



S0022-3999(98)00024-5

SLEEP ABNORMALITIES DEMONSTRATED BY HOME POLYSOMNOGRAPHY IN TEENAGERS WITH CHRONIC FATIGUE SYNDROME

GREGORY STORES, ALISON FRY and CHRISTINA CRAWFORD

(Received 11 September 1997; accepted 28 November 1997)

Abstract—To provide objective information about sleep physiology in young people with chronic fatigue syndrome (CFS), home polysomnography (PSG) was performed on 18 teenagers, aged 11–17 years, in whom CFS had been diagnosed according to internationally accepted criteria. The results were compared with those for healthy controls matched individually for gender and age. Compared with controls, CFS subjects showed significantly higher levels of sleep disruption by both brief and longer awakenings. Disruption of sleep in this way could at least contribute to the daytime symptoms of young people with CFS. The underlying cause of the disruption needs to be considered in each individual case. Further research is required to clarify the relative contribution of this neurobiological aspect of CFS in young people. © 1998 Elsevier Science Inc.

Keywords: Teenagers; Chronic fatigue; Home polysomnography.

INTRODUCTION

A recent authoritative report on the chronic fatigue syndrome, or CFS [1], concludes with the proposal that three areas should be emphasized in future research: the neurobiology of fatigue; controlled therapeutic trials; and the assessment and management of children and adolescents. The present study is concerned with a generally neglected biological aspect of CFS in young people, namely sleep disturbance. Although reference to it is consistently made in accounts of CFS, precise assessment of sleep disturbance seems unusual in spite of its potential importance in overall management in patients of any age. The present account is concerned with teenagers with CFS.

Greater attention to sleep complaints and problems are justified because: (a) they are reported to be common in both adults [2] and children with CFS [3], and (b) there is a close correspondence between many of the features of the syndrome and the reported effects of persistent sleep disturbance in many contexts, again in both adults [4] and children [5].

A main issue concerning the relationship between sleep disturbance and CFS is the direction of that relationship. To what extent can features of CFS (notably daytime inactivity) cause sleep disturbance? Conversely, when can disturbed sleep more

University Section, Park Hospital for Children, Oxford, UK.

Address correspondence to: Doctor G. Stores, University Section, Park Hospital for Children, Old Road, Headington, Oxford OX3 7LQ, UK. Tel: 01865-226515; Fax: 01865-762358.

convincingly be seen as a cause of daytime CFS symptoms? An essential preliminary to such debates is a clear description of the nature of the sleep disturbance in equally carefully diagnosed cases of CFS. Ideally, sleep disturbance would include objective appraisal of sleep by means of polysomnography (PSG) rather than exclusively self or parental reports, especially in view of the complexities and uncertainties of self-image and attribution associated with the condition, both of which can be expected to distort reporting. There have been a few published accounts in adults that meet this requirement of objectivity [6–8] and none in children. Although there have been preliminary reports [9, 10] on young people diagnosed as having fibromyalgia, the nature of this condition and its relation to CFS remain unclear.

The present study consisted of PSG comparisons between young people with CFS diagnosed according to internationally accepted criteria (with slight modification as considered appropriate for children) and controls. The CFS subjects were not specially selected on the basis of reported sleep problems. All children in the study had undergone PSG at home. Home PSG has a number of advantages for objective sleep studies in children, notably greater acceptability than recordings made in the strange environment of a sleep laboratory. This is likely to be a particularly important advantage in children with CFS due to the likely low tolerance of hospital admission by them and their families. Until very recently, however, a disadvantage was a lack of normative data for home PSG on patients of any age, but Stores and colleagues [11] have compiled such norms for children aged 5–16 years. It is from this source that control subjects were selected in the present study.

PSG in this study was confined to a single overnight recording. This was considered justifiable in view of the evidence that, in contrast to laboratory PSG where sleep disturbance caused by the recording procedure and the laboratory environment are prominent, such “first night effects” are not seen to any significant degree in home sleep recordings on children and adolescents [12, 13].

In view of past subjective reports on young people with CFS, and the adult studies to which reference has been made, it was predicted that the affected teenagers in this study would show abnormalities of sleep physiology, possibly of the types particularly associated in the literature with impairment of daytime psychological function.

The present study was approved by the local research ethics committee.

METHOD

Design

A case-control design was adopted by which each adolescent with CFS was matched with a healthy person of the same gender and age for comparison of their sleep physiology.

Subjects

Teenagers with CFS. Patients were recruited from a number of pediatricians and child and adolescent psychiatrists in the Oxfordshire area. Although labeling of the disorder varied between clinics, internationally agreed-upon criteria for chronic fatigue syndrome [14] were adapted from the adult literature only in terms of duration of fatigue. To be recruited into the study, patients must have been suffering from fatigue for at least 2 months (adult criteria require 6 months, but there is agreement that this is proportionally too long a period for younger subjects) [15]. The fatigue was severe enough to have seriously disrupted normal activities and had been present for more than 50% of the time. No physical disease was present, with no psychiatric disorder before the onset of the CFS to which the symptoms could be ascribed.

A group of 18 patients was recruited, ranging in age from 11.8 to 17.4 years (mean age 14.5 years). There were 10 males and 8 females. Duration of their fatigue ranged from 5 months to 9.5 years, with

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات