Clinical Policy: Ventriculectomy and Cardiomyoplasty

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Revision Log

Description
Guidelines to determine medical necessity for ventriculectomy and cardiomyoplasty procedures as a treatment for severe chronic heart failure

Policy/Criteria
It is the policy of Pennsylvania Health and Wellness® that that ventriculectomy and cardiomyoplasty procedures are considered **experimental and/or investigational** and are therefore not medically necessary.

Background
Heart failure is the final common path of myocardial dysfunction in most types of cardiac disease. Treatment options for heart failure include both medical and surgical therapy and surgical treatment, including ventricular assist devices (VADs), coronary revascularization, valve repair or replacement, total artificial heart, and heart transplantation. Heart transplantation has become the standard treatment for eligible patients with severe, irreversible biventricular failure unresponsive to medical or surgical treatment. Several surgical approaches have been explored as alternative treatments for patients with end-stage heart failure.

Surgical options to reduce the size of the enlarged left ventricle and improve cardiac function include partial left ventriculectomy, also known as the Batista procedure. Partial left ventriculectomy involves removing an elliptical section of the ventricle to improve cardiac output in patients who have severe chronic heart failure. Multiple studies have found minor improvements in measures of heart function and clinical status in the short term, with high mortality rates, high recurrences of symptomatic heart failure, and fatal arrhythmias (Stolf et al., 1998; Startling et al., 2000; Franco-Cereceda et al., 2001). As such, this procedure has fallen out of use (Fang, 2015).

Dynamic cardiomyoplasty is a surgical procedure in which a latissimus dorsi muscle flap is transposed into the chest and wrapped around the ventricles of the failing heart. This skeletal muscle flap is then electrically stimulated to contract in synchrony with ventricular systole. Over time, pacing of the skeletal muscle may produce morphologic, molecular and functional changes in the skeletal muscle, including notable reduction in muscle fatigue with repeated stimulation. Cardiomyoplasty has been found to be of some benefit to stage III heart failure patients; however, these patients could be well-managed with other interventions with less risk. Additionally, stage IV patients who have fewer effective interventions available had unacceptably high post-operative mortality risk (Leier, 1996) after cardiomyoplasty. Due to these considerations, this operation is very rarely used (Fang, 2015).

Reviews, Revisions, and Approvals	Date	
References reviewed and updated	02/18 CPC	

Reviews, Revisions, and Approvals	Date	
	03/18 PHW	

References

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