

Case Report : Sleep-Related Breathing Disorder Central Sleep Apnea Improved Coincidentally by Medical Therapy With Dimethyl Fumarate

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INTRODUCTION:

Central Sleep Apnea (CSA) is characterized by repetitive cessation or decrease of both airflow and ventilatory effort during sleep, is frequently due other health condition, central nervous system illnesses, congestive heart failure, and pathological alterations in breathing muscles¹. Prevalence and incidence of sleep disorders remain limited in Multiple Sclerosis (MS), but CSA is widespread in MS patients, and it is less likely to occur than OSA³. We present a unique case of CSA in patients with MS was treated using Dimethyl Fumarate (DMF) was significantly improved to mild CSA, following the treatment.

CASE PRESENTATION:

A 31-year-old female known to have MS, She was referred to a sleep clinic with a history of gasping and has breathing pauses during sleep, Epworth sleepiness Scale was 7, symptoms lasted for 1-2 years and worsened as time progressed.. She was diagnosed with MS in 2016 and was started on teriflunomide with no significant finding in the brain MRI. No history of heart diseases, Thyroid disease, Diabetes or Stroke. The patient had been on carbamazepine and teriflunomide for six years. On examination her vitals was normal, BMI of 24.17 Kg/M² and neck circumference 34 cm, Normal systemic examination. She underwent full-night PSG, which showed the following:, Total AHI were 48, most of events were central, minimal O₂ sat was 45%, and ETCO₂ 45. The hypnogram showed severe CSA figure 1. A titration study was performed, optimally titrated on BIPAP pressure of at 16/8 cm H₂O, showing improvement in her sleep efficiency. Maintained regular follow-up. During her regular follow-up, she complained of an MS attack from two months back and was treated with a pulse steroid. Later on, her neurologist changed her treatment to DMF. Since that time started to complain of sleep apnea, in detailed history it was like a panic attack rather apnea and keep continued even she was awake. PSG were performed for reassessment, showed improvement in her parameters. Total AHI were 7.1 with no significant severe desaturation, minimal Oxygen saturation was 88%. The hypnogram showed mild CSA, BIPAP was stopped. She was administered a regular follow-up.

CONCLUSIONS:

Through the treatment of multiple sclerosis using Dimethyl Fumarate improves Central sleep apnea from severe to mild. For this reason, DMF was deemed to be a successful treatment in sleep breathing disorders.

REFERENCE:

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ACKNOWLEDGEMENT :

No relevant relationships by Abdulmajeed M. Albadi, source =Web Response, No relevant relationships by Mana M. Alshahrani, source=Web Response, No relevant relationships by Riyadh O. Allehebi, source=Web Response