A assr test results in relation to c-abr

A comparison of the ASSR to the ABR, specifically with regard tothe utility of the ASSR for estimation of hearing threshold in infants andyoung children have prompted. Various issues associated with the comparison ofthe two evoked potentials were considered, including frequency specificity, response generators, the effects of hearing loss and automatic detectionalgorithms. Two studies were undertaken. The first study compared ASSR testresults in relation to c-ABR with the ASSR is based on an automatic detectionalgorithm.

And the second study did a direct comparison of ASSR and tb-ABRthreshold estimation techniques using adult listeners with the ASSR is based onobserver inspection of waveforms. First studyCorrelations were determined between ABR threshold with eachaudiometric threshold and between ASSR thresholds and audiometric thresholds. The results showed that both c-ABR andASSR have significant correlations with the pure-tone audiogram in infants andchildren with various degrees of hearing loss. These data suggest that bothc-ABR and ASSR threshold estimates can be used to predict pure-tone thresholdfor infants and children who have hearing thresholds in the normal tosevere-to-profound range.

However, the discrepancy between behavioral andevoked potential threshold was generally smaller for ASSR than for ABR. Finally, click-evoked ABR thresholds and ASSR thresholds may be used togetherfor comparison to results from the pure tone audiogram. second studytb-evoked ABR and the modulated tone-evoked ASSR thresholds weresimilar when both were detected with an automatic detection algorithm and thatthreshold estimates varied with frequency, stimulus rate, and detection method. However, both

ASSR and tb-ABR have demonstrated clinical efficacy forestimating the pure-tone audiogram in infants, children, and adults withhearing loss.

Finally, there are some studies suggested that there are nosignificant differences in threshold determination between the two techniques. However, other studies showed an advantage for ASSR over tb-ABR. That are ASSRcan determine the residual hearing for those with severe-to-profound andprofound hearing losses, whereas tb-ABR tests yield “ no response” attransducer output limits for this severity of hearing loss. Another advantagefor the ASSR is that ASSR can ensure electro-physiologic responses that areobjectively interpreted in a short time (104 sec). In comparison, long time (4min) were required per each trial when testing with tb-ABR. StrengthsFirst, many studies were compared with the present tow studies and the findingswere in a good agreement.

Second, the present two studies comparebetween ABR and ASSR with behavioral thresholds test. Whereas previous studiescompare between one electrophysiological test and behavioral thresholds test. Third, In the first study, all results of the behavioral threshold were reliable. weaknessesFirst, no variations on the selection of the participants in the secondstudy, as all participants were females with normal hearing and close range of age. Second, the present studies did not indicate if the results of the electrophysiologicaltests were reliable or not. Third, casesdemonstrating profound hearing loss were excluded so, the correlation between electrophysiological test and behavioral thresholds test were not investigated in these cases in the first study.