

Estudio número 6

Efectos de la cirugía del implante coclear sobre la función vestibular. Metaanálisis.

Desde sus inicios, se han publicado múltiples alteraciones vestibulares asociadas a la cirugía del implante coclear; sin embargo, la literatura demuestra una gran discrepancia en las repercusiones clínicas constatadas.

Este estudio ha sido realizado con el objeto de cuantificar el efecto de la cirugía del implante coclear en los resultados de los test vestibulares, estabilidad postural y percepción subjetiva de mareo antes y después de la cirugía en pacientes sometidos a implantes uni o bilaterales.

Las pruebas incluyen: pruebas calóricas de irrigación, vHIT (video-impulso cefálico), potencial evocado miogénico vestibular, el cuestionario DHI (dizziness handicap index) y posturografía computarizada dinámica.

Un total de 27 estudios cumplieron los criterios de inclusión.

Los resultados señalan alteraciones significativas en las pruebas calóricas y en los potenciales evocados miogénicos vestibulares. No se han encontrado cambios relevantes en los resultados del vHit, cuestionario DHI ni posturografía dinámica, lo cual nos habla de la escasa relevancia clínica que tienen las alteraciones vestibulares secundarias a cirugía del implante coclear.

Effect of cochlear implant surgery on vestibular function: Meta-analysis study.

Importance

Vestibular disorders have been reported following cochlear implant (CI) surgery, but the literature shows a wide discrepancy in the reported clinical impact. The aim of this meta-analysis is to quantify the effect of CI before and after surgery on the outcomes of vestibular tests, postural stability, and subjective perception of dizziness.

Objective

To evaluate the effects of CI surgery on vestibular function in adult patients (≥ 18 years) with sensorineural hearing loss who underwent unilateral or bilateral implantation.

Data sources

MEDLINE, PubMed, Web of Science and Cochrane Library from January 1, 1995, through July 12, 2016.

Study selection

Published studies of adult patients who received unilateral or bilateral CIs and whose vestibular function or postural stability was assessed before and after surgery.

Data extraction

From each study, test results before and after surgery were compared, for the following five tests: clinical head impulse test (HIT); bi-thermal caloric irrigation of the horizontal semicircular canal; vestibular evoked myogenic potential (VEMP); dizziness handicap inventory (DHI); and computerized dynamic posturography (CDP).

Results

Twenty-seven studies met all inclusion criteria. Most studies performed either bi-thermal caloric irrigation and/or VEMP, with fewer studies investigating changes in HIT, posturography or DHI. CI surgery significantly affected the results of caloric and VEMP testing. However, HIT results, posturography, and DHI, scores were not significantly affected after CI surgery.

Conclusions and relevance

CI surgery has a significant negative effect on the results of caloric as well as VEMP tests. No significant effect of CI surgery was detected in HIT, posturography, or DHI scores. Overall, the clinical effect of CI surgery on the vestibular function was found to be insignificant. Nonetheless, the potential effects of surgery on the vestibular system should be discussed with CI candidates before surgery.

Keywords

Cochlear Implant; Postural stability; Vestibular disorders; Vestibular function.

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