Heart separation device improves 3 year outcomes in heart failure patients

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A novel non-invasive device which separates healthy and damaged heart muscle and restores ventricle function improves 3 year outcomes in patients with ischemic heart failure, according to research presented at the ESC Congress 2012. The findings were presented by Professor William T. Abraham at an ESC press conference on 25 August and by Dr Marco Costa at an ESC Congress scientific session on 27 August.

Heart failure is a common, debilitating, and potentially deadly condition in which the heart is unable to supply sufficient blood flow to meet the needs of the body. Symptoms of heart failure negatively impact quality of life and include shortness of breath, persistent coughing or wheezing, buildup of excess fluid in body tissues (edema), fatigue, lack of appetite or nausea, impaired thinking, and increased heart rate. More than 20 million people around the world are affected.

Many heart attack survivors experience enlargement of the heart, causing a decrease in cardiac output that results in heart failure symptoms such as fatigue and shortness of breath. The healthy portion of the heart not affected by the heart attack has to compensate for the loss in output and becomes overloaded over time. Current treatment options for patients whose hearts have enlarged are limited.

The Parachute Ventricular Partitioning Device is the first minimally invasive treatment for patients with heart failure caused by damage to the heart muscle following a heart attack. The Parachute device is implanted in the left ventricle through a small catheter inserted in the

femoral artery.

"The device creates a barrier between the non-functioning, damaged segment of heart muscle and the healthy, functional segment of heart muscle," said Dr Costa. "This decreases the overall volume of the left ventricle chamber and restores its optimal geometry and function. The procedure is performed in the catheterization laboratory under conscious sedation."

Two-year clinical data presented at the EuroPCR conference earlier this year demonstrated improved overall cardiac function and quality of life for patients treated with the Parachute device.

The current study included 31patients treated in the US and Europe with the Parachute system. The New York Heart Association (NYHA) Functional Classification of 1 (mildest) to 4 (most severe) was used to define the severity of heart failure at 1, 2 and 3 years after treatment.

The average NYHA class at baseline was 2.6. This improved to 1.6 (p