CONDITION

Immunoblastic lymphadenopathy

Immunoblastic lymphadenopathy is an older name for a lymph-node condition now usually classified as angioimmunoblastic T-cell lymphoma.

WHAT IT IS
Historical term for angioimmunoblastic T-cell lymphoma

BODY SYSTEM
Immune and blood-forming systems

MAIN SYMPTOMS
Enlarged lymph nodes, fever, night sweats, rash

WHAT CAUSES IT
Abnormal T-cell growth; exact trigger unknown

HOW IT IS DIAGNOSED
Excisional lymph-node biopsy with specialist laboratory testing

MAIN TREATMENT
Systemic lymphoma treatment and supportive care

CAN IT BE CURED?
Sometimes - long-lasting remission follows successful treatment

IS IT AN EMERGENCY?
Sometimes - breathing difficulty or severe infection signs

LONG-TERM OUTLOOK
Often treatable, but relapse is common

Overview

Immunoblastic lymphadenopathy is an older medical term. It was mainly used for a condition later called angioimmunoblastic lymphadenopathy and then angioimmunoblastic T-cell lymphoma, often shortened to AITL.

Under current classification systems, AITL belongs to a group called nodal T-follicular helper cell lymphomas. These are cancers of T cells, a type of white blood cell involved in controlling immune responses. The abnormal cells mainly affect lymph nodes, but the condition can also involve the bone marrow, spleen, liver, skin, or other tissues.

The older name can cause confusion. "Lymphadenopathy" simply means enlarged or abnormal lymph nodes, while "immunoblast" describes an activated immune cell. In older records, these words may not show exactly how the condition would be classified today. A specialist review of

the original lymph-node sample may therefore be important.

This condition matters because it often affects several parts of the body and can disturb normal immune function. It may cause symptoms that resemble an infection or an autoimmune condition, in which the immune system mistakenly attacks the body. It can also be difficult to identify from a small tissue sample.

Symptoms

Symptoms often develop over weeks or months. They may become more noticeable, improve for a time, and then return. Symptoms alone cannot confirm the condition.

Common features include:

Immune-system changes can cause other problems. Some people develop anemia because red blood cells are being destroyed too quickly. This is called autoimmune hemolytic anemia. It may cause breathlessness, weakness, pale skin, jaundice, or dark urine.

Blood tests may also show low platelets, raised antibody levels, or other abnormal results. Low platelets can make bruising or bleeding more likely. Because these findings occur in many other conditions, further testing is needed.

- Enlarged lymph nodes in several areas, such as the neck, armpits, or groin
- Fever, drenching night sweats, or weight loss without a clear reason
- A widespread, itchy, or patchy skin rash
- Tiredness and reduced ability to manage usual activities
- Swelling of the liver or spleen, sometimes causing abdominal fullness
- Fluid-related swelling in the legs or abdomen

Causes and risk factors

The immediate cause is abnormal growth of T-follicular helper cells. These T cells normally help B cells make antibodies. When they become abnormal, they can disrupt the lymph-node structure and overstimulate other immune cells.

Changes in genes that regulate cell growth and gene activity are often found in the abnormal cells. These may include changes involving RHOA, TET2, DNMT3A, or IDH2. Such changes are acquired during life; they are not usually inherited from a parent.

Some of the same gene changes can occur in blood-forming cells before lymphoma develops.

This is called clonal hematopoiesis. Most people with clonal hematopoiesis do not develop this lymphoma, so finding it does not by itself establish a diagnosis.

Epstein-Barr virus, or EBV, is often detected in B cells within affected lymph nodes. However, the cancerous cells in this condition are T cells. EBV is not considered a simple direct cause, and having had EBV does not mean that you will develop this condition.

The condition is seen mainly in older adults, although it can occur at other ages. No everyday behaviour has been shown to be its direct cause.

Diagnosis

Diagnosis requires a lymph-node biopsy. When possible, an entire lymph node is removed in an excisional biopsy. This gives the laboratory enough tissue to examine the node's structure. A needle biopsy may not collect enough tissue because the abnormal cells can be scattered among many reactive immune cells.

A hematopathologist, a doctor who specialises in blood and lymph-node samples, examines the tissue. Tests may include immunohistochemistry, which uses stains to identify proteins on cells, and molecular testing for gene changes. These results help distinguish this condition from infections, autoimmune conditions, other T-cell lymphomas, and B-cell lymphomas.

If the biopsy confirms lymphoma, further tests assess how much of the body is involved and whether treatment can be given safely. These commonly include:

Staging describes where lymphoma is found. Many people have involvement in several areas when diagnosed. A higher stage does not mean that treatment cannot help, but it may affect treatment planning and outlook.

Because the tissue pattern is complex, a second review by a specialist lymphoma pathology service can be useful, especially when the biopsy was small or the diagnosis was made many years ago.

- Blood counts and tests of liver and kidney function
- Tests for signs of inflammation, immune activity, or red-cell breakdown
- CT or PET-CT imaging
- Bone marrow testing in selected cases
- Heart or lung tests before certain treatments

Treatment and management

Treatment is planned by a blood-cancer specialist. It is based on the modern pathology diagnosis, the areas involved, symptoms, general health, and previous treatment.

Most people with confirmed angioimmunoblastic T-cell lymphoma need treatment that works throughout the body. Combination chemotherapy is a common first approach. Some treatment plans also include a targeted medicine when the lymphoma cells carry a suitable marker, such as CD30.

Clinical trials may provide access to newer combinations or medicines that target particular cell processes. A trial may be considered at initial treatment or after the condition returns.

Stem cell transplantation may be discussed for some people who respond to treatment and are well enough for an intensive procedure. It may be used to strengthen a remission or to treat a relapse. It is not suitable or necessary for everyone.

If the lymphoma returns, another biopsy may be recommended. This can confirm that the symptoms are caused by recurrent T-cell lymphoma and check for a different lymphoma. Further treatment may involve different chemotherapy, targeted or immune-based medicines, transplantation, or a clinical trial.

Supportive care is also important. It may include treatment for infection, transfusions for low blood counts, medicines to control nausea or itching, and help with nutrition and fatigue. Steroids like prednisone or hydrocortisone can reduce inflammation and temporarily improve some symptoms, but they do not usually provide lasting control when used alone.

Treatment goals may differ when intensive therapy would cause more harm than benefit. Less intensive treatment can focus on controlling symptoms and preserving day-to-day function.

Complications

The condition can interfere with both blood-cell production and immune control. Possible complications include anemia, low platelets, serious infections, fluid around the lungs, and reduced liver or kidney function.

Autoimmune complications may occur when the immune system attacks blood cells or other tissues. High levels of abnormal immune proteins can also affect circulation, nerves, or organs, although this is less common.

The immune disruption can allow EBV-positive B cells to increase. In some people, a separate B-cell lymphoma develops. New or rapidly changing symptoms may therefore require another biopsy rather than assuming the original condition has simply returned.

Treatment can also lower blood counts and weaken resistance to infection. Longer-term risks depend on the treatments received and may include nerve symptoms, heart effects, fertility changes, or the development of another blood condition. The treatment team can explain which risks apply to a particular treatment plan.

Prevention

There is no established way to prevent immunoblastic lymphadenopathy or angioimmunoblastic T-cell lymphoma. The genetic changes linked to it are usually acquired by chance, and routine lifestyle choices are not known to cause the condition.

It is not considered an inherited condition in most people. Relatives do not usually need genetic testing or lymphoma screening solely because one family member has been diagnosed.

Preventive care remains useful after diagnosis. Vaccination planning, infection precautions, and regular health checks may reduce complications, but these measures do not prevent the lymphoma itself. Vaccines should be discussed with the treatment team because some may not be suitable during certain immune-suppressing treatments.

Living with it and what to expect

The course is different for each person. Symptoms may change quickly at first because the condition affects immune activity throughout the body. Fever, rash, and swollen lymph nodes can sometimes improve before treatment, but this does not necessarily mean the condition has resolved.

Treatment commonly lasts for several months. Blood tests and examinations are used to assess response and watch for complications. Imaging may be repeated at planned points rather than at every visit.

Some people enter a long-lasting remission, meaning there is no detectable active lymphoma. Others have a shorter response or need more than one type of treatment. Relapse is common, so follow-up continues after treatment ends.

Routine follow-up may include discussion of symptoms, examination of lymph-node areas, and blood tests. Scans are used when clinically needed or according to the follow-up plan. A new symptom does not always mean relapse; infections, medication effects, and other health conditions can produce similar changes.

Fatigue can continue after blood tests and scans have improved. Returning to work, exercise, and social activities may need to happen gradually. Emotional support, practical help, and

advice about work or finances can also be part of lymphoma care.

When to get medical help

Arrange a routine medical appointment if you have lymph nodes that remain enlarged, unexplained fever or night sweats, ongoing itching or rash, or weight loss without a clear cause. These symptoms are much more often caused by other conditions, but persistent symptoms should be assessed.

If you have already been diagnosed, contact your treatment team promptly about new or rapidly enlarging lymph nodes, worsening rash, unusual bruising, jaundice, dark urine, increasing weakness, or symptoms that return after treatment.

Seek same-day medical advice for a fever during chemotherapy or another treatment that weakens the immune system. Infection can worsen quickly when white blood cell levels are low, even if other symptoms seem mild.

Seek emergency help for:

- Severe difficulty breathing, chest pain, fainting, or new confusion
- Heavy or uncontrolled bleeding
- Rapid swelling of the face or neck, especially with breathing trouble
- Signs of a severe allergic reaction, such as throat swelling or widespread blistering
- Severe weakness with inability to stay awake or keep fluids down

Common questions

Is immunoblastic lymphadenopathy cancer?

The term is historical, but it usually refers to what is now called angioimmunoblastic T-cell lymphoma, which is a type of cancer. If the wording appears in an old report, specialist pathology review may clarify how it fits current classifications.

Is it the same as swollen glands from an infection?

No. Infections commonly cause temporary swollen lymph nodes, but immunoblastic lymphadenopathy involves a particular abnormal pattern of immune cells. A lymph-node biopsy is needed to tell it apart from infection and other causes.

Is it contagious?

No. The condition cannot spread between people. EBV may be found in some cells within

affected lymph nodes, but the lymphoma itself is not an infection and cannot be passed to someone else.

Can it go away without treatment?

Symptoms may briefly improve or respond to steroids, but confirmed angioimmunoblastic T-cell lymphoma usually requires systemic treatment. Temporary improvement does not show that the abnormal cells have been eliminated.

Can immunoblastic lymphadenopathy be cured?

Sometimes. Some people have a long-lasting remission after treatment, while others experience relapse and need further therapy. Outlook is influenced by treatment response, general health, organ involvement, and the lymphoma's biological features.

Why might I need another lymph-node biopsy?

This lymphoma can be difficult to distinguish from other conditions. A later biopsy can confirm relapse, identify changes in the T-cell lymphoma, or detect a separate B-cell lymphoma that would need different treatment.

Sources

- Alaggio R, Amador C, Anagnostopoulos I, et al. "The 5th edition of the World Health Organization Classification of Haematolymphoid Tumours: Lymphoid Neoplasms." Leukemia . 2022;36:1720-1748.
- Lunning MA, Vose JM. "Angioimmunoblastic T-cell lymphoma: the many-faced lymphoma." Blood . 2017;129(9):1095-1102.
- Federico M, Rudiger T, Bellei M, et al. "Clinicopathologic characteristics of angioimmunoblastic T-cell lymphoma: analysis of the International Peripheral T-cell Lymphoma Project." Journal of Clinical Oncology . 2013;31(2):240-246.
- National Cancer Institute. Peripheral T-Cell Lymphoma Treatment (PDQ): Health Professional Version . Cancer Treatment Information.
- National Comprehensive Cancer Network. NCCN Guidelines for Patients: Peripheral T-Cell Lymphoma . Patient guidance on diagnosis, treatment, and follow-up.