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KEY WORD : AUDITORY BRAINSTEM RESPONSE / NEWBORN

DAORUANG BUNYARAKYOTHIN : THE NORMATIVE STUDY OF CHARACTERISTIC OF HEARING IN NORMAL NEWBORNS BY USING THE AUDITORY BRAINSTEM RESPONSE. THESIS ADVISOR : CHEAMCHIT THAWIN, BS., M.A. SIRIPARN SRIWANYONG, B.A., M.S. SUMALEE SINGHANIYOM, B.Sc., M.Sc. 87 p. ISBN 974-589-211-4

The purpose of this reserch was to study the normative data of characteristic of hearing obtained from newborns who were not in high risk register by using Auditory Brainstem Response (ABR). Twenty - two males and twenty - two females, normal healthy newborns, age 1 - 3 days, served as the subjects for this study. The instrumentation used in this study was NICOLET Compact Auditory Version J.1. The stimuli were clicks presented at the rate of 11.4 per second. The intensity was attenuated at 80, 60 and 40 dBnHL The filter setting was 150 - 3000 Hz. The polarity was rarefaction. Two thousand sweeps were utilized for each run. The time window was 15 milliseconds.

The results of this study reveal that the morphology of waves I, III and V are clearly identified. The average ABR Threshold is 33.85 dBnHL (S.D.= 4.43, 2 S.D. = 8.86). The mean latencies of wave V at 80, 60 and 40 dBnHL are 6.99, 7.53 and 8.32 milliseconds, respectively, which are significantly different. Also, the results of the mean latencies of waves I, III, V and the mean interpeak latencies of waves I - III, III - V, I - V at 80 dBnHL in male and female subjects are not significantly different. The results of this study can be used to estimate hearing threshold in newborns.