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Imaging of Postoperative Sensorineural Complications of Stapes Surgery

A Pictorial Essay

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Abstract

Sensorineural hearing loss and/or vertigo are rare but severe complications of stapes surgery for otosclerosis, ranging from 0.2 to 3%. Management of such complications depends on the underlying cause: intravestibular protrusion of the prosthesis, perilymph fistula, labyrinthitis, and reparative granuloma extending into the vestibule. Surgery is mandatory in cases of intravestibular prosthesis or of persistent perilymph fistula. In cases of suppurative labyrinthitis or reparative granuloma extending into the vestibule, prognosis is usually poor, despite aggressive medical therapy or revision surgery. CT scan or magnetic resonance imaging can frequently help to determine the cause of the inner ear complication of stapedectomy. Demonstrative cases are presented to illustrate the prominent place of imaging in managing sensorineural complications of stapes surgery.

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Sensorineural hearing loss (SNHL) is a rare but severe complication of stapes surgery, frequently associated with vertigo, ranging from 0.2 to 3% in primary stapedectomy for otosclerosis [1, 2]. Management and prognosis of postoperative SNHL are closely related to its etiology. According to previous reports [1, 3, 4], surgical revision is mandatory in cases of intravestibular prosthesis or perilymph fistula (PLF). On the other hand, suppurative labyrinthitis and granuloma extending into the vestibule are of poor prognosis despite surgical revision [1, 3, 4]. To improve diagnosis of post-stapedectomy SNHL, imaging plays a more and more important role [5–8].