Interventional Cardiology Journal
ISSN: 2471-8157

Open access Commentary

Mitral Valve Repair: Navigating the Path to Cardiac Wellness

Cheng Kang*

Department of Cardiac Surgery, Capital Medical University, China

DESCRIPTION

The mitral valve, situated between the left atrium and left ventricle of the heart, plays a crucial role in ensuring unidirectional blood flow. Mitral valve disorders, whether due to degeneration, prolapse, or other structural abnormalities, can significantly impact cardiac function. Mitral valve repair has emerged as a gold standard intervention, offering a durable and effective solution to restore normal valve function. This article explores the anatomy of the mitral valve, common disorders, diagnostic approaches, the evolution of mitral valve repair techniques, and the impact of this procedure on patient outcomes. The mitral valve consists of two leaflets, anterior and posterior, anchored to the heart's fibrous ring by chordae tendineae. These chordae are connected to papillary muscles within the left ventricle, allowing for coordinated valve movement during the cardiac cycle. During diastole, the mitral valve opens to allow blood to flow from the left atrium into the left ventricle. In systole, the valve closes to prevent the backflow of blood into the left atrium, ensuring efficient ejection of blood into the systemic circulation. Mitral valve prolapse occurs when the valve leaflets bulge back into the left atrium during systole. This can lead to regurgitation, where blood leaks back into the atrium, compromising cardiac efficiency. Mitral regurgitation is characterized by the improper closure of the mitral valve, allowing blood to flow backward into the left atrium. This condition can result from valve prolapse, rheumatic heart disease, or other structural abnormalities. Mitral stenosis is characterized by a narrowing of the valve orifice, impeding the flow of blood from the left atrium to the left ventricle. This condition is often associated with rheumatic heart disease. Transthoracic Echocardiography (TTE) and Transesophageal Echocardiography (TEE) are instrumental in diagnosing mitral valve disorders. These imaging modalities provide detailed views of the valve structure, function, and any associated abnormalities. Cardiac catheterization may be employed to assess the severity of mitral valve stenosis or regurgitation. This invasive procedure involves the insertion of a catheter into the heart's chambers to measure pressures and obtain angiographic images. Historically, mitral valve disorders were primarily addressed through open-heart surgery involving sternotomy. Surgeons repaired the valve using a variety of techniques, including annuloplasty (repair of the valve ring), chordal reconstruction, and leaflet repair. Advancements in surgical techniques have led to the development of minimally invasive approaches for mitral valve repair. Minimally invasive surgeries involve smaller incisions, resulting in reduced postoperative pain, shorter hospital stays, and faster recovery compared to traditional open-heart procedures. Robotic-assisted surgery takes minimally invasive approaches a step further by utilizing robotic arms controlled by the surgeon. This technique allows for enhanced precision and maneuverability, enabling intricate repairs with greater accuracy. Percutaneous mitral valve repair represents a non-surgical approach for selected patients. Procedures like the MitraClip involve the percutaneous insertion of a clip to join the mitral valve leaflets, reducing regurgitation. While not suitable for all cases, this technique provides a less invasive option for certain patients deemed high-risk for surgery. Degenerative conditions, such as mitral valve prolapse, often necessitate surgical intervention. Repairing the valve early in the disease process can prevent the progression of regurgitation and preserve cardiac function. Mitral valve involvement is common in rheumatic heart disease, leading to stenosis or regurgitation.

ACKNOWLEDGEMENT

None.

CONFLICT OF INTEREST

The author's declared that they have no conflict of interest.

Received:	01-January-2024	**Manuscript No:**	IPIC-23-18961
Editor assigned:	03-January-2024	**PreQC No:**	IPIC-23-18961 (PQ)
Reviewed:	17-January-2024	**QC No:**	IPIC-23-18961
Revised:	22-January-2024	**Manuscript No:**	IPIC-23-18961 (R)
Published:	29-January-2024	**DOI:**	10.21767/2471-8157.10.01.05

Corresponding author Cheng Kang, Department of Cardiac Surgery, Capital Medical University, China, E-mail: chengkang@ccmu.edu.cn

Citation Kang C (2024) Mitral Valve Repair: Navigating the Path to Cardiac Wellness. Interv Cardiol J. 10:05.