CONDITION

Giant cell arteritis

Giant cell arteritis is immune-driven inflammation of arteries that can reduce blood flow to the eyes and other organs.

WHAT IT IS
Immune-driven inflammation of medium and large arteries

BODY SYSTEM
Arteries, especially around the head, eyes, and aorta

MAIN SYMPTOMS
New headache, scalp tenderness, jaw pain, vision changes

WHAT CAUSES IT
Abnormal immune inflammation; exact trigger unknown

HOW IT IS DIAGNOSED
Artery ultrasound or biopsy, supported by blood tests

MAIN TREATMENT
Prompt corticosteroids, sometimes with immune-suppressing medicine

CAN IT BE CURED?
Sometimes - inflammation settles, but relapse can occur

IS IT AN EMERGENCY?
Sometimes - new vision symptoms or stroke signs

LONG-TERM OUTLOOK
Usually controllable, though vision loss can be permanent

Overview

Giant cell arteritis is inflammation of medium-sized and large arteries. Arteries carry oxygen-rich blood from the heart to the body. The condition often affects branches of the carotid artery in the head, including arteries near the temples and eyes. It can also affect the aorta, the body's largest artery, and its major branches.

It is also called temporal arteritis or cranial arteritis. However, these names can be misleading because the inflammation is not always limited to the temples or head.

Giant cell arteritis occurs almost entirely in adults over 50. It matters because swollen artery walls can restrict blood flow. Without prompt treatment, reduced blood flow to the eye can cause permanent sight loss. Less commonly, the condition can contribute to stroke or problems involving the aorta.

Treatment usually starts as soon as giant cell arteritis is strongly suspected. Doctors may begin treatment before all tests are complete because protecting vision takes priority.

Symptoms

A new headache is common. It may affect one or both temples, but it can occur elsewhere around the head. The pain may feel different from headaches you have had before.

Other possible symptoms include:

Jaw pain caused by reduced blood flow usually develops while chewing and improves with rest. This is different from constant pain caused by a tooth or jaw-joint problem.

Shoulder and hip symptoms may be due to polymyalgia rheumatica, a related inflammatory condition. Some people have both conditions at the same time.

Symptoms can occasionally be mild or unusual. Some people mainly have general symptoms, such as fatigue or weight loss. Others have inflammation of the aorta and its branches without a typical temporal headache.

- Tenderness of the scalp, such as pain when brushing your hair
- Jaw or tongue pain while chewing or talking
- Blurred vision, double vision, or brief loss of vision
- Unusual tiredness, fever, night sweats, or unplanned weight loss
- Aching and morning stiffness around the shoulders, neck, or hips
- Arm pain or weakness during use, especially when arteries are affected there

Causes and risk factors

Giant cell arteritis happens when the immune system mistakenly attacks artery walls. The inflamed walls become thicker and may narrow the space through which blood flows. The exact trigger for this immune response is unknown.

The condition is not contagious. It is not caused by something you ate or by an injury. It does not follow a simple inherited pattern, although genes may influence susceptibility.

Age is the strongest known risk factor. Giant cell arteritis is very unusual before age 50, and risk increases with age. It is diagnosed more often in women and in people with northern European ancestry, although it can affect people of any background.

Polymyalgia rheumatica is closely linked with giant cell arteritis. Having one condition does not

mean you will definitely develop the other, but new symptoms of either need assessment.

Diagnosis

Diagnosis is based on your symptoms, an examination, blood tests, and tests that examine an affected artery. No single symptom or blood result can confirm the condition by itself.

Blood tests usually include C-reactive protein, or CRP, and the erythrocyte sedimentation rate, or ESR. Both can show inflammation. A full blood count and liver tests may also provide supporting information. Normal inflammation results make giant cell arteritis less likely, but do not completely exclude it.

Tests used to confirm or support the diagnosis include:

Ultrasound and biopsy have different advantages. The most appropriate test can depend on local expertise, how long treatment has already been given, and whether symptoms suggest inflammation outside the head.

A negative biopsy does not always rule out giant cell arteritis. Inflammation can affect separate sections of an artery, leaving normal areas between them. Doctors consider the whole pattern of symptoms, examination findings, blood results, and imaging.

Testing should not unnecessarily delay treatment when there is a serious concern about vision.

- Ultrasound: A specialist examines the temporal and nearby arteries for swelling in the artery wall.
- Temporal artery biopsy: A small piece of artery is removed from the side of the head under local anaesthetic and examined under a microscope.
- CT, MRI, or PET imaging: These may show inflammation or narrowing in the aorta and other large arteries.

Treatment and management

The main treatment is a corticosteroid like prednisone or hydrocortisone , also called a glucocorticoid or steroid. These medicines reduce immune inflammation quickly. They are not the same as anabolic steroids used to increase muscle size.

Treatment often begins with a high-dose oral steroid. If sight is threatened or has recently changed, hospital treatment and intravenous steroids may be considered. The dose is then reduced gradually over months, guided by symptoms, test results, and side effects.

Do not stop long-term steroid treatment suddenly unless a clinician has told you to do so. The

body reduces its own steroid hormone production during treatment, so sudden withdrawal can cause serious illness.

Some people are offered another medicine to reduce inflammation and limit long-term steroid exposure. Tocilizumab blocks an immune signal called interleukin-6 and is used for selected people with new or returning giant cell arteritis. Methotrexate may be considered in some situations. These medicines require monitoring because they can affect the immune system, liver, or blood cells.

Tocilizumab can suppress CRP and ESR results even when symptoms need attention. People taking it should not rely on inflammation blood tests alone to identify a relapse.

Long-term steroid treatment can increase the risk of infections, fragile bones, raised blood pressure, high blood sugar, cataracts, glaucoma, and weight gain. Management may therefore include bone-health assessment, blood pressure and glucose checks, eye checks, and a review of vaccination needs.

Aspirin or other blood-thinning treatment is not automatically suitable for everyone with giant cell arteritis. It may be used when there is another medical reason or a particular blood-flow concern.

Complications

The most important early complication is permanent sight loss caused by reduced blood flow to the optic nerve or retina. Sight already lost before treatment does not usually recover, which is why new visual symptoms need emergency assessment. Prompt treatment helps protect the other eye and reduce the risk of further loss.

Other possible complications include stroke and narrowing of arteries supplying the arms or other parts of the body.

Inflammation can weaken the wall of the aorta over time. This may lead to an aortic aneurysm, which is abnormal widening, or an aortic dissection, which is a tear within the wall. These complications are uncommon but can develop years after the first symptoms. Some people need periodic imaging of the aorta and its branches.

Treatment complications also matter. Regular monitoring helps balance control of the inflammation against the effects of steroids and other immune-suppressing medicines.

Prevention

There is no established way to prevent giant cell arteritis from developing. Its exact trigger is unknown, and it is not caused by a behaviour you can reliably change.

If the condition develops, prompt assessment and treatment can reduce the risk of sight loss and other blood-flow complications. Taking treatment as agreed, attending monitoring appointments, and reporting returning symptoms can also help limit harm.

Measures to protect bones, reduce infection risk, and manage blood pressure or blood sugar may lower some risks associated with long-term treatment. These measures do not prevent giant cell arteritis itself.

Living with it and what to expect

Headache, jaw pain, and general symptoms often begin to improve after steroid treatment starts. Improvement supports the diagnosis but does not prove it, so testing and follow-up remain important.

Treatment commonly continues for many months. The steroid dose is usually reduced in stages rather than stopped quickly. Some people eventually remain well without treatment. Others have relapses or need low-dose treatment for several years. A relapse means inflammation-related symptoms return during treatment or after it has stopped.

Follow-up usually includes a review of symptoms, medicine side effects, blood tests, and cardiovascular and bone health. Imaging may be repeated when large arteries are involved or when symptoms suggest an aortic complication.

You may be able to continue most normal activities as symptoms settle. Temporary changes may be needed if fatigue, muscle weakness, visual impairment, or medicine side effects affect daily life. If vision has been permanently affected, low-vision services and practical aids can help maintain independence.

Even after remission, attend planned follow-up. Large-artery complications can appear later and may not cause the original headache or scalp symptoms.

When to get medical help

Seek emergency medical care now if you have:

If you are over 50, seek urgent same-day medical assessment for a new, persistent headache with scalp tenderness or jaw pain while chewing. Do not wait for a routine appointment if visual symptoms are present.

If you are being treated for giant cell arteritis, report returning headache, jaw pain, scalp tenderness, visual symptoms, fever, or limb pain promptly. These may indicate a relapse, although they can also have other causes.

Routine follow-up is the place to discuss gradual weight change, sleep problems, bruising, bone health, blood pressure, or other possible treatment effects. Contact your healthcare team sooner if side effects are severe, worsening, or accompanied by signs of infection.

- Sudden loss or dimming of vision, even if it improves
- New double vision with a suspected or confirmed diagnosis
- Stroke signs, such as facial drooping, arm weakness, or speech difficulty
- Sudden severe chest, back, or abdominal pain, especially with faintness

Common questions

Is temporal arteritis the same as giant cell arteritis?

Temporal arteritis is an older name for giant cell arteritis. The newer name reflects that arteries beyond the temples, including the aorta, can also be affected.

Can giant cell arteritis go away completely?

Some people enter long-term remission and eventually stop treatment. Others have one or more relapses or need treatment for several years. Follow-up may continue after symptoms settle because large arteries can remain affected.

How long will I need steroids?

Treatment usually lasts many months and sometimes longer. The course is shaped by symptom control, relapses, blood results, artery imaging, and medicine side effects. Steroids must be reduced gradually rather than stopped suddenly.

Will eyesight return after treatment?

Vision lost because the optic nerve or retina was deprived of blood is often permanent. Treatment is still urgent because it may protect remaining vision and the other eye. Temporary visual symptoms can have different outcomes, but they always need emergency assessment.

Can normal blood tests rule it out?

No. Most people have raised inflammatory markers, but normal CRP or ESR results do not completely exclude giant cell arteritis. Symptoms, artery imaging, biopsy findings, and the effects of treatment all need to be considered.

Is giant cell arteritis life-threatening?

Most people can be treated successfully. Serious complications such as stroke, aortic dissection, or major infection from immune-suppressing treatment can be life-threatening, but they are not the usual course. Ongoing monitoring is intended to identify and reduce these risks.

Sources

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