

## CHOLESTEATOMA

A perforation of the ear drum will generally heal without surgery. In some cases, however, instead of normally healing, the skin of the ear drum can grow through the hole into the middle ear. If infection is present, the skin will continue to grow into the middle ear and will become a tumor of the ear termed a cholesteatoma. Cholesteatomas are NOT a form of cancer. They are benign tumors. As they grow, they can look like an onion peel of white skin formed into a ball.

They can destroy the bones of hearing as they grow, especially when the ear is infected or if water gets into the middle ear with other infections.

Symptoms of cholesteatoma include hearing loss and recurring discharge from the ear. Pus or unpleasant smelling fluids coming from the ear are common. A surgical microscope is necessary to make a proper inspection and cleansing of the condition, especially when there is infection.

A history of recurring ear infections after colds, or the entrance of water into the ear from swimming, require the ear to be examined regularly for this condition.

Cholesteatomas actively erode bone because they contain enzymes which are activated by moisture. In time, cholesteatomas will eventually erode the bone leading into the inner ear. This can cause nerve loss and deafness as well as severe imbalance and dizziness. The thin plate of bone that separates the roof of the ear from the brain can also be eroded by cholesteatomas. This exposes the covering of the brain. In extreme situations, it can lead to brain infection and other severe complications.

Cholesteatoma is a serious condition and, when diagnosed, requires prompt treatment. Medical treatment concentrates on drying the infection within the ear. Antibiotics, given both by mouth and drops in the ear, combined with weekly cleaning of the ear under the surgical microscope, can clear up the infection.

Polyps (growth of inflamed tissue) are often present in the ear with cholesteatoma. The polyps can shrink or may have to be surgically removed before the infection will clear up. With children, removal of polyps may have to be done under anaesthesia in the hospital. In some cases, intravenous antibiotics may have to be given to clear up the infection.

A (CAT) CT scan is obtained by the ear surgeon to determine how much the cholesteatoma has spread in the ear.

The bone behind the ear is called the mastoid bone. It connects to the middle ear. In a healthy ear, it is filled with air. In most cases of cholesteatoma, the mastoid bone is filled with irritated mucous membranes and cholesteatoma itself often grows into this bone. The CAT scan will guide the ear surgeon as to how far the cholesteatoma has grown and whether it has eroded into the inner ear or brain. The CAT scan will also indicate the degree to which bones of hearing have been eroded.

Once infection is cleared up and the ear is dry, a decision regarding surgery to remove the cholesteatoma can be made. Unless the person with cholesteatoma is extremely ill with other medical conditions, microsurgery and removal of the cholesteatoma is recommended. The ear surgeon then has to plan the type of surgery necessary to remove the tumor completely.

Courtesy of Mark J. Levenson, MD, FACS