






Značajno poboljšanje funkcije srca nakon primjene sakubitril/valsartana u zatajivanju srca kod bolesnika nakon transplantacije srca

Significant improvement of cardiac performance using sacubitril/valsartan in heart failure patient after heart transplantation

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Uvod: U zadnjih nekoliko godina inhibitori angiotenzinskih receptora i neprilizina čine novu skupinu lijekova za liječenje zatajivanja srca (HF). Kliničke randomizirane studije s bolesnicima sa HF dokazale su njihovu korisnost, pogotovo u HF sa sniženom sistoličkom funkcijom lijeve klijetke. Novije studije pokazale su i moguću prednost njihove primjene u bolesnika nakon infarkta miokarda zbog smanjenja fibroze i remodeliranja miokarda. Liječenje HF u bolesnika nakon transplantacije srca ne pruža mnoge mogućnosti u terapijskom smislu.^{1,2} Ovo je prikaz slučaja transplantiranog bolesnika sa značajnim kliničkim i ehokardiografskim poboljšanjem nakon uvođenja sakubitril/valsartana u terapiju.

Prikaz slučaja: 56-godišnji bolesnik, kojemu je učinjena transplantacija srca u 2014. godini zbog ishemijske kardiomiopatije, hospitaliziran je zbog HF. Simptomi zaduhe i intolerancije napora intenzivirali su se 2 mjeseca pred prijem u bolnicu. Ehokardiografski se prikazala umjereno reducirana sistolička funkcija lijeve klijetke (EF 32%), difuzna hipokontraktilnost (GLP_S -4%) i plućna hipertenzija (RSVP 65 mmHg), što se nije bitno razlikovalo u odnosu na ranije ultrazvučne nalaze. S ciljem poboljšanja srčane funkcije, u terapiju je uveden sakubitril/valsartan. Nakon 3 mjeseca bolesnik se subjektivno osjećao puno bolje uz značajno poboljšanje tolerancije napora. Ehokardiografski nalaz pokazao je poboljšanje sistoličke funkcije lijeve klijetke (EF 41%) i kontraktilnosti (GLP_S -7,5%) te smanjenje tlaka u plućnoj arteriji (RSVP 50 mmHg).

Zaključak: Prema našim saznanjima i dostupnoj literaturi, sakubitril/valsartan dosada se nije primjenjivao u liječenju HF kod bolesnika nakon transplantacije srca. Značajno kliničko i ehokardiografsko poboljšanje u kratkom vremenskom razdoblju nakon uvođenja sakubitril/valsartana u terapiju pobuđuje zanimanje te zahtijeva daljnja istraživanja.

Introduction: Angiotensin receptor-neprilysin inhibitors have been introduced in the last few years as a new class of drugs for the treatment of heart failure (HF) patients. Its benefits have been proven in randomized control trials in HF patients, mostly with reduced ejection fraction. Recent studies reveal new indications and information about benefit in patients after myocardial infarction by reducing myocardial fibrosis and remodeling. Treatment of HF in patients after heart transplantation is challenging with limitations in therapeutic possibilities.^{1,2} We present a case report of a heart transplant patient with significant clinical and echocardiographic improvement after sacubitril/valsartan introduction.

Case report: 56-year-old patient, with a history of heart transplantation in 2014 due to ischemic cardiomyopathy, was hospitalized for HF. Dyspnea and reduced exercise tolerance had been worsening 2 months prior to hospital admission. Echocardiography showed moderately reduced left ventricular systolic function (EF 32%), diffuse hypocontractility (GLP_S -4%) and pulmonary artery hypertension (RSVP 65 mmHg), which did not differ much from earlier examinations. In order to improve cardiac function, sacubitril/valsartan was added into treatment. 3 months later the patient was feeling much better with significantly improved physical activity tolerance. Echocardiography exam showed improvement of left ventricular systolic function (EF 41%) and longitudinal myocardial deformation (GLP_S -7.5%) with reduction of pulmonary artery hypertension (RSVP 50 mmHg).

Conclusion: To our knowledge and available literature, sacubitril/valsartan has not been used in treatment of HF patients after heart transplantation. Significant clinical and echocardiographic improvement in short period of time after introduction of sacubitril/valsartan presents curiosity. Undoubtedly, such information requires further investigation.

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LITERATURE

1. von Lueder TG, Wang BH, Kompa AR, Huang L, Webb R, Jordaan P, et al. Angiotensin receptor neprilysin inhibitor LCZ696 attenuates cardiac remodeling and dysfunction after myocardial infarction by reducing cardiac fibrosis and hypertrophy. *Circ Heart Fail.* 2015 Jan;8(1):71-8. <https://doi.org/10.1161/CIRCHEARTFAILURE.114.001785>
2. Ponikowski P, Voors AA, Anker SD, Bueno H, Cleland JGF, Coats AJS, et al; ESC Scientific Document Group. 2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC) Developed with the special contribution of the Heart Failure Association (HFA) of the ESC. *Eur Heart J.* 2016 Jul 14;37(27):2129-2200. <https://doi.org/10.1093/eurheartj/ehw128>