

A 10-Year In-Depth Follow-up of Post-lingual Hearing Loss Patients with Chinese Domestic Cochlear Implants

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Abstract : Background: Follow-up of cochlear implant effectiveness is mainly focused on 3 years postoperatively, and studies with more than 5 years of observation are rare, especially for local Chinese brands. Objectives: Nurotron (Chinese domestic cochlear implant brand) CI recipients who participated in the clinical trial in 2009 were followed-up for 10 years prospectively, providing data to guide doctors and patients. Material and Methods: From December 2009 to April 2010, 57 subjects underwent Nurotron Venus CI surgery at multiple centers and were continued to be followed up and assessed at 1, 2, 3, 4, 5, and 10 years after switching on. Results: All recipients were successfully implanted with CIs with no difficulty in subsequent use, with one reported case of re-implantation 9 years after implantation. The aided hearing thresholds were significantly improved one month after switching on ($p < 0.0001$) and remained stable afterward for 10 years. Speech recognition scores were significantly higher than pre-operative results ($p < 0.05$) and continued to improve till 3 years after switching on. At 10 years of post-operation, most subjects had improved QOL scores in most sub-items. Conclusions and Significance: Nurotron Venus CI System provides long-term, stable results in hearing speech assistance capabilities and can improve the quality of life of CI recipients.

Keywords : cochlear implantation, hearing loss, post lingual, follow up

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