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Auditory brainstem response (ABR) findings in males and females with comparable head sizes at supra-threshold and threshold levels (Article)

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Abstract

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Background and purpose: Gender disparities in auditory brainstem response (ABR) results have been reported but the exact reasons remain controversial. Difference in head size between genders has been suggested but the literature is lacking, particularly at threshold levels. In this short communication, we compared ABR results between males and females with comparable head sizes at supra-threshold and threshold levels. Materials and methods: In this comparative study, of 58 healthy young adults, 30 of them (17 females and 13 males) with comparable head sizes underwent the standard ABR testing. Wave V latencies and ABR thresholds were determined and analyzed accordingly. Results: At the supra-threshold level, significantly shorter wave V latencies were found in females than in males ( $p = 0.029$ ). This difference was substantive ( $d = 0.86$ ) and persisted even when the head size was included in the analysis ( $p = 0.032$ ). In contrast, no significant differences in ABR thresholds were found between genders ( $p > 0.05$ ). Conclusions: Significant gender differences in ABR results among young adults were only found at the supra-threshold level, which were not related to the head size. Based on the study outcomes, gender-specific normative data for ABR are still beneficial for clinical applications, particularly when recording ABR at high stimulation levels. © 2019 Elsevier GmbH

Author keywords

Auditory Brainstem Gender Head size Threshold

Indexed keywords

EMTREE medical terms:

adult article cephalometry clinical article comparative study controlled study evoked brain stem response female human human experiment male sex difference young adult

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