

CHOLESTEATOMA: A SERIOUS EAR CONDITION

What is a Cholesteatoma?

A cholesteatoma is a skin growth that occurs in an abnormal location, the middle ear behind the eardrum. It is usually due to repeated infection which causes an ingrowth of the skin of the eardrum. Cholesteatomas often take the form of a cyst or pouch which sheds layers of old skin that build up inside the ear. Over time the cholesteatoma can increase in size and destroy the surrounding delicate bones of the middle ear. Hearing loss is the most common symptom. Dizziness and facial muscle paralysis are rare but can result from continued cholesteatoma growth.

How does it occur?

A cholesteatoma usually occurs because of poor eustachian tube function as well as infection in the middle ear. The eustachian tube conveys air from the back of the nose into the middle ear to equalise ear pressure ("clear the ears"). When the eustachian tubes work poorly, perhaps due to allergy, a cold or sinusitis, the air in the middle ear is absorbed by the body and a partial vacuum results in the ear. The vacuum pressure sucks in a pouch or sac by stretching the eardrum, especially in areas weakened by previous infections. This sac often becomes a cholesteatoma. A rare congenital form of cholesteatoma (one present at birth) can occur in the middle ear and elsewhere, such as in the nearby skull bones. However, the type of cholesteatoma associated with ear infections is most common.

What are the Symptoms?

Initially, the ear may drain, sometimes with a foul odour. As the cholesteatoma pouch or sac enlarges it can cause a full feeling or pressure in the ear, along with hearing loss. (Aches behind or in the ear, especially at night, may cause significant discomfort) Dizziness or muscle weakness on one side of the face (the side of the infected ear) can also occur. Any or all of these symptoms are good reasons to seek medical evaluation.

Is it Dangerous?

Ear cholesteatomas can be dangerous and should never be ignored. Bone erosion can cause the infection to spread into the surrounding areas, including the inner ear and brain. If untreated, deafness, brain abscess, meningitis and rarely death can occur.

What Treatment can be Provided?

An examination by an ENT - head and neck surgeon can confirm the presence of a cholesteatoma. Initial treatment may consist of a careful cleaning of the ear, antibiotics and ear drops. Therapy aims to stop drainage in the ear by controlling the infection. The extent or growth characteristics of a cholesteatoma must also be evaluated.

Large or complicated cholesteatomas usually require surgical treatment to protect the patient from serious complications. Hearing and balance tests and CT scans (3D x-rays) of the mastoid (the skull bone next to the ear) may be necessary. These tests are performed to determine the hearing level remaining in the ear and the extent of destruction the cholesteatoma has caused.

Surgery is performed under local/general anaesthesia. The primary purpose of the surgery is to remove the cholesteatoma and infection and achieve an infection-free dry ear. Hearing preservation or restoration is the second goal of surgery. In cases of severe ear destruction, reconstruction may not be possible. Facial nerve repair or procedures to control dizziness are rarely required. Reconstruction of the middle ear is not always possible in one operation and therefore a second operation may be performed six to twelve months later. The second operation will attempt to restore hearing and at the same time inspect the middle ear space and mastoid for residual cholesteatoma.

Admission to the hospital is usually done the morning of surgery and the discharge may be on the same day or next day morning. For some patients an overnight stay is necessary. In rare cases of serious infection prolonged hospitalisation for antibiotic treatment may be necessary. Time off from work is typically one week.

Follow up office visits after surgical treatment are necessary and important because cholesteatoma sometimes recurs. In cases where an open mastoidectomy cavity has been created, office visits are needed in some patients every year in order to clean out the mastoid cavity and prevent new infections. In some patients there must be lifelong periodic ear examinations.

Summary

Cholesteatoma is a serious but treatable ear condition which can only be diagnosed by medical examination. Persisting earache, ear drainage, ear pressure, hearing loss, dizziness or facial muscle weakness signals the need for evaluation by an otolaryngologist.