





Elektrofiziološko liječenje u srčanom zatajivanju: iskustvo jednog centra

Ablation therapy in heart failure: a single centre experience

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Uvod: Nedavno objavljene studije ukazuju da ablacija fibrilacije atrijske (FA) u bolesnika s tahiaritmijom izazvanim zatajivanjem (ZS) može postići oporavak sistoličke funkcije srca i izbjeći komplikacije ZS^{1,2}. Prikazujemo bolesnike sa ZS s reduciranom sistoličkom funkcijom iz svakodnevnih kliničkih prakse, tahiaritmijom kao predmnijevanim etiološkim čimbenikom ZS-a, te modalitete elektrofiziološkog (EF) liječenja.

Prikazi slučajeva: 42-godišnji bolesnik s novonastalom dilatativnom kardiomiopatijom (LVEF 25%, u NYHA III. stupnju). Bez kardioloških čimbenika rizika. Isključeni su ishemijska i infektivna etiologija te se tahikardna forma FA identificirala kao potencijalni čimbenik (uz tri antiaritmika frekvencija oko 115/min). Odlučujemo se za radiofrekventnu izolaciju plućnih vena (LA planimetrijski 4,8 cm, LAVI 36 ml/m²). Na kontroli bolesnik je bio u sinusnom ritmu, kontrolni UZV srca je ukazao na smanjenje dimenzija LV te potpuni oporavak sistoličke funkcije srca (LVEF 50%). 69-godišnji bolesnik s novonastalom dilatativnom kardiomiopatijom (LVEF 20%, u NYHA II./III. stupnju). Do hospitalizacije bio zdrav. U elektrokardiogramu prisutna undulacija atrijske (UA). Elektrofiziološkim ispitivanjem verificirala se tipična, "counterclockwise" UA te se učinila izolacija kavotrikuspidalnog ušća s bidirekcijskim blokom. Na kontrolnom pregledu bolesnik je u sinusnom ritmu, kontrolni UZV srca je ukazao na oporavak sistoličke funkcije srca (LVEF 50%). 70-godišnja bolesnica se dugi niz godina prati zbog kronične FA. Posljednjih godinu dana je prisutan značajan pad sistoličke funkcije srca (LVEF 30%) s medikamentozno nereguliranom tahikardnom formom FA (uz tri antiaritmika frekvencija oko 120/min). S obzirom na kardiološke čimbenike rizika isključena je koronarna bolest srca. Odlučujemo se na ugradnju jednokomornog elektrostimulatora srca, a potom za terapijsku ablaciju AV čvora. Na kontrolnom pregledu prisutna 100% stimulirana ventrikulska aktivnost, kontrolni UZV srca je ukazao na oporavak sistoličke funkcije srca (LVEF 45%).

Zaključak: Zatajivanje srca se često povezuje uz poremećaje srčanog ritma koji mogu biti njegov uzrok ili posljedica. Identifikacijom aritmije kao etiološkog čimbenika ZS te ispravnim odabirom modaliteta EF liječenja može se postići oporavak sistoličke funkcije srca te izbjeći komplikacije SZ.

Introduction: Recently published studies showed that ablation of atrial fibrillation (AF) in patients with heart failure (HF) due to tachyarrhythmia can cause recovery of systolic function and help evade HF complications^{1,2}. We are describing series of patients with HF with reduced ejection fraction treated with radiofrequency (RF) ablation, whose HF was thought to be caused by tachyarrhythmia.

Case series: 42-years-old patient with new onset HF, dilative cardiomyopathy (LVEF 25%, NYHA III). He had no cardiovascular risk factors. Coronary artery disease (CAD) and myocarditis were excluded. Tachycardic form of AF was identified as probable cause. Patient was treated with three antiarrhythmic drugs of different class with mean heart rate of approximately 115 beats per minute (bpm). Left atrial diameter in long axis was 4.8 cm, LAVI 36mL/m², therefore we made RF pulmonary vein isolation. On follow up patient was in sinus rhythm, and left ventricle reduced its size with complete systolic function recovery (LVEF 50%). 69-years-old patient with new onset heart failure, dilative cardiomyopathy (LVEF 20%, NYHA II/III). Past medical history is unremarkable. At admission patient was in atrial flutter (AFL). On electrophysiology study, typical counterclockwise AFL was described and successful cavotricuspid ablation was performed. On follow up patient was in sinus rhythm with complete recovery of systolic function (LVEF 50%). 70-years-old patients with permanent AF. Recently severe reduction of systolic was noted, and AF rate was not under control despite the treatment with three antiarrhythmic drugs of different class (mean rate approximately 120 bpm). CAD was excluded. We implanted a single lead pacemaker, a subsequent AV node ablation was performed. On follow up patient is ventricularly paced 100% of time, and echocardiography showed improvement of systolic function (LVEF 45%).

Conclusion: Heart rhythm disturbances are related to heart failure, being a cause or a consequence. Identification of arrhythmia as a causative factor of HF, and appropriate usage of ablation therapy can lead to systolic function improvement and can help evade HF complications

LITERATURE

1. Marrouche NF, Brachmann J, Andresen D, Siebels J, Boersma L, Jordaens L, et al.; CASTLE-AF Investigators. Catheter Ablation for Atrial Fibrillation with Heart Failure. *N Engl J Med.* 2018 Feb 1;378(5):417-427. <https://doi.org/10.1056/NEJMoa1707855>
2. Ullah W, Ling LH, Prabhu S, Lee G, Kistler P, Finlay MC, et al. Catheter ablation of atrial fibrillation in patients with heart failure. *Europace.* 2016 May;18(5):679-86. <https://doi.org/10.1093/europace/euv440>

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