Cochlear Implants and Its Complications: A retrospective study

Vinaya Kumar Edwin Christopher¹, Rakesh Vuppala¹, Rambabu Koka¹, Jaswinder Pal Saluja¹, Sruthi Suravarapu¹, Srinivas Ganji¹, and Srikanth Indlamuri¹

¹Apollo Institute of Medical Sciences and Research

January 30, 2024

Abstract

Objective: To estimate the prevalence of complications associated with CI. Design: Retrospective descriptional study wherein data of surgeries done during April 1994 - March 2016 was analysed. Setting: Hospital Participants: Patients who underwent cochlear implant. Outcome measures: Complications were recorded as surgical and non-surgical; latter were further classified as major and minor. Results: 1236 surgeries were performed on 933 pediatric patients (06 months-18 years) and 79 adults. The cause of the deafness was congenital (90.91%), idiopathic (8.30%), and meningitis (0.79%). No speech impairment was seen in eight (0.86%) children. Bilateral profound hearing impairment was common in 99.41% patients. In addition, Mondini's deformity (n=05), auditory neuropathy (n=10), adenoid hypertrophy (n=05) and tongue tie (n=10) were seen in children. Previous CI was reported in 29.46%. Delayed milestones were seen in 13.39%. Hypertension (14.29%) and diabetes mellitus (15.18%) were seen in adult patients. There was history of consanguinity in 60.02% patients. Right cochlear implantation (47.43%), left (31.42%) and Bilateral implantation (21.15%) were done. Reimplantation was required 2.96% patients. Surgeries were performed by two surgeons, 55.34% and 41.50% surgeries respectively, and as a team (3.16%). All pediatric patients had uneventful postoperative period. There were 17 (1.68%) complications in adults; permanent facial nerve paresis (n=04) and flap necrosis (02) were major complications (n=08); labyrynthitis (n=04) and wound infection (n=04) were the minor complications (n=09). Conclusion: CI is a safe procedure for restoration of hearing loss and the complications are within the acceptable limits.

Hosted file

ENT Cochlear implant_for submission_Feb.docx available at https://authorea.com/users/726464/articles/708948-cochlear-implants-and-its-complications-a-retrospective-study