

Headache as a first manifestation of CO₂ narcosis in a myopathic child

Simin Khayatzadeh Kakhki,

Assistant professor of pediatric neurology, division of pediatrics, Bahrami children's Hospital, Tehran University of Medical Sciences, Tehran, Iran.



Hypercapnia, a state of elevated serum carbon dioxide (CO₂), can manifest as a broad spectrum of disease, the most severe of which is CO₂ narcosis. The delineating feature of CO₂ narcosis is a depressed level of consciousness. It is essential to recognize impending or current CO₂ narcosis; if left untreated, it can result in coma or death. Chronic respiratory failure is a major factor contributing to mortality in progressive neuromuscular disorders. Among the muscular dystrophies, respiratory failure most commonly occurs with Duchenne dystrophy, while in Becker, limb-girdle, and facioscapulohumeral dystrophies, respiratory failure is infrequent and generally occurs in the more severe cases that have progressed to a non-ambulatory, advanced functional stage.

Here is a report of a 6-year-old girl, who has been referred to pulmonary clinic for taking consent for adenoid surgery. In her medical history, she has been suffering from wake-up headache for about one year, then accompanied with progressive daily drowsiness and exertional dyspnea. During physical examination we figured out myopathic features and proximal muscle weakness, which could have been the etiology of these complications. Echocardiography demonstrated pulmonary hypertension. While inappropriate oxygen delivery caused CO₂ narcosis, but hypercapnia resolved with night-time application of noninvasive intermittent positive pressure ventilation (NIPPV) with a bilevel positive airway pressure device (Bi-PAP). The etiology of hypercarbia and clinical symptoms in this patient was congenital myopathy that was misdiagnosed and managed as adenoid hypertrophy.

Keywords: headache, congenital myopathy, pediatrics