

Thesis Title Comparison of Asymmetrical Tonic Neck
Reflex Responses between Supine and Prone
Positions in Normal Infants

Name Supawadee Lerdwannaage

Degree Master of Science (Physiotherapy)

Thesis Supervisory Committee

 Samruay Tritilanunt, M.D., Grad. Dip.
 Chanut Akamanon, B.Sc., M.A.
 Lea Maher, Grad. Dip.

Date of Graduation 25 November B.E. 2537 (1994)

ABSTRACT

The purpose of this study was to compare the asymmetrical tonic neck reflex (ATNR) responses when tested in the supine and prone positions and to study the relationship between level of the ATNR responses and the age of infants when tested in the supine and prone positions. The ATNR was tested in the prone and supine positions alternately on 120 normal infants, 68 males and 52 females, with ages ranging from 1.53 to 4.36 months. Sixty infants were tested on the left side and the other 60 on the right side. The infants were divided into 3 groups; two, three and four months, 40 infants equal in each group.

Wilcoxon Matched-pairs Signed-ranks Test was used to compare the level of the ATNR responses when tested in the supine and prone positions. The results revealed a significant difference in the ATNR responses between these positions ($Z=-6.685$, $p=0.00$). The same statistical results were also found in each age group. The relationship between the level of the ATNR response and the infant's age was analysed by using the Spearman rank-order correlation coefficient. The result revealed a low negative relationship which was statistically significant when tested in the supine position ($r_s=-0.3013$, $p<0.05$). The older infants tended to demonstrate a lower level of ATNR responses. This may be because older infants have better control of their movements causing the ATNR to diminish. This relationship was not evidenced in the prone position ($r_s=-0.0563$, $p>0.05$). Most infants tended to show the ATNR at a low level through the age range that was tested. It may be that the effect of the tonic labyrinthine prone at 2-3 months as well as the development of voluntary control of the upper part of the body at 3-4 months could influence the ATNR level of responses.

The results from this study suggest that therapists may choose the most suitable position for ATNR testing and in treatment programs for neurological abnormality. Guidelines for further studies of the ATNR are recommended.