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Inspiratory muscle training for advanced heart failure with lamin-related muscular dystrophy.

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Abstract

Respiratory muscle weakness is often complicated in patients with heart failure. Its presence further worsens the clinical course of heart failure. However, the effect and appropriate method of inspiratory muscle training has not previously been elucidated. A 55-year-old man with dilated cardiomyopathy was admitted for intractable heart failure. His heart failure was dependent on catecholamine infusion and the implantation of left ventricular assist device was planned. He also had suffered from some muscle weakness, which was later diagnosed as lamin dystrophy due to mutation of *LMNA* c.G97T E33X. Preoperatively we started aerobic rehabilitation with inspiratory muscle training. Before training, inspiratory and expiratory muscle strength was significantly reduced and exercise capacity was decreased. The load of inspiratory training could be gradually increased along the result of regular evaluation of respiratory muscle strength. During 8 weeks of training, there was no worsening of heart failure and no significant events related to arrhythmia. After training, respiratory muscle strength and exercise capacity were improved significantly.

<Learning objective: Inspiratory muscle training was effective and safe in a patient with intractable heart failure, which was complicated by skeletal muscle myopathy due to lamin-related muscular dystrophy.>.

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KEYWORDS: Advanced heart failure; Inspiratory muscle training; Lamin-related muscular dystrophy

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