Review of cochlear implantation in Taiwan and personal experience in Chang-Gung Memorial Hospital
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**Objectives**: The aim of this report was to review the development of cochlear implantation in Taiwan and personal experience in Chang-Gung Memorial Hospital

**Study design**: retrospective

**Methods**: review the general development of cochlear implantation in Taiwan from 1991 till now and report the recent survey results by the resource center under the Minister of Internal Affairs using the children questionnaire adopted and modified from (MRC Institute of Hearing Research, England, 2005) and the adult questionnaire from (the Hearing Handicap Inventory, USA, 1985-1986). Also the outcome measures such as the speech perception, speech production and speech intelligibility (CAP and SIR), language development, intellectual ability [D. Wechsler Intelligence Scale for Children (WISC)] and educational settings was utilized to evaluate the long term outcomes of 162 patients followed-up by author.

**Results**: In the national survey, 257/612 (41.99%) of children and 63/223 (28.25%) of adult questionnaires were retrieved. About 90% of the parents regard it is a correct decision to receive the cochlear implants for their children and 80% of them receive subsidiary from our government and private donations like ours from the Formosa Group. 90% of the implantees receive the auditory-verbal rehabilitation in some way and in professional rehabilitation facilities (the first Audio-Verbal rehabilitation centre such as Children’s hearing foundation founded in Asia in 1996, the National Women League foundation for the hearing impaired, Taiwan). In personal study about long-term Speech Intelligibility and Categorical Auditory Performance in Mandarin-speaking Prelingually Deaf Children with Early Cochlear Implantation in Taiwan. Compared to the results reported by English-speaking country, our growth of CAP and SIR seems to be slightly faster. In intellectual ability study, our results show that the verbal score of WISC-R of these implant users varied greatly. The range of their score was as great as the range among normal hearing subjects. The distribution of verbal IQ was significantly different from that of the hearing population. A much larger proportion (32%) falls into the category of “Intellectual Deficiency” and relatively smaller proportion in the “Average” and “Above Average” level. As for performance IQ, the distribution was not significantly different from the norms. the
verbal IQ was significantly affected by gender (Female > male, p=0.004), side of implantation (Bilateral > Left > right, p=0.017) and two speech test scores (PB score p=0.036; sentence, p=0.002), but not by age of implantation (p=0.621) or length of implant usage (p=0.480). Only moderate correlation (r=0.49) was found between verbal and performance IQ.

**Conclusions:** The efficacy and efficiency of cochlear implantation in patients with bilateral profound hearing impairment in Taiwan have been demonstrated from our experience and the future perspective in this field is bright.