Measuring activity patterns to diagnose a delirium using wrist-actigraphy and Everon monitoring

Published: 21-06-2010
Last updated: 02-05-2024

To investigate whether the Actiwatch® actigraph and the Everon* sensor can be helpful in the early diagnosis of a delirium. If both are able to do so, we evaluate which of the two performs best as a delirium screening device.

Ethical review	Approved WMO
Status	Pending
Health condition type	Deliria (incl confusion)
Study type	Observational non invasive

Summary

ID

NL-OMON35032

Source
ToetsingOnline

Brief title
MOVED: Movements of vulnerable elders reveal a delirium

Condition

- Deliria (incl confusion)

Synonym
acute confusional state, delirium

Research involving
Human

Sponsors and support

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

Intervention

Keyword: actigraphy, delirium, elderly with a hip fracture, Everon monitor

Outcome measures

Primary outcome

Primary endpoints are the activity patterns and circadian rhythms as measured by the wrist-actigraph and the Everon sensor.

Secondary endpoints are: diagnosis, onset, duration and severity of the delirium, determination of delirium subtype, tolerability of the 2 devices by the patients, and statistics of the activity patterns of the delirious patients and the non-delirious patients.

Secondary outcome

Secondary endpoints are: diagnosis, onset, duration and severity of the delirium, determination of delirium subtype, tolerability of the 2 devices by the patients, and statistics of the activity patterns of the delirious patients and the non-delirious patients.

Study description

Background summary

Elderly patients admitted to the hospital frequently suffer from a delirium. A delirium is a syndrome that is characterized by symptoms of disturbed consciousness, concentration and cognition, and symptoms of disturbed sleeping patterns. In addition, a delirium is highly heterogeneous in clinical presentation. This is represented in the concept of hypoactive, hyperactive and mixed motor subtypes, which states that patients can be classified according to their activity pattern. It is important to distinguish between the subtypes since each of them requires a specific treatment. Subtyping is based on observations and scales without any available golden standard. The diagnosis delirium is therefore frequently missed, especially the hypoactive and mixed

subtypes. Preliminary studies have shown that devices capable of measuring patients* activity can play a role in the early screening of delirium. We want to investigate whether two specific devices are able to do so, and which of the two devices performs best.

Study objective

To investigate whether the Actiwatch® actigraph and the Everon* sensor can be helpful in the early diagnosis of a delirium. If both are able to do so, we evaluate which of the two performs best as a delirium screening device.

Study design

An observational cohort study.

Study burden and risks

Patients* activity patterns will be measured throughout the length of their hospital stay. The Everon* device is a non-contact sensor that has to be placed under the patient*s matress, and hence the patient does not notice its presence. The actigraph is a simple device, the size of a watch, that is placed on the wrist like a watch. Since most people are used to wearing a watch, we do not think that patients perceive the actigraph in any way as uncomfortable. Obviously, there are no risks associated with these devices.

Contacts

Public
Academisch Medisch Centrum

Postbus 22700
1105 DE Amsterdam
NL
Scientific
Academisch Medisch Centrum

Postbus 22700
1105 DE Amsterdam
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

* Patients acutely admitted for unplanned surgical repair of hip fracture
* Admitted on the surgical or orthopedic ward
* Age 65 years or older
* Patients or their primary caregivers must be able to give informed consent

Exclusion criteria

* Patients that can*t speak or understand Dutch / English.

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-04-2010
Enrollment:	40
Type:	Anticipated

Ethics review

Approved WMO

Application type:	First submission
Review commission:	METC Amsterdam UMC

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	NL31530.018.10