We present a case series of four patients with tri-somy 18 who were evaluated for SDB aged 17mo-3yrs at the time of the reported polysomnographies (PSGs). Two patients had multiple prior studies. Moderate OSA was noted in two patients, and one was noted to have severe OSA, while the fourth patient had resolution of their severe OSA post adenotonsillectomy (T&A). Reduced sleep efficiency was noted in 2 patients. All but one patient had abnormal EEGs, consistent with known underlying seizure disorders. While all patients desaturated during sleep, only two patients fulfilled the criteria for hypoxemia (SpO2 below 90% for more than 5 minutes). One of these had resolution of hypoxemia with a trial of positive airway pressure therapy (PAP) of 5 cmH2O on a titration study. While capnography showed hyperventilation in two patients, one of the patients was treated with supplemental oxygen and the recommendation for titration PSG study to evaluate the need for PAP.

Conclusion: With aggressive interventions, children with trisomy 18 have seen a higher survival over the recent years. These children often have micrognathia or retrognathia, midface hypoplasia, glossoptosis, and hypotonia, predisposing them to have UAO. Endoscopic assessments reveal laryngomalacia and/or tracheomalacia, tonsillar and adenoid hypertrophy. In a previously reported study by Kettler et al. (2020), a prevalence of SDB of 44.68% was noted compared to the 1-4% average prevalence in non-syndromic children, hence clinicians should have a low threshold to screen them. In our small case series, all 4 patients had moderate-to-severe OSA, to begin with. Our results show that both surgery and PAP therapy may be successful in the treatment of OSA. More longitudinal data is needed to understand the pathology and management of SDB in these children.

Support (If Any):

0848
TWO ARE BETTER THAN ONE: TREATMENT OF COMPLEX SLEEP APNEA WITH TWO DISTINCT SLEEP NEUROSTIMULATORS
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Introduction: Complex sleep apnea refers to the emergence of central apnea when obstructive apneas have been adequately treated. While a combination of medications and noninvasive positive airway pressure ventilation is frequently used in patients with this syndrome, the optimal treatment has not yet been fully elucidated. With the advent of nerve stimulation therapy, it is now possible to target specific physiologic mechanisms and provide precise and adjustable therapy. We present a case in which two distinct nerve stimulators were used to successfully treat a patient with complex sleep apnea.

Report of Cases: We present a case in which a ptient with complex sleep apnea was successfully treated by implantation of two distinct nerve stimulators: hypoglossal nerve stimulation therapy for obstructive sleep apnea and phrenic nerve stimulation therapy for concomitant central sleep apnea.

Conclusion: Complex sleep apnea was successfully treated in this patient with the combination of hypoglossal and phrenic nerve stimulation therapy as evidenced by a reduction in both the obstructive and central apnea hypopnea indices. This patient also had significant clinical improvement with decreased excessive daytime sleepiness and improved daytime functioning as evidenced by decreased Epworth Sleepiness Score, improved patient reported daytime activity, decreased apnea hypopnea index, and increased total sleep time. This case provides evidence for the efficacy and safety of the simultaneous use of hypoglossal and phrenic nerve stimulation for the treatment of complex sleep apnea. Is also highlights the importance of obtaining a laboratory polysomnographic evaluation in all patients prior to any sleep device implantation. Further study is needed, however, to establish the long-term efficacy of this approach to treatment.

Support (If Any): I am seeking financial support and assistance for meeting attendance and travel for the June sleep meeting from Inspire Sleep Apnea and other travel assistance funds.

0849
BACLOFEN-INDUCED SEVERE CENTRAL SLEEP APNEA
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Introduction: Baclofen is a gamma-aminobutyric acid-B agonist that targets neurons in the spinal cord and brain. It has skeletal muscle-relaxant properties and is FDA approved to treat spasticity from spinal cord injury (SCI), multiple sclerosis, or traumatic brain injury. Off label use includes treatment of alcohol use disorder, hiccups, and muscle spasms. A rare respiratory side effect of baclofen is apnea, with reports of baclofen-induced central sleep apnea (CSA) in a pediatric patient and four adults with alcohol use disorder. We describe a case of severe CSA in a veteran with T7 paraplegia due to chronic baclofen use.

Report of Cases: A 42-year-old veteran with T7 paraplegia was referred to sleep medicine for unrefreshing sleep. He had a remote history of spinal cord injury complicated by spasticity that was being treated with oral baclofen (40 mg TID). Further evaluation of unrefreshing sleep was obtained with baseline polysomnography. A total of 146 apnea and hypopnea events were observed (5 obstructive apneas, 131 central apneas, 4 mixed apneas and 6 hypopneas) for an AHI of 43.2 events/hour. Minimum oxygen saturation was 85% with 0.3 minutes spent <89%. Respiratory pattern was suggestive of crescendo decrescendo breathing but did not meet diagnostic criteria for Cheyne-Stokes respiration (cycle length <40 seconds). Other causes of CSA were investigated but unrevealing. A diagnosis of baclofen-induced central sleep apnea was made.

Conclusion: Spasticity is a common consequence of SCI and is commonly managed with baclofen. Apnea is a rare respiratory side effect of baclofen but can significantly impact patients’ sleep quality and overall quality of life. Our case highlights how providers should have a high suspicion for sleep-disordered breathing in patients with chronic baclofen use.