

Assessment of Muscle Tone in Extremely Preterm, Very Preterm and Moderate Preterm Infants at 40 Weeks of Corrected Gestational Age

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Abstract

Introduction: who defines preterm as the babies born alive before the completion of 37 weeks of gestational age. the preterm infants (pti) are further categorised based on their gestational age as extremely preterm infants being born before 28 weeks of gestation.

Methods: this observational study was conducted in nicu of sri ramachandra institute of higher education and research. 132 infants were recruited based on the inclusion and exclusion criteria after obtaining informed consent. they are categorised into four groups - group 1 extremely pti (n=30), group 2 very pti (n=34), group 3 moderate to late pti (n=34), group 4 fti (n=34). muscle tone of the infants were measured using amiel-tison angle (adductor angle, heel to ear, popliteal angle, dorsiflexion angle and scarf sign) at the time of birth and all the preterm infants received early stimulation program and they were reassessed for muscle tone at the 40th week of corrected gestational age.

Results: anova of three-group showed significant difference between the muscle tone extremely pti, very pti, moderate pti at the time of birth for all the angles with $p < 0.05$. anova of three groups and fti showed significant difference between the groups with $p < 0.05$ except dorsiflexion angle between the moderate pti and the fti infants at 40weeks of corrected age.

Conclusion: there is a significant difference in the muscle tone development at the time of birth and at 40weeks of gestation in pti born at different gestational age. the result accentuates that tonal deviations should be addressed appropriately based on their gestational age to enhance their motor development.