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TEERANUCH ENGKAWISAN: THE EFFECT OF STIMULUS CLICKS ON THE EXTRATYMPANIC ELECTROCOCHLEOGRAPHY IN NORMAL HEARING ADULTS. THESIS ADVISORS: CHEAMCHIT THAWIL, M.A., SIRIPARN SRIWANYONG, M.B.A., M.Sc., MONTIP TIENSUWAN, Ph.D, SAOWAROS ASAWAWICHIANGINDA, MD. 78 P. ISBN 974-665-066-1.

The purpose of this research was to study the effect of stimulus clicks on the extratympanic ECochG. Sixty ears in normal hearing adults(30females, 30males) with ages ranging from 20 to 40 years, served as the subjects. The test instrument used in this study was Smart EP. The stimuli were clicks at 50, 70, and 90dBnHL. The stimulus repetition rates were 7.1/sec and 99.9/sec. The filter setting was 10 to 1500 Hz, and the polarity was alternating.

The results of this study showed that the SP component appeared at the same direction as AP component. There were 2 patterns of AP component waveform. The single peak pattern found was 68.33 %, and the double peak pattern was 31.67%. The mean SP/AP amplitude ratio was 0.1733(SD=.0769). The mean absolute latencies of AP were 1.8403 ms(SD=.1592), and 2.0437 ms(SD=.1978) when 7.1/sec and 99.9/sec click rate stimuli were used respectively, and were significantly different($p<.001$). The mean absolute latency of SP were 0.9770 ms(SD=.0981) and 0.9857 ms (SD=.1021) when 7.1/sec and 99.9/sec click rate stimuli were used respectively, and were not significantly different. The absolute latencies of SP and AP in males and females were not significantly different. The mean ECochG threshold was 34.67 dB (SD=6.36). The ECochG threshold value was significantly higher than the pure tone average threshold($p<.001$). The mean amplitude of AP was significantly increased with increasing intensities($r=.715$, $p<.001$). The mean absolute latency of AP was significantly decreased with increasing intensities($r=-.912$, $p<.001$). At high stimulus intensities(70dB to 90dB), the decrement of AP latency were 0.5665 ms(SD=.4118). At low stimulus intensities(50dB to 70dB), the decrement of AP latency were 0.8705 ms(SD=.5823).