Improving Knowledge of ICSD-3 and DSM-5 Criteria for Diagnosing Narcolepsy

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OBJECTIVE

The average time from symptom onset to a diagnosis of narcolepsy is more than 10 years, leading to diminished quality of life, functional impairment, and risk for accidental injury. The delay in diagnosis seems to be related to mildness of initial symptoms, gradual onset, lack of recognition, or mistaken diagnosis. Patients are often misdiagnosed with other disorders of sleepiness, such as sleep deprivation or obstructive sleep apnea, and psychiatric disorders, such as attention-deficit/hyperactivity disorder or depression. A study was conducted to determine if an online educational intervention could improve neurologists’ knowledge and competence in diagnosing narcolepsy based on criteria in the third edition of the International Classification of Sleep Disorders (ICSD-3) and the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).

METHODS

The effectiveness of an online educational intervention focusing on the diagnosis of narcolepsy was analyzed using a pre-assessment/post-assessment study design.

INSTRUCTIONAL METHOD:

The training format consisted of a 30-minute audio lecture with 25 synchronized slides for the target audience of neurologists. Slides included bullet points, figures, graphics, and/or still images that summarized key points from the ICSD-3 and DSM-5 criteria for diagnosing narcolepsy. The lecture also included interactive, multiple-choice, intra-activity questions to provide elements of engagement and feedback.

A FOR learners wishing to view the program offline, a transcript and slides were made available for downloading/printing.

The activities were available on the Medscape Mobile application, ensuring real-time access by the many clinicians who rely on mobile devices for education.

DATA COLLECTION:

The educational intervention launched online on June 18, 2014, and data were collected through August 18, 2014 (81 days).

ASSESSMENT METHOD:

This study design compared participants’ responses to questions before exposure to educational content (pre-assessment measurement) with the same participants’ responses to the same questions placed after the educational content (post-assessment measurement). Linking pre-assessment and post-assessment participants allows learners to serve as their own controls. A paired 2-tailed t-test was used to assess whether the mean pre-assessment score was different from the mean post-assessment score. McNemar’s χ² test was used to assess whether the mean pre-assessment score was different from the mean post-assessment score.

Results

• For neurologists who participated in the online activity, comparison of assessment questions related to ICSD-3 and DSM-5 criteria for diagnosing narcolepsy demonstrated statistically significant improvements (n=188; P <.05) and a large effect (d=0.883). (Figure 1)

• As a result of participating in this educational program, significant improvements (P <.05) were observed in several specific areas:
  - Identification of cataplexy as a symptom virtually diagnostic of narcolepsy (23% improvement) (Figure 2)
  - Identification of common characteristics or symptoms associated with narcolepsy (39% improvement) (Figure 3)
  - Diagnosing narcolepsy type 2 (57% improvement) (Figure 4)
  - Use of diagnostic sleep studies for the differential diagnosis of narcolepsy (29% improvement) (Figure 5)

Conclusions

This study demonstrated the success of a targeted educational intervention in improving the knowledge and competence of neurologists in the use of ICSD-3 and DSM-5 narcolepsy diagnostic criteria. These metrics, with statistically significant improvements in all areas covered in education, provide strong evidence that well-designed, online, audio/video-based instruction is a useful methodology for knowledge transfer.

References


Acknowledgments

The educational intervention and outcomes were measured through an independent educational grant from Jazz Pharmaceuticals.