

## OUTCOME OF COCHLEAR IMPLANTATION AMONG PRELINGUAL CHILDREN WITH DIFFERENCE AGE AT IMPLANTATION

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### ABSTRACT

**Introduction:** The aims of this study are to compare the outcomes of cochlear implantation (CI) among pre-lingual children at different age of implantation and to determine associated factors that affecting outcome.

**Methods:** A total of 24 prelingual (CI) recipients from University Malaya Medical Centre (UMMC) with age at implantation ranged from 24 to 172 months (mean: 66.9 1 SD: 32.68) participated. Patients were then assigned according to their age of implantation; "early implanted (4 years and less, N=7)" and "late implanted (more than 4 years old, N= 17)". The Meaningful Auditory Integration Scale (MAIS) and the Meaningful Use of Speech Scale (MUSS) questionnaire were used to assess parent's perception before and after the implantation. The difference between pre- and post in percentage named as Normalised MAIS and Normalised MUSS were then calculated in addition to the average aided test in dBHL and monosyllabic, dwisyllabic and polysyllabic (MDP3, 6 and 12) test results.

**Results:** No significant difference were found between early and late implantees group for average aided score, Normalise MAIS, Normalise MUSS and MDP3/6/12 ( $P>0.05$ ). A significant negative correlation were found between the average aided CI score and the MDP 12 score with the duration of implantation with a strong relationship ( $r = -0.584$  to  $-0.689$ ,  $p<0.05$ ). This suggests that the longer the usage of the CI, the lower the aided response especially in the late implantees group.

**Conclusion:** Whilst this finding showed patient with late implantees benefited from the CI, it should be noted that the sample size for the early implantees was relatively small than the late implantees suggesting a lot more number of participants should be recruited before a solid conclusion can be made.

**KEYWORDS:** Paediatric, Cochlear Implant, Outcomes measure, CAEP

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