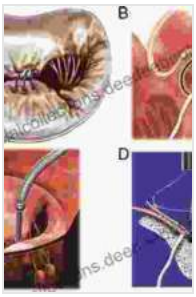
Atlas of Percutaneous Edge-to-Edge Mitral Valve Repair: An In-Depth Guide to Techniques and Outcomes

Percutaneous edge-to-edge mitral valve repair (PMVR) is a minimally invasive procedure used to treat mitral valve regurgitation (MR),a condition in which the mitral valve does not close properly, causing blood to leak back into the left atrium during systole. PMVR involves using a catheter-based device to clip together the leaflets of the mitral valve, reducing the regurgitation.

This atlas provides a comprehensive overview of PMVR techniques, including step-by-step instructions, tips, and tricks. It also explores the latest research and clinical outcomes, providing readers with a valuable resource for understanding and performing this procedure.

The mitral valve is located between the left atrium and left ventricle of the heart. It consists of two leaflets, the anterior and posterior leaflets, which are attached to the mitral annulus. When the heart contracts, the mitral valve closes to prevent blood from flowing back into the left atrium.



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by AANewYork

★★★★★ 5 out of 5

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MR occurs when the mitral valve does not close properly, allowing blood to leak back into the left atrium. This can be caused by a variety of factors, including:

- Mitral valve prolapse
- Mitral valve stenosis
- Rheumatic heart disease
- Ischemic heart disease

There are two main PMVR techniques:

- **MitraClip (Abbott Vascular)**: The MitraClip is a device that clips together the anterior and posterior leaflets of the mitral valve. It is delivered through a transfemoral approach and is placed under fluoroscopic guidance.
- **Tendyne (Abbott Vascular)**: The Tendyne is a device that sutures together the anterior and posterior leaflets of the mitral valve. It is delivered through a transapical approach and is placed under direct visualization.

Both the MitraClip and Tendyne have been shown to be effective in reducing MR and improving symptoms. The choice of device depends on the individual patient's anatomy and the severity of the MR.

The PMVR procedure is typically performed under general anesthesia. The patient is placed in a supine position and a transesophageal echocardiogram (TEE) is performed to assess the mitral valve.

The following steps are then performed:

1. A transfemoral or transapical approach is used to access the mitral valve.
2. The PMVR device is delivered through the access site and placed under fluoroscopic guidance or direct visualization.
3. The device is used to clip or suture together the anterior and posterior leaflets of the mitral valve.
4. The device is then removed and the access site is closed.

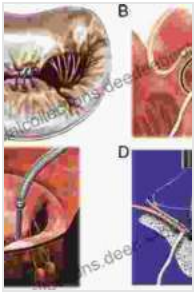
Here are some tips and tricks for performing PMVR:

- Use TEE to carefully assess the mitral valve anatomy before and during the procedure.
- Select the appropriate PMVR device based on the patient's anatomy and the severity of the MR.
- Place the PMVR device accurately to ensure optimal leaflet coaptation.
- Be aware of potential complications, such as bleeding, perforation, and device embolization.

PMVR has been shown to be effective in reducing MR and improving symptoms in patients with severe MR. Studies have shown that PMVR can reduce MR by up to 50% and improve symptoms in up to 80% of patients.

PMVR is also associated with a low risk of complications. The most common complications include bleeding, perforation, and device embolization. The risk of these complications is typically less than 5%.

PMVR is a safe and effective procedure for treating severe MR. This atlas provides a comprehensive overview of PMVR techniques, including step-by-step instructions, tips, and tricks. It also explores the latest research and clinical outcomes, providing readers with a valuable resource for understanding and performing this procedure.



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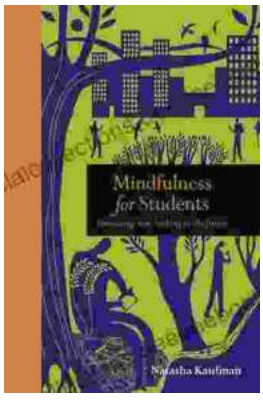

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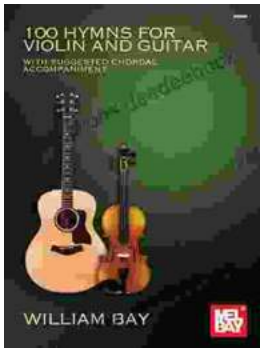

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