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260. Measuring sleep-disordered breathing in children and adults I: questionnaires, epidemiology and sleep studies

PA2344
Assessment of end-tidal CO\textsubscript{2} during sleep in children with idiopathic epilepsy. Is it associated with seizure control?
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Background: Sleep apneas have been correlated with poor seizure control in children with epilepsy. Although nocturnal hypercapnia may result from prolonged sleep apneas, its relation to seizure control hasn’t been studied. Aims and objectives: Our aim is to compare values of end-tidal CO\textsubscript{2} (ETCO\textsubscript{2}) during sleep between children with epilepsy and healthy children and correlate them with seizure control and respiratory parameters. Methods: A total of 28 children with idiopathic epilepsy (mean age 10.75±2.56 years) and 19 healthy children (mean age 11±2.07 years, p>0.05) underwent overnight polysomnography. Data about ETCO\textsubscript{2}, oxygen saturation, sleep apneas-hypopneas and sleep efficiency were statistically analyzed. Results: The mean value of ETCO\textsubscript{2} in children with epilepsy was not significantly higher compared to healthy children (40.67±4.0mm Hg VS 39.48±3.12mm Hg, p>0.05). A total of 14 of 28 children with epilepsy had poor seizure control and mean value of ETCO\textsubscript{2} was higher than in children with good seizure control, but without statistical significance (41.56±1.81mm Hg VS 40.19±5.52mm Hg, p>0.05). The correlation of ETCO\textsubscript{2} with apneas-hypopneas index, sleep efficiency and desaturation index was poor in all groups (r<0.49). Conclusions: ETCO\textsubscript{2} during sleep is increased in children with epilepsy and poor seizure control compared to children with good seizure control and healthy children. It would be interesting to investigate the effect of ETCO\textsubscript{2} during sleep on daytime symptoms in children with epilepsy.