THE EFFECT OF ONLINE CASE-BASED CONTINUING EDUCATION ON PHYSICIAN KNOWLEDGE AND COMPETENCE FOR THE MANAGEMENT OF NARCOLEPSY COMORBID WITH PSYCHIATRIC ILLNESS

Thomas F. Finnegan, PhD; Stacey L. Hughes
Medscape, LLC, New York, NY, USA

INTRODUCTION

Narcolepsy is a primary disorder of the central nervous system that is thought to reflect the autoimmune destruction of hypothalamic-containing neurons of the anterior hypothalamus. Patients with narcolepsy unexpectedly fall asleep at work, while studying, during a conversation, or while driving. Patients experiencing this condition suffer from lower quality of life, higher rates of depression, and other psychiatric comorbidities. Due to the psychosomatic impingement of many patients, the ability to maintain relationships and employment is reduced. It is therefore important to recognize narcolepsy and any potential psychiatric comorbidities. However, many physicians are challenged to differentiate narcolepsy from psychiatric comorbidities, a situation that can be amplified in pediatric patients. Furthermore, management of narcolepsy, with or without psychiatric comorbidities, is suboptimal. We sought to determine if an online, case-based continuing medical education (CME) program could improve the ability of neurologists and psychiatrists to manage narcolepsy comorbid with psychiatric illness.

METHODS

Instructional Method

This online, CME-certified case challenge was presented in the form of 2 case scenarios that included questions assessing clinical decision making. Clinical decision questions provided tailored feedback and clinical consequences based on the specific answer choice selected and allowed learners who answered the question incorrectly on the first attempt an opportunity to answer it again (a second attempt) after feedback had been provided. The educational intervention launched online on June 26, 2015 and data were collected through July 30, 2015.

Assessment Method

To determine measurable improvements in knowledge/competence, first- and second-attempt answer choices were evaluated for the clinical decision questions. An overall effect size was calculated using the Cohen’s d statistic to show the magnitude and strength of the consequence-based feedback learning method, along with a percent change in the proportion of correct answers (effect sizes greater than 0.8 are considered large, between 0.8 and 0.4 are medium, and 0.4 are small).

RESULTS

A total of 173 neurologists and 500 psychiatrists were included in the data analyses. A medium effect size (neurologists: d = 0.60; psychiatrists: d = 0.64) resulted for the educational impact of the learning on clinical decision making. As a result of participating in the educational intervention, specific areas of improvement included:

- Between 24% and 71% of neurologists made correct clinical decisions with respect to the use and interpretation of tools for the diagnosis of narcolepsy, the relationship between ADHD and sleep, and addressing the patient’s symptoms. Between 17% and 47% of responders improved their decisions after receiving tailored feedback (Figure 2A).
- Between 27% and 69% of psychiatrists made correct clinical decisions with respect to the use and interpretation of tools for the diagnosis of narcolepsy, the relationship between ADHD and sleep, and addressing the patient’s symptoms. Between 18% and 49% of responders improved their decisions after receiving tailored feedback (Figure 2B).
- Significant pre- vs post-educational improvement was observed in the identification of major depression as the most common psychiatric comorbidity associated with narcolepsy (neurologists, 90% improvement; P < 0.5; psychiatrists, 47% improvement, P < 0.5).

CONCLUSIONS

The online education format consisting of 2 case challenges was successful in improving the competency of neurologists and psychiatrists in differentiating narcolepsy from narcolepsy comorbid with a psychiatric illness. A significant number of learners were also able to improve their knowledge of major depression as the most common psychiatric comorbidity associated with narcolepsy. Future education should focus on educating neurologists and psychiatrists on the etiology of narcolepsy, sleep disorders associated with ADHD, and environmental triggers of narcolepsy.