CONDITION

Subendocardial sclerosis

Subendocardial sclerosis is fibrous thickening or scarring beneath the heart's inner lining.

WHAT IT IS
Scarring beneath the heart's inner lining

BODY SYSTEM
Heart and circulation

MAIN SYMPTOMS
Often none, breathlessness, chest discomfort, palpitations

WHAT CAUSES IT
Heart stress or injury; sometimes unknown

HOW IT IS DIAGNOSED
Cardiac MRI; sometimes heart tissue biopsy

MAIN TREATMENT
Treatment of the underlying heart condition

CAN IT BE CURED?
Sometimes - causes treatable, established scar often remains

IS IT AN EMERGENCY?
Sometimes - new chest pain or severe breathlessness

LONG-TERM OUTLOOK
Linked to scar extent and underlying heart condition

Overview

Subendocardial sclerosis means thickening or scarring in the tissue just beneath the heart's inner lining. The inner lining is called the endocardium . "Sclerosis" means that tissue has become abnormally firm, usually because fibrous scar tissue has formed.

The term describes a structural change rather than one single disease. It may appear in an imaging report, operation note, or laboratory examination of heart tissue. Some people have a small, stable area that causes no symptoms. More extensive scarring may affect how the heart fills, pumps, or carries electrical signals.

The subendocardial area is especially sensitive to reduced blood flow. It may be injured by coronary artery disease, a previous heart attack, prolonged strain on the heart, or certain inflammatory and structural heart conditions. Sometimes the exact cause cannot be established.

Subendocardial sclerosis is not automatically the same as a current heart attack. It is also not identical to endocardial fibroelastosis or endomyocardial fibrosis, which are specific conditions with their own patterns and causes. The wording and location in your report matter.

Symptoms

Subendocardial sclerosis may cause no symptoms, particularly when the affected area is small and the heart's pumping function remains normal. Symptoms that do occur are often related to the underlying heart condition rather than the scar alone.

Possible symptoms include:

These symptoms have many possible causes. Their presence does not show by itself that you have subendocardial sclerosis.

A sudden change is more important than a long-standing, stable symptom. New chest discomfort, severe breathlessness, or fainting needs prompt assessment because it may signal an acute heart problem.

- Shortness of breath during activity or while lying flat
- Chest pressure, tightness, or discomfort
- A rapid, pounding, or irregular heartbeat
- Unusual tiredness or reduced exercise ability
- Dizziness or fainting
- Swelling in the feet, ankles, legs, or abdomen

Causes and risk factors

Subendocardial sclerosis usually develops after tissue beneath the inner heart lining has been repeatedly stressed or injured. The body replaces damaged cells with fibrous tissue. This scar is stronger than injured tissue but does not contract or conduct electrical signals like healthy heart muscle.

Reduced blood flow is one possible cause. The inner part of the heart muscle is particularly vulnerable when narrowed or blocked coronary arteries limit its oxygen supply. A previous heart attack may leave a subendocardial pattern of scar.

Other possible settings include:

High blood pressure, diabetes, high cholesterol, smoking, and coronary artery disease can

increase the chance of reduced blood flow to the heart. They do not prove that a particular area of sclerosis was caused by poor circulation.

The location and pattern of scarring can provide clues. However, imaging appearances may overlap, and no risk factor explains every case. In some people, the cause remains uncertain after assessment.

- Long-term pressure or volume strain on the heart
- Heart muscle conditions, called cardiomyopathies
- Heart valve disease
- Previous inflammation of the heart muscle
- Certain conditions that scar the endocardium and nearby muscle
- Previous heart surgery or another local injury

Diagnosis

Subendocardial sclerosis may first be suspected after an echocardiogram, cardiac MRI, or another heart test. Your assessment usually focuses on confirming the tissue change, measuring its effect on the heart, and looking for an underlying cause.

An echocardiogram uses sound waves to show the heart's chambers, valves, wall thickness, and pumping action. It may identify abnormal filling, reduced movement, or related valve problems. It cannot always distinguish microscopic scar from other forms of thickening.

A cardiac MRI provides detailed pictures of heart structure and tissue. A contrast agent called gadolinium may be used to highlight areas where the tissue has been injured or replaced by scar. A subendocardial pattern can suggest previous injury from reduced coronary blood flow, but the result must be interpreted with your history and other tests.

Additional tests may include:

An endomyocardial biopsy removes tiny samples of tissue through a catheter placed into the heart. Examination under a microscope can confirm fibrosis or sclerosis. Biopsy is not routinely needed for every scar seen on imaging because it is invasive, can miss a small affected area, and may not change treatment. It is reserved for selected situations in which tissue findings could clarify the diagnosis or guide care.

A report using the term "subendocardial sclerosis" should be interpreted in context. Important details include which chamber is involved, how much tissue is affected, whether heart function is reduced, and whether active injury is suspected.

- An electrocardiogram, or ECG, to examine the heart's electrical activity
- Blood tests for heart injury, inflammation, and related conditions
- A portable heart monitor to look for intermittent rhythm problems
- Coronary CT or coronary angiography to examine the heart arteries
- Exercise or other stress testing to assess blood flow and symptoms

Treatment and management

There is no single treatment designed specifically for the words "subendocardial sclerosis." Management is based on the cause, the amount of scarring, your symptoms, and the way your heart is functioning.

Established scar tissue often cannot be changed back into normal heart muscle. Treatment instead aims to prevent further injury and manage its effects.

If reduced coronary blood flow is responsible, care may include medicines and procedures used for coronary artery disease. If high blood pressure, valve disease, inflammation, or a cardiomyopathy is contributing, treatment is directed at that condition.

When the heart is not pumping or relaxing normally, heart failure treatment may be used to reduce symptoms and protect heart function. Fluid retention may require medicines that help the body remove excess salt and water. The specific treatment must account for kidney function, blood pressure, other medicines, and the type of heart dysfunction.

Palpitations or fainting may lead to longer heart-rhythm monitoring. Rhythm problems can be treated with medicines, catheter procedures, or an implanted device in selected people. The presence of scar alone does not mean that you need a pacemaker or defibrillator.

Management may also include physical activity suited to your symptoms and heart function, cardiac rehabilitation after certain heart events, and support with smoking cessation. Follow-up imaging is sometimes used to check whether heart size or function has changed. There is no universal scanning schedule for this finding.

Complications

Possible complications depend mainly on how much tissue is affected and what caused the damage. A small, stable area may have little practical effect.

More extensive sclerosis can make the heart wall stiff, reducing its ability to fill between beats.

If nearby heart muscle has also been damaged, pumping strength may fall. These changes can contribute to heart failure symptoms such as breathlessness, tiredness, and swelling.

Scar tissue may disrupt electrical pathways and increase the chance of an abnormal rhythm. Scarring near valves or the structures supporting them can sometimes contribute to valve leakage.

In selected conditions involving marked endocardial scarring, blood clots may form inside a heart chamber. This is not an expected complication of every small subendocardial scar. Tests showing chamber shape, blood flow, and heart function help determine the risk.

Prevention

Subendocardial sclerosis cannot always be prevented. Some underlying heart muscle or inflammatory conditions are not caused by lifestyle, and an old scar may remain even after its cause has been treated.

When poor coronary blood flow contributed, lowering cardiovascular risk may help prevent further injury. This can include not smoking, staying physically active within safe limits, and managing blood pressure, cholesterol, and diabetes. Medicines should be taken as agreed with your healthcare team rather than started or stopped because of an imaging term.

Prompt assessment of persistent chest discomfort or a clear decline in exercise ability may allow an underlying heart problem to be treated earlier. It cannot guarantee that scarring will be avoided.

Living with it and what to expect

The long-term course is not determined by the word "sclerosis" alone. A limited scar with normal heart function may remain stable for years and may only require routine follow-up. Many people in this situation continue their usual work, family life, and suitable physical activities.

The outlook is more guarded when scarring is extensive, the heart's pumping or filling function is impaired, or the underlying condition continues to cause injury. Symptoms may then change over months or years. Treatment and monitoring focus on maintaining function, reducing symptoms, and identifying rhythm or circulation problems.

Routine follow-up may involve reviewing symptoms, blood pressure, medicines, ECG findings, and heart imaging. Contact your usual healthcare service between appointments if breathlessness, swelling, palpitations, chest discomfort, or exercise tolerance gradually

worsens.

Emotional reactions are common after being told that there is heart scarring. Ask for the report to be explained in plain language, including how much tissue is affected and whether heart function is normal. Those details are usually more useful than the term by itself.

When to get medical help

Arrange a routine medical review if you have a new report mentioning subendocardial sclerosis and it has not been explained. Routine review is also appropriate for gradually increasing tiredness, mild breathlessness, ankle swelling, or recurring palpitations without severe symptoms.

Seek urgent medical advice for a noticeable decline in breathing, repeated episodes of a fast or irregular heartbeat, or new dizziness. Palpitations accompanied by weakness or near-fainting should be assessed promptly.

Call emergency services for:

Do not assume that sudden chest symptoms are caused by old scar tissue. Acute coronary artery blockage and other emergencies need rapid assessment.

- New or severe chest pressure, tightness, or pain
- Severe difficulty breathing, especially at rest
- Fainting with chest discomfort or palpitations
- Sudden weakness on one side, facial drooping, or trouble speaking
- Collapse, unresponsiveness, or absent normal breathing

Common questions

Is subendocardial sclerosis a heart attack?

Not by itself. It describes firm or scarred tissue beneath the heart's inner lining. A previous heart attack can create this pattern, but other conditions can also cause it. Blood tests, symptoms, ECG findings, and imaging help distinguish an old scar from an active emergency.

Is subendocardial sclerosis cancer?

No. It is a form of tissue thickening or scarring, not a cancerous growth. Further testing may still be needed to identify why the tissue changed and whether it affects heart function.

Can the scar go away?

Established heart scar usually remains. Some surrounding inflammation or temporary swelling may improve, and treating the cause may stop or slow further injury. Follow-up imaging can show whether the appearance and heart function are stable.

Can I exercise with subendocardial sclerosis?

Exercise may be appropriate, but the safe type and intensity depend on heart function, symptoms, rhythm findings, and the underlying cause. A small stable scar is different from active inflammation, poor pumping function, or exercise-triggered rhythm problems. Seek individual advice before beginning vigorous activity.

Is it the same as endocardial fibroelastosis?

No. Endocardial fibroelastosis is a specific pattern of thickening involving fibrous and elastic tissue, most often discussed in infants and children. Subendocardial sclerosis is a broader descriptive term for firm or scarred tissue beneath the endocardium.

Will I need heart surgery?

Most people do not need surgery simply because sclerosis appears on a report. Procedures may be considered if there is a treatable blocked artery, serious valve disease, a dangerous rhythm, or another structural problem. The decision is based on the underlying condition and its effects, not the term alone.

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