



HEALTHY HEART

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Honorary Editor :

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Dear Friends,

Septal myectomy is currently the gold standard treatment for symptomatic patients with hypertrophic cardiomyopathy. Due to the rare disease occurrence, which requires precise diagnosis and surgical skills, very few centers do it with low mortality and morbidity. At MarengoCIMS Hospital, we perform this surgery regularly with excellent short and long-term results.



SEPTAL MYECTOMY

1. What is a septal myectomy:

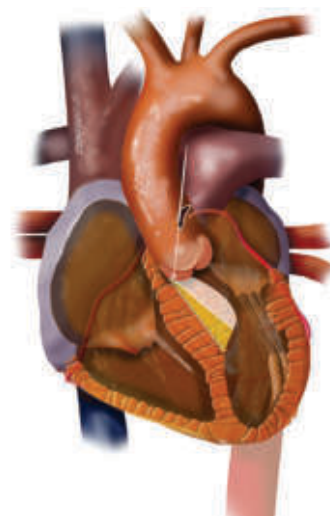
• A septal myectomy is a surgical procedure performed to treat a condition called hypertrophic cardiomyopathy (HCM). HCM is a genetic heart disease characterized by the abnormal thickening (hypertrophy) of the heart's muscular wall, known as the septum. This thickening can obstruct blood flow from the left ventricle to the aorta, leading to various symptoms and potential complications.

• During a septal myectomy, a cardiac surgeon removes a portion of the thickened septal wall to relieve the obstruction and improve blood flow. The procedure aims to alleviate symptoms, improve exercise tolerance, and reduce the risk of complications associated with HCM, such as heart failure and arrhythmias.

• Septal myectomy is a highly specialized and precise procedure that requires a skilled surgical team with expertise in treating HCM. The reduction in obstruction and improvement in blood

flow dynamics evaluate the procedure's success.

• It's important to note that septal myectomy is considered the gold standard treatment for obstructive HCM when medical therapy alone is insufficient to manage symptoms and complications. However, the decision to undergo this surgery is individualized and based on a thorough evaluation by a cardiac team, including cardiologists and cardiac surgeons.



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Who is a candidate for a septal myectomy?

- A septal myectomy is a surgical procedure primarily performed to treat hypertrophic cardiomyopathy (HCM), a genetic heart condition characterized by the abnormal thickening of the heart's muscular wall (septum). Not all individuals with HCM require or are candidates for a septal myectomy. The decision to undergo this surgery is based on several factors, including the condition's severity and specific clinical indications.

- It's essential to note that not all individuals with HCM will require or benefit from a septal myectomy. The treatment choice, including surgery, is individualized and based on a comprehensive evaluation by a specialized medical team. The surgery aims to improve symptoms, quality of life, and long-term outcomes for eligible candidates with obstructive HCM.

What happens before a septal myectomy?

Before undergoing a septal myectomy, a patient undergoes a comprehensive evaluation and preparation process. A septal myectomy is a surgical procedure to treat hypertrophic cardiomyopathy (HCM), characterized by the abnormal thickening of the heart's muscular wall (septum). Here's what typically happens before a septal myectomy:

1. Initial Evaluation: The process begins with an initial evaluation by a cardiologist or a team of healthcare providers specializing in HCM. During this evaluation, the medical team will:

- Review the patient's medical history, including any symptoms and family history of heart conditions.
- Conduct a physical examination to assess cardiac function and listen to the heart sounds.
- Perform diagnostic tests, such as echocardiography, electrocardiography (ECG), and sometimes cardiac MRI, to assess the degree of hypertrophy, obstruction, and other factors.

2. Confirmation of Diagnosis: The diagnosis of HCM is confirmed based on clinical evaluation and imaging tests.

3. Symptom Assessment: The patient's symptoms, if present, are carefully evaluated. Common symptoms of HCM include shortness of breath, chest pain, fatigue, dizziness, and fainting (syncope).

4. Assessment of LVOT Obstruction: If the patient has a significant left ventricular outflow tract (LVOT) obstruction (usually defined by a pressure gradient more significant than 50 mm Hg), the medical team will assess the severity of the obstruction and its impact on blood flow.

5. Medical Management: Many patients with HCM receive initial medical management to alleviate symptoms and control the condition. Medications such as beta-blockers, calcium channel blockers, and disopyramide may be prescribed. The patient's response to these medications will be monitored.

6. Preoperative Assessment: If the decision is made to proceed with a septal myectomy, the patient will undergo a thorough preoperative assessment, which may include:

- Comprehensive blood tests to evaluate overall health and assess coagulation parameters.
- Chest X-ray to assess the condition of the lungs and chest cavity.
- Evaluation by an anaesthesiologist to assess anaesthesia-related considerations.
- Consultation with the surgical team to discuss the specifics of the procedure and address any questions or concerns.

The timing of the surgery will depend on the patient's condition and the urgency of the procedure. In some cases, septal myectomy may be scheduled relatively soon after the initial evaluation, while in others, it may be planned later to allow for careful preoperative assessment and optimization of the patient's health.

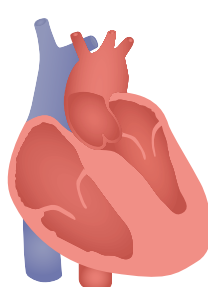
Patients must ask questions, seek clarification on any concerns, and actively participate in the decision-making process with their healthcare team. Effective communication is essential in ensuring that the patient's goals and expectations are considered in the treatment plan.

What happens during a septal myectomy?

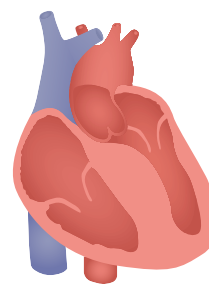
- A septal myectomy is a surgical procedure to treat hypertrophic cardiomyopathy (HCM), a genetic heart condition characterized by the abnormal thickening of the heart's muscular wall (septum). During a septal myectomy, a cardiac surgeon carefully removes a portion of the thickened septal wall to relieve the obstruction and improve blood flow. Here's what typically happens during a septal myectomy:

1. Anesthesia: The procedure begins with general anaesthesia, ensuring the patient is asleep and pain-free during the surgery.

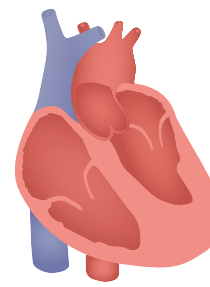
2. Incision: A surgical incision is made in the chest, usually through the breastbone (sternotomy), to access the heart. In some cases, minimally invasive techniques with smaller incisions may be used, but the choice depends on the specific issue and the surgeon's expertise.



Symmetrical hypertrophy



Septal hypertrophy



Apical hypertrophy



3. Access to the Heart: The surgical team carefully exposes the heart and locates the thickened septal wall, which separates the left and right ventricles of the heart.

4. Septal Myectomy: The surgeon removes a portion of the hypertrophied septal wall using specialized surgical instruments. The extent of tissue removal is determined based on the individual's anatomy and the degree of obstruction. The goal is to create a more comprehensive pathway for blood to flow out of the left ventricle and into the aorta, relieving the obstruction.

5. Assessment of Results: After the septal myectomy, the surgical team evaluates the results by assessing the reduction in the degree of obstruction and the improvement in blood flow dynamics.

6. Closure: The surgeon carefully closes the incision once the septal myectomy is completed. The chest is typically locked using wires, and the skin incision is closed with sutures or staples.

7. Monitoring: The patient is transferred to the intensive care unit (ICU) for close monitoring during the immediate postoperative period. Vital signs, cardiac function, and overall stability are closely monitored.

- A successful septal myectomy can significantly improve symptoms, exercise tolerance, and overall quality of life for individuals with obstructive HCM. The extent of improvement may vary depending on the patient's specific condition and the success of the surgery in relieving the obstruction. The decision to undergo a septal myectomy is individualized and based on a thorough evaluation by a specialized medical team.

How long does a septal myectomy surgery take?

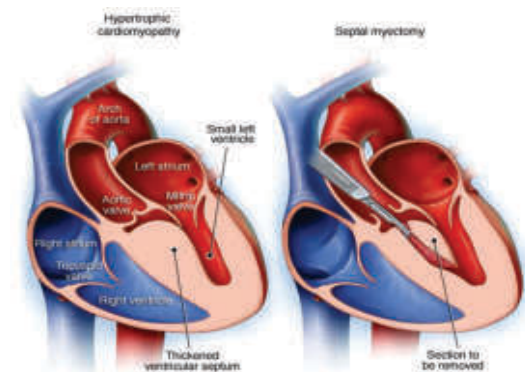
- The duration of a septal myectomy surgery can vary depending on several factors, including the complexity of the procedure, the extent of the septal wall thickening, and the individual patient's anatomy. On average, a septal myectomy surgery typically takes approximately 2 to 4 hours to complete.

- However, it's important to note that this is a general estimate, and the actual duration of the surgery may be shorter or longer based on the specific circumstances of each case. The surgical team, which includes a cardiac surgeon and specialized support staff, will work diligently to ensure the procedure is performed safely and effectively.

- In some cases, the surgical team may need to spend additional time carefully assessing the septal wall and achieving optimal results. Minimally invasive techniques with smaller incisions may also reduce the surgical time in some cases.

- The primary goal of a septal myectomy is to relieve the obstruction caused by hypertrophic cardiomyopathy (HCM) by removing a portion of the thickened septal wall, thereby improving blood flow and reducing symptoms. The surgical team will take the necessary time to achieve the best possible outcome for the patient while prioritizing safety and precision.

- After the surgery, the patient will be closely monitored in the intensive care unit (ICU) and later in a regular hospital room during the immediate postoperative period. The overall recovery process, including hospital stay and rehabilitation, may extend beyond the duration of the surgery itself and can vary from person to person.



What happens after a septal myectomy?

- After undergoing a septal myectomy, a surgical procedure to treat hypertrophic cardiomyopathy (HCM), the patient enters a postoperative recovery and rehabilitation phase. This phase is crucial for optimizing recovery, monitoring surgical outcomes, and ensuring long-term cardiac health. Here's what typically happens after a septal myectomy:

1. Intensive Care Unit (ICU): After the surgery, the patient is transferred to the ICU for close monitoring during the initial recovery phase. This is where vital signs, cardiac function, and overall stability are closely observed. Mechanical ventilation may be continued as needed to support breathing.

2. Pain Management: Medications for pain management are administered as needed to keep the patient comfortable during the immediate postoperative period.

3. Monitoring: Continuous monitoring of heart rhythm, blood pressure, oxygen saturation, and other vital signs is conducted by the medical team in the ICU.

4. Chest Tubes: Chest tubes may be in place to drain excess fluid and air from the chest cavity. These are typically removed when drainage decreases, and the patient's condition stabilizes.

5. Physical Assessment: The medical team assesses the surgical site, incisions, and overall cardiac function. Any immediate concerns or complications are addressed promptly.



- The specific timeline for recovery can vary based on individual factors, including the extent of surgery, overall health, and any complications. Effective communication with the medical team, adherence to postoperative instructions, and active participation in cardiac rehabilitation and follow-up care are essential to ensure the best possible outcome and long-term cardiac health.

What are the advantages of a septal myectomy?

- A septal myectomy is a surgical procedure to treat hypertrophic cardiomyopathy (HCM), a genetic heart condition characterized by the abnormal thickening of the heart's muscular wall (septum). The procedure offers several advantages for eligible patients with obstructive HCM:

1. Symptom Relief: One of the primary goals of a septal myectomy is to alleviate the symptoms associated with HCM. These symptoms may include severe shortness of breath, chest pain, fatigue, dizziness, and fainting (syncope). Many patients experience significant improvement in their quality of life due to symptom relief.

2. Improved Exercise Tolerance: By reducing the obstruction in the left ventricular outflow tract (LVOT), a septal myectomy enhances the heart's ability to pump blood efficiently during physical activity. This leads to improved exercise tolerance and the ability to engage in more strenuous activities without experiencing debilitating symptoms.

3. Reduced Risk of Complications: Obstructive HCM can lead to various complications, including heart failure, arrhythmias, and an increased risk of sudden cardiac death. A septal myectomy can reduce the risk of these complications by addressing the underlying cause of obstruction and improving cardiac function.

4. Long-Term Benefits: The benefits of a septal myectomy are often long-lasting. Many patients experience sustained relief from symptoms and improved quality of life over the years following the surgery. Regular follow-up care and medication management are essential to maintaining these benefits.

5. Individualized Approach: A septal myectomy is tailored to each patient's specific anatomy and degree of obstruction. The surgical team carefully assesses the extent of tissue removal needed to achieve optimal results while preserving overall heart function.

6. Alternative to Medical Therapy: For patients who do not respond well to medications or experience side effects from drug therapy, a septal myectomy provides a surgical alternative that directly addresses the underlying problem.

7. Lower Medication Dependence: Following a successful septal myectomy, some patients may be able to reduce their reliance on certain medications, such as those used to manage symptoms or reduce the risk of arrhythmias.

8. Improved Quality of Life: Patients who undergo a septal myectomy often report a significant improvement in their overall quality of life. They can participate in daily activities and exercise more comfortably, which can positively impact their physical and emotional well-being.

- It's important to note that the decision to undergo a septal myectomy is individualized and based on a thorough evaluation by a specialized medical team. While the procedure offers significant advantages, it also carries some risks, and the decision should be made collaboratively between the patient, their family, and the healthcare providers. The goal is to achieve the best possible outcomes and improve the patient's cardiac health and overall quality of life.



What is the success rate for septal myectomy?

- The success rate of a septal myectomy for treating hypertrophic cardiomyopathy (HCM) is generally high when performed by experienced cardiac surgeons in specialized centres. The procedure is considered the gold standard treatment for obstructive HCM, and it can provide significant symptom relief and improve the patient's quality of life.

- It's important to note that the procedure's success is influenced by several factors, including the patient's anatomy, the experience of the surgical team, and the patient's overall health. Patients who have surgery at high-volume centres with surgeons experienced in septal myectomy tend to have better outcomes.

- While the success rate is generally high, no surgical procedure is without risks, and there can be variations in individual responses to the surgery. Potential complications, such as bleeding, infection, arrhythmias, and issues related to the heart valves or conduction system, are possible, but the medical team typically manages them.

- The decision to undergo a septal myectomy should be made after a thorough evaluation by a specialized medical team. Patients and their families need to discuss the potential benefits and risks of the procedure with their healthcare providers and actively participate in the decision-making process to achieve the best possible outcomes.



When should I see my cardiac physician?

• Suppose you have been diagnosed with hypertrophic cardiomyopathy (HCM) or are experiencing symptoms suggestive of this condition. In that case, you must have regular follow-up appointments with your healthcare provider, typically a cardiologist specializing in managing cardiac conditions. The timing and frequency of these appointments may vary based on your condition's severity, specific symptoms, and healthcare plan. Here are some general guidelines for when you should see your healthcare provider:

1. Initial Evaluation: If you are experiencing symptoms such as shortness of breath, chest pain, fatigue, dizziness, or fainting (syncope), it's essential to seek medical attention promptly. Your healthcare provider can perform an initial evaluation to determine the cause of your symptoms and assess your cardiac health.

2. Diagnosis: If you are diagnosed with HCM, you should have regular follow-up appointments with your cardiologist to discuss the condition, its progression, and your treatment plan.

3. Symptom Changes: If you notice any changes in your symptoms or experience new symptoms, such as worsening shortness of breath, chest discomfort, palpitations, or fainting episodes, contact your healthcare provider promptly. These changes may warrant adjustments to your treatment plan or additional testing.

4. Medication Management: If you are prescribed medications to manage your HCM or related symptoms, you should have regular follow-up appointments to monitor the effectiveness of the drugs, assess for any side effects, and make necessary adjustments to your medication regimen.

5. Scheduled Follow-Up: Your healthcare provider will typically schedule regular follow-up appointments to monitor your cardiac health and assess the progression of HCM. The frequency of these appointments may depend on the severity of your condition and your response to treatment.



6. Testing and Imaging: Your cardiologist may order echocardiograms, electrocardiograms (ECGs), and stress tests to monitor cardiac function and assess the degree of hypertrophy and left ventricular outflow tract (LVOT) obstruction.

• Maintaining open and regular communication with your healthcare provider is essential to ensure that your HCM is well-managed and that you receive appropriate care and support. Be proactive in discussing any concerns, changes in symptoms, or questions about your condition or treatment plan during your appointments. Additionally, adhere to your prescribed medication regimen and follow the recommendations provided by your medical team to optimize your cardiac health.



How serious is a septal myectomy?

• A septal myectomy is a surgical procedure used to treat hypertrophic cardiomyopathy (HCM), a genetic heart condition characterized by the abnormal thickening of the heart's muscular wall (septum). The decision to undergo a septal myectomy is based on the severity of the patient's HCM symptoms, left ventricular outflow tract (LVOT) obstruction, and other clinical factors. While the procedure is generally safe and highly effective, it is considered a serious surgical intervention, and it should only be performed by experienced cardiac surgeons in specialized centres.

• In summary, a septal myectomy is a serious surgical procedure, but it is also highly effective in relieving symptoms and improving the quality of life for patients with obstructive HCM. The seriousness of the procedure underscores the importance of careful patient selection, a skilled surgical team, and postoperative care to optimize outcomes and minimize risks. Patients considering this procedure should have open and thorough discussions with their healthcare providers to fully understand the potential benefits and risks based on their circumstances.



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