

The relationship between symptom severity, attention/vigilance, and quality of life in patients with narcolepsy

Weichih Chin*, Yushu Huang, Chihhuan Wang

Objective: to examine the change of quality of life in patients with narcolepsy within five years, and to investigate the relationship between the symptoms and attention on quality of life.

Methods: We recruited 111 type 1 narcolepsy patients and 85 of them completed the 5-year annual follow-up data collection. During the follow-up, polysomnography (PSG), multiple sleep latency test (MSLT) and human leukocyte antigen (HLA) test were conducted. Computerized neuropsychological tests of Conners' Continuous Performance Test (CPT-II) was also administered to attention data. The short form-36 items of health related quality of life (SF-36) was applied to assess quality of life. Visual analogue score (VAS), Epworth Sleepiness Scale (ESS) (15) and Pediatric Daytimes Sleepiness Scale (PDSS) were used to assess symptom severity. Descriptive statistics, repeated measures and hierarchical linear models were applied for data analysis.

Results: No significant difference during the 5-year follow-up was found in all physical domains of SF-36. In psychological domains of SF-36, only "role functioning-emotion" and "social function" showed significantly change ($p = 0.041$; 0.01), with improvement first and then declination. The VAS of daytime sleepiness and cataplexy showed significantly difference after treatment during the 5-year follow-up ($p = 0.01$; 0.01). Both symptoms severity showed decreased after treatment, but relapsed later.

The CPT result showed "attention" can affect domains of SF-36 including "social function($r = 0.169^*$) and role function-emotion (0.270^*)"; "vigilance" can affect "role function-physical(0.284^*), general health(0.251^*), social function(0.391^*), and role function-emotion($r=0.609^*$)" in SF-36.

Conclusion: Although quality of life of patients with narcolepsy was improved after treatment, but the "social function and role functioning-emotion domain" declined during follow-up afterward. Clinical symptoms and attention also significantly affected the quality of life with the change of time.

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作者：金韋志^{1, 2*} 黃玉書^{1, 2} 王志宸³
服務單位：林口長庚醫院¹ 睡眠醫學中心² 兒童心智科、浙江師範大學³ 心理系