

Lijevostrana srčana potporna crpka kao terapijska opcija za bolesnike s uznapredovalim kroničnim zatajivanjem srca i trombom u lijevoj klijetki: prikaz slučaja

Left ventricular assist device as a treatment option for a patient with advanced chronic heart failure and left ventricular thrombus: a case report

Josip Vincelj,
Boris Starčević,
Danijela Grizelj*,
Sandra Jakšić
Jurinjak,
Mario Udovičić,
Ivana Jurin,
Vanja Ivanović,
Petra Vitlov,
Željko Sutlić

Klinička bolnica Dubrava,
Zagreb, Hrvatska
University Hospital Zagreb,
Croatia

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***ADDRESS FOR CORRESPONDENCE:** Danijela Grizelj, Klinička bolnica Dubrava, Avenija Gojka Šuška 6, HR-10000 Zagreb, Croatia. / Phone: +385-95-8702-180 / E-mail: danijela.grizelj@yahoo.com

ORCID: Josip Vincelj, <http://orcid.org/0000-0003-0064-9128> • Boris Starčević, <http://orcid.org/0000-0002-3090-2772>
Danijela Grizelj, <http://orcid.org/0000-0002-8298-7974> • Sandra Jakšić Jurinjak, <http://orcid.org/0000-0002-7349-6137>
Mario Udovičić, <http://orcid.org/0000-0001-9912-2179> • Ivana Jurin, <http://orcid.org/0000-0002-2637-9691>
Vanja Ivanović, <http://orcid.org/0000-0001-6931-5404> • Petra Vitlov, <http://orcid.org/0000-0001-6983-1409>
Željko Sutlić, <http://orcid.org/0000-0001-6926-9436>

Uvod: Tromb u lijevoj klijetki (LV) nije rijetka pojava kod bolesnika nakon infarkta miokarda prednje stijenke i s redukcijom ejekcijske frakcije (EF).¹ Ovdje prikazujemo slučaj bolesnice s velikim trombom u LV s reduciranom EF i uznapredovalim kroničnim srčanim popuštanjem, kod koje je učinjena trombektomija i ugradnja crpke za potporu lijevoj klijetki (LVAD) kao destinacijska terapija.

Prikaz slučaja: Bolesnica u dobi od 66 godina s kroničnim srčanim zatajivanjem uslijed ishemijske kardiomiopatije nakon preboljelog subakutnog infarkta miokarda prednje stijenke LV, kod koje je ranije operirana trombozirana aneurizma abdominalne aorte te učinjena desnostrana nefrektomija, hospitalizirana je zbog pogoršanja uznapredovalog kroničnog srčanog zatajivanja. 3D transtorakalnim i transezofagijskim ultrazvukom srca (TTE i TEE) verificira se prošireni, globalno hipokinetični LV izrazito reducirane EF (po Simpsonu BP 21%), stanjene prednje stijenke i akinetičnog apeksa s formiranjem aneurizme i sesilnim trombom dimenzija 32x47 mm. Obzirom na uznapredovalo kronično srčano zatajivanje, oštećenu bubrežnu funkciju, difuznu perifernu vaskularnu bolest, povišenu plućnu vaskularnu rezistenciju, očuvanu funkciju desne klijetke i minimalnu trikuspidalnu regurgitaciju, odlučili smo se za trombektomiju i potom ugradnju LVAD-a kao destinacijsku terapiju. Da bi se postigla optimalna vizualizacija tromba, ali i zbog idealne pozicije za ugradnju inflow kanile uređaja, učinjena je apikalna ventrikulotomija te je tromb uklonjen, a potom je uspješno implantiran LVAD HeartMate II. Liječenje tromba u lijevoj klijetki terapijski je izazov, jer je nužno u potpunosti ukloniti tromb da bi se izbjegla tromboza uređaja za potporu lijevoj klijetki i posljedično sustavno embolijsko zbivanje. Bolesnica je nakon uspješnog zahvata i oporavka otpuštena kući, i tijekom dosadašnje tri godine praćenja s LVAD-om klinički je dobro i bez embolijskog incidenta.

Zaključak: Ugradnja LVAD-a s istovremenim uklanjanjem tromba iz lijeve klijetke može se uspješno izvesti bez tromboembolijskog incidenta. Pažljiva preoperacijska priprema ključ je uspjeha, a nove ehokardiografske metode kao 3D TTE i TEE pritom su od neprocjenjive važnosti.

Introduction: Left ventricular (LV) clot is a common occurrence after anterior myocardial infarction in patients with decreased left ventricular ejection fraction (LVEF).¹ We present a case of a patient with a very large LV thrombus in the setting of decreased LVEF and advanced chronic heart failure (CHF) with surgical removal of thrombus and left ventricular assist device (LVAD) implantation as destination therapy.

Case report: A 66-year old female patient with a medical history of advanced CHF due to ischaemic cardiomyopathy after a subacute myocardial infarction of LV anterior wall, and with surgically treated thrombosed abdominal aortic aneurysm and removed right kidney, was admitted to our hospital due to worsening of CHF. 3D transthoracic and transesophageal echocardiographic (TTE and TEE) examination revealed a dilated, globally hypokinetic LV (Simpson BP EF 21%), with thinned wall, akinetic apex and a formed LV aneurysm containing a sessile thrombus with dimensions of 32x47mm. Due to advanced CHF, impaired kidney function, diffuse peripheral vascular disease, elevated pulmonary vascular resistance, preserved function of the right ventricle and minimal tricuspid regurgitation, we decided to refer the patient to LVAD implantation as destination therapy coupled with prior thrombectomy. The ventriculotomy was performed on the apex to achieve the best possible site for good visualization of the LV chamber for clot removal, as well as ideal position for the LVAD inflow cannula implantation. The thrombus was removed and the LVAD (HeartMate II) was then successfully implanted. Treatment of LV thrombus in this setting is particularly challenging because the large clot has to be completely removed in order to prevent potential pump thrombosis and systemic embolism. The patient was subsequently discharged home, and three years afterwards she is doing well on LVAD support as destination therapy, without any thromboembolic events.

Conclusion: LVAD implantation can be safely performed with previous surgical removal of a large LV clot without systemic embolism. Meticulous preoperative echocardiographic assessment is essential, and novel echocardiographic modalities such as 3D TTE and TEE are of invaluable importance.

LITERATURE

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