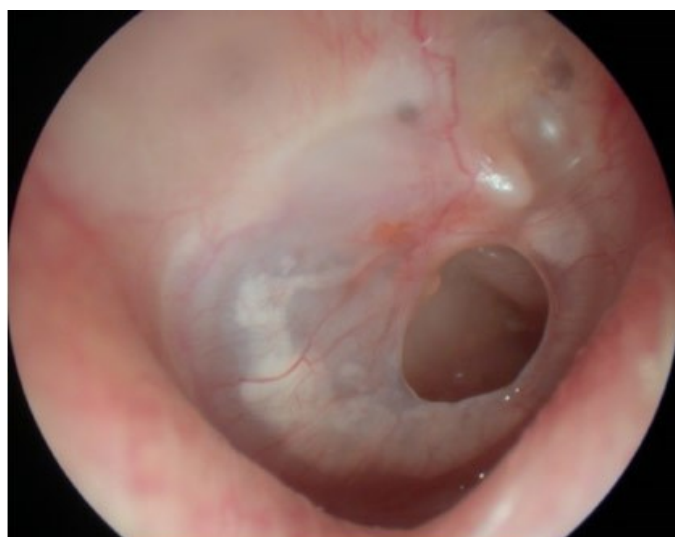


While we do not diagnose or treat medical disorders, we must be able to recognize them in order to properly refer if needed. Outer ear disorders are cause for alarm and most likely will cause conductive hearing loss in a patient. A conductive loss involves the breakdown or obstruction of the outer or middle ear and can cause air or bone conduction to not be transmitted properly through to the inner ear. Many of these disorders can be treated medically.

In this lesson you will learn what disorders occur in the outer ear, and have visual aids to compare and contrast different appearances of disorders. All conductive disorders require referral.

Perforation– A perforation is a hole in the eardrum that can be caused from an infection, explosion, foreign objects, or perhaps being slapped on the ear. A **Monomeric spot** is a healed perforation that can reflect light from the otoscope when inspecting the ear. A hole can be treated by a myringoplasty in which they patch the hole with skin. In the picture to the right there is a perforation present in the superior/anterior section of the eardrum.



Impacted Cerumen (Wax)– Normally ear wax migrates out of the ear canal naturally, but when it becomes impacted it can cause a loss from blockage or by stiffening the eardrum. If the eardrum can still be seen, the wax build up has not reached a point of need for referral. It would be advantages to mention to the patient to perhaps get cleaning solution to remove the wax. Generally speaking the darker the wax,



the older it is. Since wax impaction can go all the way back to the eardrum, it is important not to try to make an impression or perform a test until it is cleaned by a physician or nurse.

Malformations— Malformations include many things. **Atresia** is a canal that has closed from surgery or present at birth. A **pro-lapsed canal** is typically age related and is present when a breakdown of cartilage is causing the canal to collapse or sag. Other such conditions would be a malformed or missing part of the pinna. Pictured to the right is an example of a prolapsed canal. If canal is not completely blocked it will not necessarily cause a loss, but could eventually if canal continues to close.



Tympanosclerosis— As the tissue of an eardrum degenerates with age it can turn to a white calcium rich deposit. This can start as a small build up, but eventually turn into a horseshoe-shaped configuration. This can stiffen the eardrum and cause a conductive loss.



Otitis Externa— Perhaps the most common outer ear disorder, Otitis externa is an infection of the outer ear that can also include the canal. This will not cause a hearing loss unless the canal is completely closed. It would be painful to the patient and cause discomfort especially when touched. It is usually bright red and if not treated can lead to a middle ear infection. Do not get Otitis externa confused with otitis media. The former is an infection of the outer ear, vs the latter that is an infection of the middle ear.



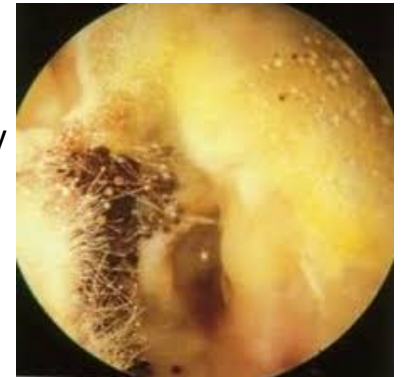
Polyps/Bony Growths/Cholesteatomas— Polyps are simply an excess of tissue that grow outward from the canal surface. A bony growth is bone that is building up under the surface and can be very painful. **Exostosis** (right) is a bony growth or multiple growths typically present within the canal of a patient that enjoys swimming in cold environments. A **cholesteatoma** (left) is a tumor that typically starts in the middle ear but can burst through the eardrum and invade the outer canal.



Fluid Drainage– A liquid of any kind from the ear is always cause for referral. It is typically associated with a foul odor coming from the ear. Most commonly caused by an otitis media fluid that has ruptured through the eardrum into the canal.



Candidas Albicans- A fungal or yeast infection in the ear which may even have sprouts present. The fungus could hinder the vibration of the tympanic membrane. Can be more prevalent in humid environments.



Abrasion and Hematoma– A abrasion is when the blood vessels are exposed within the ear canal and it is bleeding. This can be caused by scratching the canal. A hematoma is when blood collects under the top layer of skin and is very painful.



Foreign Objects– This can be any object that is not supposed to be in the ear. I.e. cotton, erasers, insects, gum, etc.