

Coding Brief: Tympanoplasty

A well-known cell phone commercial asks “Can you hear me now?” The commercial happily indicates the simple solution is a new cell phone or service using very minute fiberoptic technology. Similarly, sound transmission for proper hearing relies on the function of some of the smallest anatomy in the human body (including the smallest bone). The beginning process of hearing occurs with the tympanic membrane (commonly known as the eardrum). However, surgical treatment may be required for those having conductive hearing loss. Conductive hearing loss may be the result of ossicular erosion or fixation from chronic ear disease, blunt or penetrating trauma, or congenital or neoplastic causes.

Overview

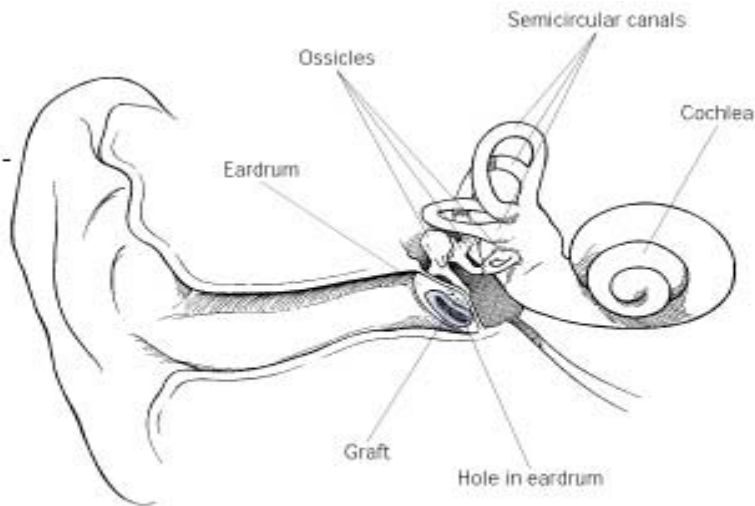
Tympanoplasty is a microsurgery that repairs, or removes disease involving, the tympanic membrane and/or the middle ear. This type of surgery is performed either transcanal through the ear canal (external auditory canal) or postauricular behind the ear. The tympanoplasty family of codes (69631-69646) describes tympanic membrane and middle ear repair procedures to remove disease and restore hearing. To restore or improve hearing in conjunction with tympanoplasty, in the event an anatomic structure has been excised or destroyed due to injury or disease, at times a surgeon will middle ear structure(s) with the patient’s own bone or a synthetic prosthesis. Tympanoplasty must be distinguished from myringoplasty, a procedure limited solely to the drumhead or eardrum. Code *69620 Myringoplasty (surgery confined to drumhead and donor area)* describes an operation to repair the tympanic membrane and includes the harvesting of a donor graft, when performed. To report a tympanoplasty for repair of the eardrum, the middle ear must be entered and inspected.

Codes 69631-69646

There are three families of tympanoplasty codes (69631-69633, 69635-69637, 69641-69646) each representing unique technique(s), approach, anatomy, and prosthetic/graft placement procedures. Therefore, you will observe that the tympanoplasty code descriptors have a distinct structure:

- The descriptors reference canalplasty, atticotomy, and/or middle ear surgery as inclusive procedures, when performed (*See Definitions*)
- Mastoidectomy may or may not be performed
- Reconstruction may or may not be performed on the middle ear’s three tiny bones (ossicles— malleus, incus and stapes) that form a chain attached to the deep side of the eardrum in the middle ear
- Synthetic ossicular replacement prosthesis (partial or total) may be used,

- Can represent either an “initial” or “revised” procedure.



Code 69631

The first in this family of codes is **69631 Tympanoplasty without mastoidectomy (including canalplasty, atticotomy and/or middle ear surgery), initial or revision; without ossicular chain reconstruction**. As the descriptor language reflects, neither a mastoidectomy nor ossicular (malleus, incus, and stapes) reconstruction is performed.

To reach the middle ear for exploration of the ossicles and removal of disease such as adhesions or cholesteatoma (skin growth in the middle ear behind the eardrum), the surgeon performs either a postauricular or a transcanal incision in the ear canal.

To repair the tympanic membrane perforation, a graft is harvested either from the temporalis fascia or other tissue. Occasionally a graft is used from material other than fascia. The graft harvest through a separate incision and placement is additionally reportable. The surgeon chooses an appropriate technique for placement of the graft under (underlay or medial graft technique) or on top of the remaining eardrum (overlay or lateral graft technique). Middle ear exploration, exploratory tympanotomy, or tube placement are not separately reportable. If disease is removed from the middle ear or a repair performed but no graft of the tympanic membrane is needed, this is still considered a tympanoplasty and reported with 69631.

Packing is placed in the ear canal and any external incisions are closed, dressings applied. Code 69631 may be reported for either an initial treatment or revision procedure.

Coding Tip: CPT codes 69631-69646 are unilateral procedures. Therefore, if the surgeon performs the procedure as described by a code from this series in both ears (although clinically infrequently performed), then it would be appropriate to append the modifier 50 to the code describing the definitive surgical procedure.

Code 69632

The procedure described by code **69632 Tympanoplasty without mastoidectomy (including canalplasty, atticotomy and/or middle ear surgery), initial or revision; with ossicular chain reconstruction (eg, postfenestration)**, contains the same elements as 69631 above but with reconstruction of the ossicular chain or sound conduction mechanism within the middle ear. As stated in the descriptor, a mastoidectomy is not performed.

Reconstruction of the ossicular chain may be performed by repositioning and reshaping one or more of the patient's own ossicles. Middle ear packing may be placed to support the ossicle until final positioning of the eardrum graft to repair the perforation is performed. Fenestration is an operation rarely performed today.

Code 69632 may be reported for either an initial treatment or revision procedure.

Coding Tip: Tympanoplasty procedures may require the use of a graft in order to repair the tympanic membrane. The harvesting of the graft does not warrant a separate CPT code if the graft was obtained through the same incision used for access to the tympanic membrane or middle ear. Otherwise, a graft harvest code may be reported.

Code 69633

With this code, the ossicular reconstruction differs from code 69632 since the ossiculoplasty (operation to reconstruct the ossicular chain) involves insertion of a prosthesis, as indicated in the descriptor language of code 69633, *Tympanoplasty without mastoidectomy (including canalplasty, atticotomy and/or middle ear surgery), initial or revision; with ossicular chain reconstruction and synthetic prosthesis (eg, partial ossicular replacement prosthesis (PORP), total ossicular replacement prosthesis (TORP))*. The type of prosthesis is predicated on the condition of the handle of the malleus and the stapes superstructure. PORPs (partial ossicular replacement prostheses) are used for lateral chain reconstruction when only a portion of the ossicular chain is present. If the malleus handle, incus, and the stapes arch are absent, a TORP (malleus-

incus-stapes) can be used to conduct sound from the eardrum to the mobile footplate and inner ear. The prosthesis may be constructed of metal, plastic, or hydroxyapatite.

The appropriate type prosthesis is placed, that often ~~may~~ includes cartilage placement between the eardrum and the prosthesis. This graft may be reported additionally if harvested through a separate incision. Middle ear packing may be placed to support the ossicle until final positioning of the eardrum graft to repair the perforation is performed.

Code 69635

Unlike codes 69631-69633, the second family of tympanoplasty codes include mastoidectomy. Code **69635** *Tympanoplasty with antrotomy or mastoidectomy (including canalplasty, atticotomy, middle ear surgery, and/or tympanic membrane repair); without ossicular chain reconstruction*, does not include ossicular reconstruction, but does include elements of tympanoplasty as well as performance of mastoidectomy.

Bone is dissected to enter the mastoid antrum and/or peripheral mastoid air cells via an endaural (extended transcanal approach) or postauricular incision. (See definitions.) Otherwise, the tympanoplasty is performed consistent with 69631. If the common wall between the antrostomy or mastoidectomy is removed, it may be rebuilt, often with cartilage. This graft may be separately reported if harvested through a different incision.

Code 69636

Fundamentally code **69636** *Tympanoplasty with antrotomy or mastoidectomy (including canalplasty, atticotomy, middle ear surgery, and/or tympanic membrane repair); with ossicular chain reconstruction* includes elements of tympanoplasty with ossicular reconstruction (69632) as well as performance of mastoidectomy.

Code 69637

Replacement of one or more of the ossicles using either a partial ossicular replacement prosthesis (PORP) or total ossicular replacement prosthesis (TORP), including mastoidectomy, with other elements of tympanoplasty is described by code **69637** *Tympanoplasty with antrotomy or mastoidectomy (including canalplasty, atticotomy, middle ear surgery, and/or tympanic membrane repair); with ossicular chain reconstruction and synthetic prosthesis (eg, partial ossicular replacement prosthesis (PORP), total ossicular replacement prosthesis (TORP))*.

The third family of codes involves performance of mastoidectomy.

Code 69641

The procedures described by code **69641** *Tympanoplasty with mastoidectomy (including canalplasty, middle ear surgery, tympanic membrane repair); without ossicular chain reconstruction*, includes elements of tympanoplasty as well as performance of

mastoidectomy, a more involved procedure than antrostomy. The type of mastoidectomy is not specified by the code.

Code 69642

Differing from 69641, one or more of the ossicles is reconstructed using bone when reporting code **69641 *Tympanoplasty with mastoidectomy (including canalplasty, middle ear surgery, tympanic membrane repair); with ossicular chain reconstruction-***

Code 69643

Code **69643 *Tympanoplasty with mastoidectomy (including canalplasty, middle ear surgery, tympanic membrane repair); with intact or reconstructed wall, without ossicular chain reconstruction*** includes elements of tympanoplasty without ossicular reconstruction plus mastoidectomy that preserves the common wall between mastoid and ear canal or includes immediate reconstruction if the wall is taken down for removal of disease.

The canal wall reconstruction is typically performed with cartilage, harvest of which may be reported additionally if obtained from an incision different from that for the primary procedure. Multiple materials may be used for this purpose, including autologous and homologous cartilage and bone, hydroxyapatite in granular cement and preformed solid forms, porous polytetrafluoroethylene-carbon filament composite, and titanium mesh.

Code 69644

Differing from 69643, code **69644 *Tympanoplasty with mastoidectomy (including canalplasty, middle ear surgery, tympanic membrane repair); with intact or reconstructed canal wall, with ossicular chain reconstruction***, includes, ossicular chain reconstruction. The ossicular chain reconstruction (OCR) may be with the patient's own bone or with a prosthesis; the type of reconstructive material is not specified as it is with several of the other tympanoplasty codes.

Code 69645

CPT code **69645 *Tympanoplasty with mastoidectomy (including canalplasty, middle ear surgery, tympanic membrane repair); radical or complete, without ossicular chain reconstruction*** includes tympanoplasty with a radical or complete mastoidectomy. (See definitions.) Typically, the common wall between the mastoid bone and ear canal would be removed creating a common cavity (mastoid cavity or mastoid bowl).

Code 69646

The last code in this tympanoplasty family, code **69646** *Tympanoplasty with mastoidectomy (including canalplasty, middle ear surgery, tympanic membrane repair); radical or complete, with ossicular chain reconstruction*, includes all of the elements of 69645 with ossicular chain reconstruction. This may be with the patient's own bone or a synthetic prosthesis, such as a partial ossicular replacement prosthesis (PORP) or total ossicular replacement prosthesis (TORP).

Definitions

antrostomy - an operation in which only the mastoid antrum is opened or exposed. The antrum is the large central space in the mastoid bone between the middle ear and the remainder of the mastoid air cells. It may be approached from postauricular (behind or in the ear crease) or transcanal (endaural).

atticotomy - an opening into the attic or epitympanic recess, the dorsal part of the tympanic cavity which contains the upper half of the malleus and most of the incus. When performed with tympanoplasty, this is performed to provide access to or remove disease (eg, cholesteatoma) from this region.

canalplasty -an operation on the external auditory canal. When performed with tympanoplasty, it is used to widen the ear canal to allow visualization of the tympanic membrane and middle ear.

cholesteatoma - a destructive and expanding sac in the middle ear and/or mastoid process.

mastoid bone - is the posterior aspect of the temporal bone located behind the ear (felt as a hard bump behind the ear). Inside it looks like a honeycomb, with the spaces filled with air. These air cells are connected to the middle ear through an air filled cavity called the mastoid antrum. Although the mastoid bone serves as a reserve air supply to allow normal movement of the eardrum, its connection to the middle ear may also result in the spread of middle ear infections to the mastoid bone (mastoiditis).

mastoidectomy – an operation to dissect or open the mastoid bone for exposure or removal of disease. Depending on the amount of infection or cholesteatoma present, various degrees of mastoidectomies can be performed. The common wall between the mastoid and ear canal may be removed (“canal wall down”), left intact (“canal wall up”), or taken down but reconstructed, typically with cartilage. Mastoidectomies may be performed as stand-alone operations or with tympanoplasty or other procedures.

--simple or complete mastoidectomy, the surgeon opens the mastoid, including the antrum, and removes any infection.

--radical mastoidectomy removes the most bone of the mastoid and joins it to the ear canal creating a common cavity. This operation is rarely performed today. The

eardrum and middle ear structures may be completely removed, sparing. The stapes (the "stirrup" shaped bone) if possible to help preserve some hearing.

--modified radical mastoidectomy means that the common wall between the ear canal and mastoid is taken down, exteriorizing disease (typically cholesteatoma) with existing middle ear bones left in place. This is usually performed when the hearing is relatively well preserved.

References

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