

AETIOLOGY OF HEARING LOSS IN CHILDREN PRESENTING FOR COCHLEAR IMPLANTATION AND OUTCOMES

P.G. O'Sullivan, S.M. Ellul, B.C. Pyman, G.M. Clark

The Royal Victorian Eye & Ear Hospital, The Department of Otolaryngology, The University of Melbourne, Melbourne, Australia

The aetiology of hearing loss has a significant bearing on the likely outcome of cochlear implantation and therefore is an important consideration in patient selection and workup. Disease processes which result in sensorineural hearing loss may be associated with other structural or functional neurological disorders, in addition to damage to the cochlea and auditory pathways.

The classification of aetiology of sensorineural hearing loss varies widely between different authors and is compounded by the difficulty in determining the aetiology of sensorineural deafness retrospectively when hearing loss in infants is eventually detected. Together these factors have made it difficult to establish a relationship between the aetiology of the hearing loss and the benefit following cochlear implantation.

In an effort to further evaluate potential patient response to implantation and to anticipate likely length of habilitation, we have classified the aetiology of hearing loss according to a prepared format. Ninety eight children who received a multi-channel cochlear implant between the ages of seventeen months and sixteen years are reviewed and divided into those patients where aetiology of hearing loss is known (69%) and those where aetiology of hearing loss is unknown (31%).

Where aetiology is known these factors are then divided into those that are congenital in origin and those that are non-congenital in origin. Each of these divisions is further subdivided into those factors which are genetic in origin and those that are not genetic in origin.

Aetiology of hearing loss is then correlated with the best level of speech perception attained and the length of time taken to reach that level.

Our results are presented and discussed in the context of identifying those patients who might conceivably do less well from cochlear implantation than others and who would benefit from earlier

**intervention (eg: teaching of signing) to avoid delay in
of communication skills.**



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Author/s:

O'Sullivan, P. G.; Ellul, S. M.; Pyman, B. C.; Clark, Graeme M.

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