Confusion of Dreaming with Reality in Narcolepsy

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Observational non invasive

Summary

ID

NL-OMON35610

Source
ToetsingOnline

Brief title
Confusional dreaming in Narcolepsie

Condition

- Other condition
- Sleep disturbances (incl subtypes)

Synonym
Excessive Daytime sleepiness, Narcolepsy

Health condition

slaapstoornissen

Research involving
Human

Sponsors and support

Primary sponsor: Leids Universitair Medisch Centrum
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: Confusion, delusions, Dreaming, Narcolepsy

Outcome measures

Primary outcome

The goals of the present study, therefore, are twofold:

a) To estimate the incidence of dream/reality confusions in the narcoleptic

population, relative to healthy controls

Secondary outcome

b) To provide a comprehensive description of the characteristics of these

confusional instances

Study description

Background summary

Narcolepsy is a neurological disorder characterized by the intrusion of rapid eye movement sleep into the waking state. Hallmark symptoms of the disorder include daytime sleep attacks, cataplexy, sleep paralysis, and vivid hallucinations at sleep onset. Although memory impairment is not typically observed in narcoleptics when standardized tests are employed, it is common for patients to present with subjective memory complaints. Clinical observations suggest that these patients may frequently experience one particularly intriguing type of memory problem, in which they mistakenly think that an event that occurred in a dream might have actually happened in real life. Although such experiences have been described in a handful of case studies, to date there have been no systematic descriptions of the incidence of this memory complaint in the narcoleptic population, nor of the qualitative characteristics of these dream/reality confusions.
These confusional experiences may represent a failure of *reality monitoring*, a psychological mechanism by which we distinguish thought and

fantasy from actual events, resulting in confusion about the origin and reality of a past experience. Studying these instances of dream/reality confusion in narcoleptic patients may give us clues to the normal functioning of memory systems in the human brain. Accumulating evidence now demonstrates that sleep is integrally involved in the processing and retention of memories across time. We hypothesize that the sleep-related dysfunctions characteristic of narcolepsy may explain the unique memory complaint of confusing dreams with reality. Specifically, abnormal hippocampal-cortical communication dynamics during REM (rapid eye movement) sleep could cause patients suffering from narcolepsy to encode the experience of a dream in a manner very similar to how waking experiences are stored in memory, thus leading to confusion about the origin of the memory.
The confusion of dream experiences with reality is also of potential interest from a clinical perspective. It has long been reported that narcoleptic patients complain of memory problems, though objective tests of memory performance have failed to reveal any consistent deficits. It may be that subjective memory complaints in narcolepsy arise from a unique type of memory dysfunction to which standard testing instruments are insensitive. In this context, the aforementioned anecdotal reports and case studies describing confusion of dreaming with reality in narcolepsy are of particular interest. It has been established that confusion of dreaming with reality can occur in the normal population (i.e. Kemp & Burt, Memory, 2006). However, we hypothesize that the incidence and severity of this experience is much greater in the narcoleptic population than in normals. Exploring these memory *source confusions* may allow us to better understand the nature of memory impairment in this disorder.

Study objective

The goals of the present study, therefore, are twofold:
a) To estimate the incidence of dream/reality confusions in the narcoleptic population, relative to healthy controls
b) To provide a comprehensive description of the characteristics of these confusional instances

Towards these ends, we plan to conduct a two-part interview study, in which patients and healthy controls suffering from this particular memory complaint will first be identified through a telephone screening process, and then will come in to the laboratory for a more extensive face-to-face interview session. Through this research, we hope to attain a better understanding of the nature of memory impairment in narcolepsy, as well as the more general relationship between memory processes and sleep.

Study design

Procedures/Instruments

This is a two-part interview study. During the initial phase, narcoleptic patients and healthy controls will participate in a short (approx. 15-20 min) telephone interview (see section C for recruitment techniques and selection criteria). Based on participants* responses during this phone interview, subjects may be invited to come to the laboratory for a longer (approx. 45 min) interview session, during which further details about these confusional instances would be elicited.

Part I
The initial phase will consist of a brief (approx. 15-20 min) telephone interview, in which participants will be queried about the general characteristics of their sleep and dreams, and will be asked whether they have ever been unsure if an event actually occurred, or was only experienced in a dream. The phone interview will also include administration of two short questionnaires: The Boundary Questionnaire (Hartmann, 1989), and the Prospective/Retrospective Memory Questionnaire (Smith et al., 2000).

Part II
During the second part of the study, those who responded that they have been confused in the past about whether an event was dreamed or real will be asked to come to the laboratory for an in-depth interview. During the face-to-face interview, participants will be asked to provide detailed information on these experiences. This interview will be tape-recorded, in order to facilitate the later coding and analysis of the data.

Study burden and risks

Minimal risk is involved in this interview-based protocol. If participants recall dreams or waking experiences during the study that are embarrassing or socially unacceptable, they may not feel comfortable reporting this material. Accordingly, subjects will be specifically instructed that they are not obligated to describe any dreams or experiences that they do not feel comfortable sharing. These minimal risks to participants are deemed to be acceptable in light of the modest educational benefits provided to participants, combined with the potentially substantial benefits of the knowledge gained through this research to society as a whole.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Age 16-64
Diagnosis of narcolepsy with cataplexy, made by certified neurologist according to The International Classification of Sleep Disorders criteria (ICSD-2, 40) for narcolepsy with cataplexy.
Definite diagnosis for at least 6 months

Exclusion criteria

• Change in narcolepsy medication in the last month
• Recreational drug use in the past week
• Diagnosis of substance or alcohol abuse or dependence - DSM-IV criteria
• Current diagnosis of generalized anxiety disorder, depression or other psychiatric illness
• Other acute, unstable medical conditions or serious chronic diagnoses

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)

Primary purpose: Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	10-12-2010
Enrollment:	100
Type:	Actual

Ethics review

Approved WMO

Date:	08-12-2010
Application type:	First submission
Review commission:	METC Leids Universitair Medisch Centrum (Leiden)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL27446.058.09