CONDITION

Cystic hygroma

A cystic hygroma is a fluid-filled lymphatic malformation, usually found in the neck.

WHAT IT IS
A fluid-filled malformation of lymph vessels

BODY SYSTEM
Lymphatic system, usually affecting the neck

MAIN SYMPTOMS
Soft swelling, rapid enlargement, trouble swallowing, breathing difficulty

WHAT CAUSES IT
Abnormal development of lymph vessels before birth

HOW IT IS DIAGNOSED
Prenatal ultrasound or ultrasound and MRI after birth

MAIN TREATMENT
Monitoring, sclerotherapy, surgery, or specialist medicines

CAN IT BE CURED?
Sometimes - complete removal may be possible

IS IT AN EMERGENCY?
Sometimes - when swelling affects breathing

LONG-TERM OUTLOOK
Often manageable; prenatal outlook hinges on associated abnormalities

Overview

A cystic hygroma is a group of fluid-filled spaces caused by lymph vessels that did not form normally. When these vessels do not connect or drain properly, lymph fluid collects in cysts.

The current medical term is usually macrocystic lymphatic malformation . "Macrocystic" means the fluid spaces are large enough to see clearly on imaging. A cystic hygroma is not cancer and does not spread to other parts of the body.

Most form before birth, although they may not become noticeable until infancy, childhood, or occasionally adulthood. They are usually found in the neck but may extend into the face, mouth, tongue, chest, armpit, or nearby tissues.

Depending on its size and location, a cystic hygroma can affect swallowing, speech, movement, or breathing. It may enlarge after an infection or bleeding into the cysts.

When found during pregnancy, it can be associated with chromosome differences, genetic conditions, heart problems, or fluid buildup in the fetus. Some are isolated, with no other condition found.

Symptoms

After birth, a cystic hygroma often feels like a soft, compressible swelling with normal-looking skin. It may be small and stable or extend through several tissue spaces.

Possible symptoms include:

In a fetus, the finding is usually detected on ultrasound as a fluid-filled, often divided swelling around the back or sides of the neck.

- A soft lump, usually on the side or back of the neck
- Swelling that becomes more noticeable during an infection
- Sudden enlargement caused by bleeding into the cysts
- Trouble swallowing, feeding, speaking, or moving the neck
- Noisy breathing or shortness of breath if the airway is narrowed
- Pain, warmth, redness, or tenderness if the area is inflamed or infected
- Clear or blood-stained fluid leaking through the skin in some extensive malformations

Causes and risk factors

A cystic hygroma begins when part of the lymphatic system develops abnormally before birth. Affected vessels become separated from normal drainage channels, allowing fluid to collect.

The exact reason is not always known. Many isolated lymphatic malformations have gene changes that affect cell growth and blood-vessel development only within the affected tissue. These somatic genetic changes usually happen after conception and are not inherited.

A cystic hygroma seen during pregnancy is associated with a higher chance of conditions such as Turner syndrome, Down syndrome, trisomy 18, and Noonan syndrome. However, not every fetus with a cystic hygroma has a genetic condition.

There are no established lifestyle risk factors. It is not caused by something a parent ate, did, or failed to do during pregnancy.

Diagnosis

During pregnancy, cystic hygroma is usually identified by ultrasound. A detailed scan assesses the swelling and looks for other fetal differences. Follow-up scans may check growth, heart structure, and signs of fetal hydrops, which is abnormal fluid buildup in several parts of the body.

A fetal medicine team may discuss genetic testing. Diagnostic options include chorionic villus sampling or amniocentesis, which collect placental tissue or amniotic fluid to examine fetal chromosomes. More detailed genetic testing may be considered if standard chromosome testing does not explain the finding.

After birth, diagnosis is based on examination and imaging. Ultrasound shows the fluid-filled spaces and nearby blood flow. MRI provides a detailed map of the malformation and whether it involves the airway, tongue, nerves, muscles, or chest. MRI uses a magnetic field rather than radiation.

A tissue biopsy is rarely needed but may be considered if the diagnosis remains uncertain.

Treatment and management

Treatment depends on the cystic hygroma's size, location, symptoms, and effect on daily life. Care may involve a vascular-anomalies team, interventional radiologist, surgeon, ear, nose and throat specialist, genetic specialist, or fetal medicine team.

A small malformation that is not growing or causing problems may be monitored with examinations, photographs, measurements, or repeat imaging.

Sclerotherapy is a common treatment for macrocystic lymphatic malformations. Under imaging guidance, a specialist drains the cysts and introduces a substance that makes the spaces scar and shrink. Temporary swelling, discomfort, and inflammation are expected. More than one session may be needed.

Surgery may be considered when the malformation can be removed safely or continues to cause symptoms. Complete removal is not always possible because abnormal spaces may surround nerves, muscles, blood vessels, or airway structures. Leaving some tissue behind may be safer than damaging these structures.

Medicines such as sirolimus or other targeted treatments may be used for extensive or complicated malformations. They require specialist supervision and regular monitoring.

If a large neck malformation is found before birth, maternity and newborn teams may plan where and how delivery should happen. Rarely, a special delivery procedure allows the baby's

airway to be secured while oxygen is still supplied through the placenta.

A cystic hygroma should not be punctured or drained at home. Drainage alone does not treat the underlying spaces and can cause infection or bleeding.

Complications

Complications are more likely when the malformation is large or involves the mouth, throat, or chest.

Possible complications include:

During pregnancy, a cystic hygroma may occur with heart or other structural abnormalities. Fetal hydrops can develop if fluid collects throughout the fetus. The outlook is more concerning when hydrops, chromosome differences, or major structural problems are present.

Sclerotherapy and surgery can cause swelling, infection, bleeding, skin injury, scarring, or damage to nearby structures. The treatment team should explain the risks for the malformation's location.

- Airway narrowing and breathing difficulty
- Problems with feeding, swallowing, speech, or movement
- Infection or inflammation within the cysts
- Bleeding into the malformation, causing sudden swelling and pain
- Skin breakdown or persistent fluid leakage
- Regrowth or refilling after treatment
- Scarring or injury to nearby nerves and other structures after procedures

Prevention

A cystic hygroma cannot currently be prevented. It forms because lymph vessels develop abnormally before birth and is usually unrelated to parental behaviour or preventable exposure.

Most isolated lymphatic malformations are not inherited. If one is associated with a chromosome or genetic condition, genetic counselling can explain the results and the chance of the condition occurring in a future pregnancy.

Living with it and what to expect

The course varies. Some small cystic hygromas remain stable and need only monitoring. Others enlarge as a child grows or swell suddenly during infection, inflammation, trauma, or internal bleeding.

Treatment often reduces the size and symptoms, but several procedures may be needed. A malformation can refill if abnormal spaces remain, so follow-up is important even after a good response.

Children with a localized malformation that does not affect vital structures can often take part in usual activities. Visible swelling or treatment scars may affect confidence, and psychological support, school planning, or a vascular-anomalies support group may help.

Extensive malformations may require care over several years. Feeding, speech, dental, breathing, or movement support may be needed when the mouth, tongue, throat, or muscles are involved.

For a cystic hygroma diagnosed before birth, the outlook depends mainly on genetic test results, associated structural findings, hydrops, and whether the swelling grows or resolves. An isolated hygroma that becomes smaller can have a better outlook, but continued pregnancy and newborn assessment remain important.

When to get medical help

Seek emergency medical help if a child or adult with a cystic hygroma has:

Contact the care team urgently on the same day for rapid enlargement, new trouble swallowing, bleeding, fluid leaking through the skin, or signs of infection such as fever, redness, warmth, and increasing pain.

Arrange routine follow-up if the swelling is slowly changing, symptoms return after treatment, or the malformation begins affecting eating, speech, sleep, movement, or confidence. Routine appointments also monitor stable malformations and determine whether repeat imaging is needed.

If cystic hygroma is found during pregnancy, keep planned fetal medicine and ultrasound appointments. Contact the maternity unit about concerns such as reduced fetal movement, following the advice given for the stage of pregnancy.

- Difficulty breathing or severe noisy breathing
- Blue, grey, or unusually pale lips or skin

- Rapid neck or tongue swelling that is affecting the airway
- Inability to swallow saliva, choking, or marked drowsiness

Common questions

Is a cystic hygroma cancer?

No. It is a benign, noncancerous malformation of lymph vessels and does not spread to distant organs. It can still cause serious problems if it presses on the airway or nearby structures.

Can a cystic hygroma go away on its own?

Some fetal cystic hygromas become smaller or disappear on later ultrasound, and a small malformation after birth may remain stable. However, apparent resolution does not rule out an associated genetic or structural condition. A malformation may also become noticeable again.

Can a cystic hygroma be completely removed?

Sometimes. Complete removal may be possible when it is well defined and separate from important nerves or blood vessels. In other cases, sclerotherapy or partial surgery is safer. Residual spaces can refill.

Why does a cystic hygroma suddenly get bigger?

Infection, inflammation, trauma, or bleeding inside the cysts can cause rapid swelling. Sudden enlargement needs prompt assessment, especially in the neck, mouth, or tongue. Breathing difficulty is an emergency.

Does a fetal cystic hygroma mean the baby has a chromosome condition?

Not always. It increases the chance of a chromosome or genetic condition, but some fetuses have normal test results and no other abnormalities. Diagnostic testing and detailed ultrasound provide more information.

Is cystic hygroma hereditary?

Most isolated cystic hygromas are not inherited. Some occur with an inherited or newly occurring genetic condition. Genetic counselling can clarify what a specific result means for the family and future pregnancies.

Sources



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