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Diaphragmatic excursion and pulmonary function in children with cerebral palsy – comparative study.

Tintu Thomas

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1. **Title:** Diaphragmatic excursion and pulmonary function in children with cerebral palsy – comparative study. **Authors:** Tintu Thomas, Amitesh Narayan, Gopal Krishna Alaparthi.

KEY WORDS: Cerebral Palsy, Typically Developing, Diaphragmatic excursion, Diaphragmatic function

Abstract:

Objective: To analyze the differences in kinematic parameters of diaphragmatic function during volitional effort in children with cerebral palsy (CP) compared to typically developing (TD). **Methodology:** Cross-sectional analytical study with purposive sampling. Thirty-five (TD-19; CP-16) children [mean age 9.78 ± 2.56 for TD and 9.75 ± 3.01 years for CP {GMFCS Level-1, 68.7% (n=11) and 31.25% (n=5) level- II}] participated. **Results:** The diaphragmatic excursion was more in TD children 4.142 ± 0.656 (R) and 4.168 ± 0.0619 (L) compared to children with CP 3.075 ± 0.407 (R) and 3.250 ± 0.495 (L); ($P \leq 0.00$). **Conclusion:** There is reduced excursion of the hemi diaphragms in children with CP and have significantly poor performance on pulmonary function variables compared to TD.