CONDITION

Splenic infarction

Splenic infarction is damage to part of the spleen caused by interrupted blood flow.

WHAT IT IS
Loss of blood flow causing damage to spleen tissue

BODY SYSTEM
Blood and circulation, immune system

MAIN SYMPTOMS
Upper-left abdominal pain, fever, nausea, left shoulder pain

WHAT CAUSES IT
Blood clots, blood disorders, infection, trauma, or procedures

HOW IT IS DIAGNOSED
Contrast-enhanced CT scan, supported by blood tests

MAIN TREATMENT
Pain control and treatment of the underlying cause

CAN IT BE CURED?
Sometimes - tissue heals, but underlying causes may persist

IS IT AN EMERGENCY?
Sometimes - severe worsening pain or fainting

LONG-TERM OUTLOOK
Often good when complications and causes are managed

Overview

Splenic infarction happens when blood flow to part or all of the spleen is blocked. Without enough blood and oxygen, the affected tissue becomes damaged. An infarction is sometimes called an "infarct."

The spleen is an organ under the ribs on the upper-left side of your abdomen. It filters blood, removes old blood cells, stores some platelets, and helps the immune system respond to certain infections.

An infarction may affect a small area or much of the spleen. Small infarctions may cause mild symptoms or be found during a scan performed for another reason. Larger infarctions can cause significant pain and, less often, complications such as bleeding, infection, or rupture.

Splenic infarction is a condition caused by another problem rather than a disease by itself.

Finding the cause matters. Possible causes include a blood clot from the heart, a condition that makes blood clot too easily, a blood disorder, infection, trauma, or a recent procedure.

Symptoms

Pain in the upper-left abdomen is the most typical symptom. It may begin suddenly or develop over several hours. The area can feel tender when touched.

Possible symptoms include:

Some people have few or no symptoms. The infarction may be noticed only when imaging is performed for another concern.

These symptoms are not specific to splenic infarction. Kidney stones, pancreatitis, stomach problems, lung conditions, and other abdominal conditions can cause similar pain. A medical assessment is needed to identify the cause.

- Upper-left abdominal pain or tenderness
- Pain spreading to the left shoulder
- Fever or chills
- Nausea or vomiting
- Reduced appetite
- Pain that becomes worse with a deep breath

Causes and risk factors

Splenic infarction usually occurs when a blood vessel supplying the spleen becomes blocked. Sometimes blood flow is reduced because the vessel has been damaged or compressed.

A clot may travel to the spleen from the heart or a large blood vessel. This is called an embolus. Heart-related causes include atrial fibrillation, an irregular heart rhythm that can allow clots to form, and infective endocarditis, an infection of the inner lining or valves of the heart.

Conditions that increase blood clotting can also cause splenic infarction. These include some cancers, antiphospholipid syndrome, and inherited clotting disorders. Antiphospholipid syndrome is an immune condition that raises the risk of abnormal blood clots.

Blood disorders are another important group of causes. Sickle cell disease can block small blood vessels in the spleen. Myeloproliferative neoplasms, which cause the bone marrow to make too many blood cells, may increase clotting and enlarge the spleen.

Other possible causes include:

In some people, more than one factor is present. Occasionally, no definite cause is found even after appropriate testing.

- Injury to the abdomen
- Surgery or procedures involving nearby blood vessels or organs
- Inflammation of the pancreas
- Disease affecting the splenic artery or vein
- Severe infection
- A very enlarged spleen

Diagnosis

A clinician will ask when the pain started, where it is located, and whether you have fever, recent injury, heart problems, blood disorders, cancer, or a history of clots. They will examine your abdomen and check your temperature, heart rate, blood pressure, and other vital signs.

A contrast-enhanced CT scan of the abdomen is the main test used to confirm splenic infarction. Contrast is a substance that makes blood vessels and organs easier to see. An infarct often appears as a wedge-shaped area with reduced blood flow.

Ultrasound may be useful in some situations, especially when CT contrast cannot be used. However, an early or small infarction may be harder to detect with ultrasound.

Blood tests do not confirm the condition by themselves. They may show inflammation, infection, anaemia, or changes in blood cell numbers. Tests of kidney and liver function can help guide imaging and treatment.

Further testing is chosen according to the suspected cause. It may include an electrocardiogram to check heart rhythm, an echocardiogram to examine the heart, blood cultures when bloodstream infection is possible, or tests for blood and clotting disorders.

Treatment and management

Treatment is based on how much of the spleen is affected, whether complications are present, and what interrupted the blood supply.

An uncomplicated infarction is often managed with pain relief, fluids when needed, treatment for nausea, and observation. Symptoms commonly improve as inflammation settles, although

the damaged area may leave a scar.

Treatment of the cause is equally important. Anticoagulants like warfarin or apixaban , often called blood thinners, may be used when an abnormal clot caused the infarction and the bleeding risk is acceptable. They are not suitable for every splenic infarction, particularly when bleeding or trauma is involved.

Antibiotics like amoxicillin or doxycycline are used when there is a bacterial infection, such as infective endocarditis or a splenic abscess. They are not routinely needed for an uncomplicated infarction without infection.

A surgical or interventional radiology assessment may be required if there is major bleeding, rupture, an abscess, persistent symptoms, or uncertainty about the diagnosis. Interventional radiology uses imaging to guide treatment through blood vessels. Surgery to remove the spleen, called splenectomy, is reserved for selected situations and is not needed for most uncomplicated infarctions.

If the spleen is removed or no longer works well, protection against infection becomes important. This can include specific vaccinations and a clear plan for seeking care if fever develops.

Complications

Most concern is focused on complications that cause continuing pain, infection, or internal bleeding.

A splenic abscess is a pocket of infection in damaged tissue. It may cause persistent or returning fever, chills, worsening pain, or continued illness. Treatment usually involves antibiotics and sometimes drainage or surgery.

The damaged area can occasionally bleed. Heavy bleeding into the abdomen may cause rapidly worsening pain, dizziness, fainting, weakness, or low blood pressure. Rupture means that the spleen's outer covering has torn and is an emergency.

Other possible complications include a fluid-filled cavity called a pseudocyst or continued pain from inflammation and scarring. Large or repeated infarctions can reduce how well the spleen functions.

Loss of splenic function raises the risk of severe infection from certain bacteria. This is most relevant after splenectomy or when repeated damage has left little working splenic tissue.

Prevention

Splenic infarction cannot always be prevented. It may result from an inherited blood condition, an unexpected clot, infection, injury, or a necessary medical procedure.

When a known condition raises the risk, managing that condition can reduce the chance of another infarction. This may involve treatment for an irregular heart rhythm, a clotting disorder, sickle cell disease, infection, or a bone marrow condition.

If you have been prescribed an anticoagulant for a diagnosed clotting or heart condition, taking it as directed is important. Do not start, stop, or change an anticoagulant because of a suspected splenic problem without medical advice, since these medicines can also increase bleeding.

Inherited causes cannot be prevented. Their complications may sometimes be reduced through ongoing specialist care and an agreed treatment plan.

Living with it and what to expect

Recovery after an uncomplicated splenic infarction often focuses on controlling pain and treating the cause. Pain may improve over days, but tenderness or discomfort can last longer. The exact recovery period reflects the size of the infarction, complications, and your general health.

Damaged splenic tissue does not return to normal, but unaffected parts of the spleen can continue working. A small infarction may have little long-term effect. Large or repeated infarctions can lead to scarring and reduced splenic function.

Follow-up is usually aimed at the underlying cause. You may need heart monitoring, blood tests, or review by a heart, blood, infection, or surgical specialist. Repeat imaging is not automatically required for everyone. It may be arranged when symptoms continue, complications are suspected, or the original finding needs reassessment.

Some causes require long-term treatment to reduce further clots. Others, such as a temporary infection or procedure-related injury, may not create an ongoing risk once resolved. Recurrence is more likely when the underlying clotting, heart, or blood condition remains active.

Most day-to-day limits are temporary and relate to pain or the risk of bleeding. Follow the activity advice given after your assessment, particularly if trauma, an enlarged spleen, or anticoagulant treatment is involved.

When to get medical help

Seek prompt medical assessment for new, unexplained pain in the upper-left abdomen, especially when it is severe, persistent, associated with fever, or occurs after an injury. Splenic infarction cannot be confirmed from symptoms alone.

Get urgent same-day help if you have a known splenic infarction and develop:

Call emergency services for sudden severe or rapidly worsening abdominal pain, fainting, confusion, trouble breathing, a rigid or swollen abdomen, or signs of collapse. These can be symptoms of internal bleeding, rupture, or severe infection.

Routine follow-up is appropriate when symptoms are stable or improving. Use these appointments to review test results, the suspected cause, medicines, and whether the spleen is expected to keep normal function.

- Increasing abdominal pain or tenderness
- Fever, chills, or feeling progressively unwell
- Repeated vomiting or difficulty keeping fluids down
- New weakness, dizziness, or a racing heartbeat

Common questions

Can a splenic infarction heal?

The inflammation and pain can settle, and unaffected spleen tissue may continue to work normally. The infarcted tissue usually heals by forming a scar rather than returning to its previous state.

How long does splenic infarction pain last?

Pain may improve over several days in an uncomplicated case, but discomfort can continue for weeks. Persistent, returning, or worsening pain needs reassessment because it may signal a complication or another cause.

Will I need my spleen removed?

Usually not. Removal is mainly considered for major bleeding, rupture, an abscess that cannot be managed another way, or other serious complications.

Is splenic infarction a sign of cancer?

Not necessarily. Cancer is one possible risk factor because some cancers increase clotting, but heart conditions, infections, blood disorders, trauma, and medical procedures can also cause

an infarction. Testing is guided by your history and findings.

Can splenic infarction happen again?

Yes, especially if an underlying clotting, heart, or blood condition remains active. Treating the cause can reduce the risk, but it may not remove it completely.

Can I live normally after a splenic infarction?

Many people return to their usual activities after recovery. Long-term care is shaped more by the cause and the amount of working spleen tissue than by the infarction alone.

Sources

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