CONDITION

Infectious myringitis

Infectious myringitis is a viral or bacterial infection that inflames the eardrum and may cause painful blisters.

WHAT IT IS
Infection and inflammation of the eardrum

BODY SYSTEM
Ear and hearing

MAIN SYMPTOMS
Ear pain, muffled hearing, fever, ear discharge

WHAT CAUSES IT
Viral or bacterial infection

HOW IT IS DIAGNOSED
Ear examination with an otoscope

MAIN TREATMENT
Pain relief and antibiotics when bacterial infection is likely

CAN IT BE CURED?
Yes, most acute infections clear

IS IT AN EMERGENCY?
Sometimes, with swelling behind ear or facial weakness

LONG-TERM OUTLOOK
Usually full recovery; muffled hearing may outlast pain

Overview

Infectious myringitis is inflammation of the eardrum caused by an infection. The eardrum, also called the tympanic membrane, is the thin layer of tissue separating the ear canal from the middle ear.

The condition often causes sudden, intense ear pain. Small fluid-filled blisters may form on the eardrum. When blisters are present, the condition is commonly called bullous myringitis .

Infectious myringitis may occur by itself, but it often appears with acute otitis media, which is an infection in the air-filled space behind the eardrum. Both conditions are more common during or soon after a cold or another respiratory infection.

Most people recover without lasting problems. Pain can be severe while the infection is active,

and fluid behind the eardrum may temporarily reduce hearing. An examination is important because several other ear conditions can cause similar symptoms but need different treatment.

Symptoms

Ear pain is usually the main symptom. It may begin quickly and can be more intense than the pain from an uncomplicated middle-ear infection. The pain may ease if a blister breaks, although this is not always the case.

Possible symptoms include:

Hearing may sound blocked because the inflamed eardrum does not move normally. Fluid behind the eardrum can add to this effect. This type of hearing loss is usually temporary.

Discharge can occur if a blister breaks. It can also mean that the eardrum has developed a small hole, called a perforation. An examination can tell the difference.

Ear pain alone does not confirm infectious myringitis. An outer-ear infection, middle-ear infection, ear-canal injury, pressure injury and dental or jaw problems can all produce similar pain.

- Sudden pain in one ear, or occasionally both ears
- Muffled or reduced hearing
- A feeling of pressure or fullness in the ear
- Fever
- Irritability, poor sleep or feeding difficulty in young children
- A small amount of blood-stained or clear ear discharge

Causes and risk factors

Viruses and bacteria that cause middle-ear infections can also cause infectious myringitis. The infection may follow a cold because swelling around the eustachian tube prevents the middle ear from draining normally. The eustachian tube connects the middle ear to the back of the nose and throat.

Common bacterial causes overlap with those of acute otitis media. Respiratory viruses may cause the inflammation directly or make a later bacterial infection more likely. Symptoms alone usually cannot show whether a virus or bacterium is responsible.

Older reports linked bullous myringitis closely to Mycoplasma pneumoniae , a bacterium that can cause respiratory infections. Later evidence has not supported it as a unique or usual cause. In practice, the condition is assessed in much the same way as other acute middle-ear infections.

Factors that may increase the chance of an ear infection include:

Putting objects into the ear may injure the canal or eardrum, but it is not the usual cause of infectious myringitis.

- A recent cold, influenza or other respiratory infection
- Close contact with people who have respiratory infections
- Exposure to tobacco smoke
- A history of repeated middle-ear infections
- Eustachian tube problems, which are especially common in young children
- Conditions or treatments that weaken immune defences

Diagnosis

A healthcare professional diagnoses infectious myringitis by examining the ear with an otoscope. This is a lighted instrument that provides a magnified view of the ear canal and eardrum.

The examination may show one or more blisters on a red, inflamed eardrum. The blisters can contain clear fluid or blood. The clinician also looks for bulging of the eardrum or fluid behind it, which suggests an accompanying middle-ear infection.

A pneumatic otoscope may be used to send a gentle puff of air toward the eardrum. An infected eardrum or one with fluid behind it may not move normally. Tympanometry, a test that measures eardrum movement, can sometimes help when the findings are uncertain.

Laboratory tests are not usually needed. A sample of ear discharge may be tested if an infection is persistent, recurrent or not responding as expected. Imaging scans are reserved for situations where a complication or another diagnosis is suspected.

A hearing test may be arranged if reduced hearing continues after the pain and infection have settled. Persistent hearing loss should not automatically be attributed to leftover fluid without reassessment.

Treatment and management

Treatment focuses on controlling pain and treating a likely bacterial infection when appropriate. The best approach is influenced by the examination findings, age, symptom severity and whether there is a middle-ear infection.

Pain relief is important because infectious myringitis can be very uncomfortable. A healthcare professional or pharmacist can advise which non-prescription pain medicine is suitable. Children and adults should use medicines only as directed on the product label or by their clinician.

Antibiotics like amoxicillin or doxycycline may be prescribed when bacterial infection is likely, particularly when infectious myringitis occurs with acute otitis media. Antibiotics do not treat viruses. The choice of medicine considers allergies, recent antibiotic use and local recommendations.

If a blister is causing severe pain, an ear specialist may sometimes drain it using sterile equipment. Do not try to burst or drain a blister yourself. The eardrum is delicate, and inserting anything into the ear can cause injury or introduce another infection.

Ear drops are not interchangeable. Some are intended for ear-canal infections and may not help an infection behind an intact eardrum. Certain drops should not be used if the eardrum has a hole. Use only a product recommended after the ear has been assessed.

Keep the ear dry if there is discharge or a known perforation. Avoid swimming and do not put cotton buds, oil or home remedies into the canal. Decongestants and antihistamines like cetirizine or loratadine have not been shown to routinely clear acute middle-ear infections.

Follow-up may be recommended to confirm that the eardrum has healed, especially when there was a perforation, ongoing discharge or reduced hearing.

Complications

Complications are uncommon, and most infections clear without lasting damage.

Fluid may remain behind the eardrum after the active infection settles. This can cause temporary muffled hearing for several weeks. Children with prolonged hearing difficulty may have trouble following speech in noisy settings until the fluid clears.

Other possible complications include:

A perforation caused by an acute infection often heals, but it needs follow-up if discharge or hearing loss continues.

Rarely, infection can spread to nearby tissues or affect the facial nerve. Warning signs include

swelling behind the ear, the ear being pushed outward, or new weakness on one side of the face.

- A small eardrum perforation
- Ongoing or repeated middle-ear infection
- Persistent ear discharge
- Temporary conductive hearing loss, caused by blocked sound movement
- Rare spread of infection into the bone behind the ear

Prevention

Infectious myringitis cannot always be prevented. It often develops as part of a common viral or bacterial respiratory infection.

Measures that may reduce the chance of respiratory and middle-ear infections include:

Do not insert cotton buds or other objects into the ear canal. This does not prevent myringitis, but it reduces the chance of ear-canal and eardrum injury.

People with repeated infections may need assessment for persistent middle-ear fluid, hearing problems or conditions that affect eustachian tube function. Preventive options are based on the cause and are not the same for everyone.

- Washing hands regularly
- Avoiding close contact with people who are acutely unwell when practical
- Keeping recommended vaccines up to date
- Avoiding tobacco smoke and vaping aerosol around children
- Not sharing objects that have been placed in the ear

Living with it and what to expect

Infectious myringitis is usually an acute condition, meaning that it begins quickly and lasts for a limited time. Pain often starts improving within the first few days of appropriate care. Fever and general illness should also settle.

Muffled hearing may last longer than the pain. Fluid behind the eardrum can remain after the infection has cleared, sometimes for several weeks. Hearing usually returns as the inflammation and fluid resolve, but the timing cannot be predicted for an individual person.

A small amount of discharge after a blister breaks may stop quickly. Continuing or recurring discharge needs another examination. Keep the ear dry until a clinician confirms that the eardrum is intact.

Most people return to their normal activities once pain and fever have improved. Children may return to school or childcare when they feel well enough and meet the setting's rules for fever or other respiratory symptoms. Infectious myringitis itself does not spread between people, but the respiratory virus that triggered it may be contagious.

Repeated episodes are possible, especially in children prone to middle-ear infections. Frequent infections, persistent fluid or ongoing hearing difficulty may lead to a hearing assessment or referral to an ear, nose and throat specialist.

When to get medical help

Arrange prompt medical assessment for severe ear pain, new ear discharge, fever with ear symptoms, or noticeable hearing reduction. A young infant with fever or suspected ear pain should also be assessed promptly.

Seek follow-up if symptoms are not starting to improve after treatment, or if they improve and then return. Routine follow-up is also appropriate when muffled hearing, a blocked feeling or discharge continues after the acute pain has settled.

Get urgent medical help for:

Seek emergency care for severe headache with neck stiffness, confusion, unusual drowsiness, seizures or other serious neurological symptoms. These symptoms are not typical of uncomplicated infectious myringitis.

- Redness, pain or swelling behind the ear
- An ear that begins to stick outward
- New weakness or drooping on one side of the face
- Sudden major hearing loss
- Severe dizziness or difficulty walking
- Worsening illness despite treatment

Common questions

Is infectious myringitis the same as an ear infection?

It is an infection involving the eardrum. It may occur with a middle-ear infection, but they are not exactly the same condition. An ear examination shows whether infection or fluid is also present behind the eardrum.

Why does infectious myringitis hurt so much?

The eardrum contains sensitive nerve endings. Inflammation and pressure from blisters can produce intense pain, even when the affected area is small.

Will the blisters on my eardrum burst?

A blister may break and release a small amount of clear or blood-stained fluid. Others shrink as the infection resolves. Do not try to burst one yourself, because this could damage the eardrum.

Do I need antibiotics for infectious myringitis?

Not every ear infection is bacterial. Antibiotics are often considered when the examination suggests bacterial myringitis or an accompanying middle-ear infection. A clinician decides based on the ear findings and your overall situation.

How long will my hearing stay muffled?

Hearing often improves as the inflammation settles. If fluid remains behind the eardrum, muffled hearing can continue for several weeks. Arrange follow-up if it persists, worsens or is accompanied by ongoing discharge.

Can I fly or swim with infectious myringitis?

Swimming is best avoided while there is discharge or a perforated eardrum. Flying can increase pain when pressure cannot equalise normally. Ask for individual advice if travel cannot wait, particularly when symptoms are active or the eardrum may be perforated.

Sources

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