DA. Pharmacology in Peripheral Arterial Disease. *Seminars in Interventional Radiology*. 2014; 31(4):330–337.

Acknowledgements

The study was supported by the Ministry of Science and Technological Development of the Republic of Serbia (Grant No: 451-03-9/2021-14/200113).

FARMAKOTERAPIJA I FAKTORI RIZIKA INTERMITENTNE KLAUDIKAČIJE KOD PACIJENATA SA PERIFERNOM ARTERIJSKOM BOLEŠĆU

Ivana Damnjanović¹, Nikola Stefanović¹, Zoran Damnjanović²,
Aleksandra Catić-Đorđević¹, Radmila Veličković – Radovanović³

¹ Univerzitet u Nišu - Medicinski fakultet, Katedra za farmaciju, Niš, Srbija

² Klinika za vaskularnu hirurgiju, Univerzitetski klinički centar u Nišu, Srbija

³ Univerzitet u Nišu - Medicinski fakultet, Katedra za Farmakologiju sa
toksikologijom, Niš, Srbija

Najčešći simptom periferne arterijske bolesti donjih ekstremiteta je intermitentna klaudikacija (1). Lekovi koji se koriste u terapiji periferne arterijske bolesti su usmereni na specifičan tretman klaudikacije, u cilju postizanja produženja distance koju pacijenti savladavaju, ili na sekundarnoj prevenciji kardiovaskularnih događaja, čime se postiže bolja prognoza bolesti (2,3).

Cilj našeg istraživanja bio je ispitati terapijski efekat lekova (acetilsalicilna kiselina, cilostazol, pentoksifilin) u kombinovanoj ili monoterapiji i faktora rizika (pušenje, dislipidemija, dijabetes, hipertenzija, upotreba beta blokatora) intermitentne klaudikacije kod pacijenata sa perifernom arterijskom bolešću.

U prospektivnu studiju preseka, a na osnovu inkluzionih kriterijuma uključen je 71 ispitanik (48 muškaraca i 23 žene) sa simptomima periferne arterijske bolesti. Podaci su dobijeni pomoću upitnika koji se odnosio na informacije vezane za demografske karakteristike, podatke o medicinskoj istoriji, pregledu terapije i intermitentnu klaudikacionu distancu.

Uspeh terapije na osnovu produženja klaudikacione distance zabeležen je kod 64,79% ispitanika. Najveće poboljšanje zabeleženo je u grupi ispitanika koji su istovremeno koristili acetilsalicilnu kiselinu i cilostazol ($p=0,083$), na osnovu analize srednje i apsolutne vrednosti klaudikacione distance nakon uvođenja terapije. Statistički značajno smanjenje efikasnosti primenjene terapije je registrovano kod pacijenata sa diabetes mellitusom ($p=0,033$) i kod ispitanika na terapiji beta blokatorima ($p=0,015$).

Kombinacija acetilsalicilne kiseline i cilostazola predstavlja efikasniji terapijski izbor u odnosu na monoterapiju intermitentne klaudikacije kod pacijenata sa perifernom arterijskom bolešću. Terapijski efekti su značajno manji kod dijabetičara i pacijenata na terapiji beta blokatorima.

Literatura:

1. Shu J, Santulli G. Update on peripheral artery disease: Epidemiology and evidence-based facts. *Atherosclerosis*. 2018; 275:379–381.
2. Halliday A, Bax JJ. The 2017 ESC Guidelines on the diagnosis and treatment of Peripheral Arterial Diseases. *European Journal of Vascular and Endovascular Surgery*. 2018; 55:301-302.
3. Atturu G, Homer-Vanniasinkam S, Russell DA. Pharmacology in Peripheral Arterial Disease. *Seminars in Interventional Radiology*. 2014; 31(4):330–337.

Zahvalnica

Istraživanje je podržano od strane Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije (Grant No: 451-03-9/2021-14/200113).