## Estudio número 13

**Implantes cocleares en adultos con hipoacusia asimétrica: Beneficios de la estimulación bimodal.**

Se trata de un estudio longitudinal prospectivo en el cual participan 7 adultos con hipoacusia neurosensorial asimétrica: menos del 30% de reconocimiento verbal en su peor oído y entre 60 y 85% de reconocimiento verbal en su mejor oído.Todos los pacientes tuvieron una sordera postlocutiva y menos de 20 años de deprivación auditiva.

Se realiza el implante coclear en el oído funcionalmente cofótico.

El objeto del estudio es valorar el resultado funcional del implante coclear, conjuntamente con el uso de audioprótesis en pacientes con hipoacusias asimétricas.

La estimulación bimodal consigue hasta un 88% de reconocimiento verbal en los test utilizados, tras 12 meses. La estimulación bimodal resulta en un mejor reconocimiento verbal, que es significativamente superior al logrado únicamente con la audioprótesis o solo con el implante coclear. Otros parámetros habitualmente evaluados, como la capacidad para localizar sonidos, el reconocimiento de frases en ambientes ruidosos y la calidad de vida, también mejoran de forma significativa con este tipo de estrategia de adaptación.

Los pacientes consiguen integrar el estímulo acústico contralateral con el eléctrico del implante coclear; por ello este tipo de adaptación debe ser considerada en este grupo de pacientes.

**Cochlear Implantation in Adults With Asymmetric Hearing Loss: Benefits of Bimodal Stimulation.**


**Importance**
This study addresses the outcome of cochlear implantation in addition to hearing aid use in patients with asymmetric sensorineural hearing loss.

**Study design**
Prospective longitudinal study.

**Setting**
Tertiary referral center.

**Patients**
Seven adults with asymmetric sensorineural hearing loss, i.e., less than 30% aided speech recognition in their worst hearing ear and 60 to 85% speech recognition in their best hearing ear. All patients had a postlingual onset of their hearing loss and less than 20 years of auditory deprivation of their worst hearing ear.

**Intervention**
Cochlear implantation in the functionally deaf ear.

**Main outcome measures**
Speech recognition in quiet, speech recognition in noise, spatial speech recognition, localization abilities, music appreciation, and quality of life. Measurements were performed before cochlear implantation and 3, 6, and 12 months after cochlear implantation.

**Results**
Before cochlear implantation, the average speech recognition of the ear fitted with a hearing aid was 74%. Cochlear implantation eventually resulted in an average speech recognition of 75%. Bimodal stimulation yielded speech recognition scores of 82, 86, and 88% after 3, 6, and 12 months, respectively. At all time intervals, bimodal stimulation resulted in a significantly better speech recognition as compared with stimulation with only hearing aid or only cochlear implant (CI). Speech recognition in noise and spatial speech recognition significantly improved as well as the ability to localize sounds and the quality of life.

**Conclusion**
This study demonstrated that patients are able to successfully integrate electrical stimulation with contralateral acoustic amplification and benefit from bimodal stimulation. Therefore, we think that cochlear implantation should be considered in this particular group of patients, even in the presence of substantial residual hearing on the contralateral side.



van Loon, M.C.[1]; Smits, C.; Smit, C.F.; Hensen, E.F.; Merkus, P.



**Bibliography.** Otol Neurotol. 2017 Jul;38(6):e100-e106. doi: 10.1097/MAO.0000000000001418.