Does cerebellar flocculus size affect subjective outcomes in pediatric auditory brainstem implantation

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Objectives: The objectives of the study was to describe relevant surgical anatomy in defining and accessing the lateral recess for placement of electrode; propose a working classification for grades of flocculus and; to determine if different grades of cerebellar flocculus effects placement of ABI electrode and subjective outcomes in implantees.

Methods: Our study was a prospective study, and comprised of cohort of 12 patients who underwent ABI surgery via retrosigmoid approach between 1 Jan 2012 to 31 Dec 2014. All children with congenital profound sensorineural hearing loss with either absent cochlea or cochlear nerve were included in the study. Relevant anatomy was noted. We also noted down the difficulty encountered during the placement of ABI electrode. Auditory perception and speech intelligibility was scored post operatively for 1 year.

Results: Cerebellar flocculus was divided into 4 grades depending on the morphology of cerebellar flocculus. It was noted that Grade 3 & 4 flocculus (Group B) had difficult ABI electrode placement in comparison to Grade 1 & 2 flocculus (Group A). The subjective outcomes of Group A was better than Group B. However the p value was not statistically significant.

Conclusion: Cerebellar flocculus can be graded depending on morphology and size. Flocculus of higher grades can make the placement of ABI electrodes difficult and adversely effects the postoperative subjective outcomes.

Biography
Sunil Goyal has completed his graduation at Armed Forces Medical College, Pune (India) and Post-graduation in ENT in the Armed Forces in 2010. He underwent training in Neuro-otology including Implant Otology and Skull Base Surgery for 2 years at Madras ENT Research Foundation, Chennai (India) under th guidance of Prof. Mohan Kameswaran which he completed in Sep 2016. Presently, he is working as Assistant Professor at the Armed Forces Medical College, Pune (India). He has published more than 15 papers in reputed journals including chapters on vertigo in books.

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