Method and Device for Catheter-Based Repair of Cardiac Valves

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Technology description

Summary

The invention provides a system and method for catheter-based repair of cardiac valves. The technique may permit non-surgical repair of regurgitant valves using percutaneous catheters in awake patients. The intervention is intended to discontinue/lessen regurgitation of the mitral valve and should provide a viable alternative to the conventional treatment with vasodilator medications and open heart surgery. The technology involves re-apposing of mitral valve leaflets by percutaneous annuloplasty delivering circumferential tensioning devices. Under appropriate imaging guidance (such as fluoroscopic MRI) a circumferential device trajectory is navigated through anatomic (coronary sinus) and non-anatomic spaces to deliver a circumferential tensioning device. Provided are also designs of various catheters, systems that would be necessary to perform the repair of cardiac valves. Imaging methods, like fluoroscopic (real time MRI), could be used to assist the operator for placement and orientation purposes.

Institution

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