Gardner Robertson Scale

Grade I (good-excellent) pure tone audiogram (dB) : 0-30 speech discrimination (%) : 70-100

Grade II (serviceable) pure tone audiogram (dB) : 31-50 speech discrimination (%) : 50-69

Grade III (non-serviceable) pure tone audiogram (dB) : 51-90 speech discrimination (%) : 5-49

Grade IV (poor) pure tone audiogram (dB) : 91-max speech discrimination (%) : 1-4

Grade V (none) pure tone audiogram (dB) : not testable speech discrimination (%) : 0

[1)]

If PTA and speech do not correlate, use lower class.

in Gardner and Robertson (GR) Class II should be considered to have useful hearing, and patients classified in Class III should be considered to have not-useful hearing. Therefore, it is important for acoustic neuroma surgery to distinguish between postoperative GR Class II and Class III patients by brainstem auditory evoked potentials (BAEPs). We evaluate which BAEP parameter is the best for predicting postoperative GR Class II or III in 36 preoperative GR Class II patients with unilateral acoustic neuroma. Delay in wave V latency, reduction ratio in wave V amplitude, and interaural difference of wave V (IT5) are evaluated by a receiver-operating characteristic (ROC) curve in this study. IT5 is the best distinguishing parameter between postoperative Class II and Class III. IT5 below 1.12 millisecond (msec) should be a good marker to preserve postoperative useful hearing. Thus, comparing the latency of wave V on both sides is important, and surgeons would be able to make more informed decisions during surgery by checking IT5 on BAEPs [2)].

[1)]
Gardner G, Robertson JH. Hearing preservation in unilateral acoustic neuroma surgery. Ann Otol Rhinol Laryngol 1988 97(01):55–66

[2)]
Aihara N, Murakami S, Takemura K, Yamada K. Interaural Difference of Wave V Predicting Postoperative Hearing in Gardner-Robertson Class II Acoustic Neuroma Patients. J Neurol Surg B Skull Base. 2013 Oct;74(5):274-8. doi: 10.1055/s-0033-1348024. Epub 2013 Jun 13. PubMed PMID: 24436924.