Rehabilitation challenges in a patient with durable biventricular mechanical circulatory support: a case report

Aleksandra Kraljević[1,2]*, Matej Tadejević[1], Vlatka Rado[1], Dino Glavočević[1]

[1]University Hospital Centre Zagreb, Zagreb, Croatia
[2]University of Applied Health Sciences, Zagreb, Croatia

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***ADDRESS FOR CORRESPONDENCE**: Aleksandra Kraljević, Klinički bolnički centar Zagreb, Kišpatićeva 12, HR-10000 Zagreb, Croatia. / Phone: +385-98-1762-056 / E-mail: kraljevicaleksandra@gmail.com

ORCID: Aleksandra Kraljević, https://orcid.org/0000-0001-6550-7687 • Matej Tadejević, https://orcid.org/0000-0002-5073-8551 Vlatka Rado, https://orcid.org/0000-0002-7454-7602 • Dino Glavočević, https://orcid.org/0000-0002-3110-3470

Cardiac cachexia and dyspnea are one of the leading symptoms in heart failure patients.[1] In 2017, 46-year-old man was diagnosed with severe ischemic biventricular cardiomyopathy together with other comorbidities. As a "bridge" to transplantation, in February 2018 left ventricular assist device (LVAD) was implanted, and due to the right heart failure right ventricular assist device (RVAD) was implanted in March 2018. On the twenty-first postoperative day, the patient was partially respiratory insufficient (SpO_2 91%), almost bedridden. Early mobilization and respiratory rehabilitation were delayed due to the volume overload, profuse and frequent epistasis due to the anticoagulant therapy, infections and the occurrence of left leg intramuscular hematoma. The patient was gradually verticalized, separated from the oxygen (SpO_2 96%) and discharged home in April 2018 hemodynamically stable, fully mobilized, properly anticoagulated and with stable pump parameters. During next 48 months, patient was independent in his everyday activities (6 minute walking test = 69%, 500m), without biventricular assist device (BiVAD) related complications. In March 2022 patient was hospitalized due to the right-sided hemiparesis and motor dysphasia caused by development of intracerebral hemorrhage and subarachnoid hemorrhage. After initial stabilization of the intracerebral bleeding, intensive physical therapy was carried out with gradual improvement of neurological deficits. Patient's condition was also complicated by pneumonia and frequent RVAD alarms. In July 2022 patient was listed as an elective Eurotransplant candidate and was discharged home in good overall condition and fully mobile. In late August 2022, he was again admitted due to the worsening of dyspnea. At the admission, worsening of anemia and intermittent BiVADa low flow alarms were detected. His functional capacity was significantly reduced by the severe shortness of breath (SpO_2 95%), and his walking distance was only 40m. During the course of that hospitalization (September 2022), heart transplantation was performed. After the heart transplantation, patient was hemodynamically stable and soon being able to move independently. This is a valuable example of multidisciplinary team work focused on the preservation of patient's hemodynamic stability and mobility.

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LITERATURE

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