# Social cognition in aneurysmal subarachnoïd haemorrhage (SAH) after neurosurgical - (clipping) and/or endovascular intervention (coiling)

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To determine the estimation of prevalence of the primary research parameter for deficits in social cognition; e.g. facial emotion perception, after subarachnoid haemorrhage which has been treated through neurosurgical- (clipping) and/or endovascular...

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

# Summary

### ID

NL-OMON33740

**Source** ToetsingOnline

**Brief title** Social cognition in SAH patients

# Condition

- Other condition
- Central nervous system vascular disorders

#### Synonym

deficits in social cognition, emotion- and behavioural regulation, personality changes

#### **Health condition**

aneurysmatische subarachnoidale bloeding en neurochirurgische - (clippen) of endovasculaire interventie (coilen); stoornissen in sociale cognitie

# Research involving

Human

### **Sponsors and support**

**Primary sponsor:** Universitair Medisch Centrum Groningen **Source(s) of monetary or material Support:** Stichting Catharina Heerdt

#### Intervention

Keyword: social cognition, subarachnoid haemorrhage (SAH)

#### **Outcome measures**

#### **Primary outcome**

Deficits in social cognition e.g. facial emotion perception based on scores on the Facial Expressions and Emotions: Stimuli and Tests (FEEST; Young et al., 2002) in the chronic stage (20months post SAH).

#### Secondary outcome

Scores on tests and questionnaires for social cognition and social functioning in daily life in the subacute, chronic and stable endstage (4.5 months, 20 months and 4 years post SAH), being the Read The Mind in the Eye test (RTME; Baron-Cohen et al., 1997), Cartoon test (Happé et al., 1999), Cartoon prediction task (O\* Sullivan & Guilford, 1965), Humourprocessing task (Brownell, 1983), Faux Pas test (Stone et al.,1998), Social Attribution Task (SAT; Klin, 2000), Iowa Gambling Task (IGT; Bechara, 1994), Sustained Attention to Response Task (SART; Robertson et al., 1997), Test for Emotional Prosody (Pijnenborg et al, 2007), The Awareness of Social Inferences Test (TASIT; McDonald et al., 2003), Emotional Empathy Questionnaire (EEQ, Mehrabian & Epstein, 1972), Questionnaire for emotional consequences of stroke (VEG, Schure et al., 1995), Apathy Evaluation Scale (AES; Marin et al., 1991).

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Scores on tests for memory, attention, mental speed and executive functioning

(WAIS digit span, 15WT, Stroop KW test, Trailmaking test, WTS S1-S3, DT,

Fluency, Zoo Map en DEX) and an estimated premorbid IQ based on the Dutch

version of the NART (NLV; Schmand et al., 1992).

Psychological and somatic complaints (SCL-90), personality questionnaire (NPV),

coping (UCL).

# **Study description**

#### **Background summary**

Patients who experienced a subarachnoid haemorrhage (SAH) resulting from a ruptured aneurysm and are subsequently treated with neurosurgical- (clippin) or endovascular intervention (coiling) frequently report problems concerning social and emotional functioning in daily life. These problems can indicate deficits in social cognition which can manifest themselves as emotionally indifferences, apathy, mood disorders, agitation, impulsivity, emotionally disinhibited behaviour, emotional instability, problems in decisionmaking, socially inadequate behaviour and problems in understanding or mentalising other's thoughts, desires and feelings. These problems could partially be caused by failure of psychological mechanisms and copingstyles with regard to acceptance and adaptation to the traumatic event and possible cognitive disturbances caused by brain damage. However, there is evidence that brain damage can cause deficits in social cognition, especially following damage to orbitofrontal/ventromedial prefrontal brain area's. Social cognition implies the ability to perceive social information (i.e. facial expressions of emotions), to integrate this information with general knowledge of social schemes and conventions in order to understand the behaviour of others and to correctly adapt ones behaviour to the social situation. Such disturbances in social and emotional behaviour can have serious, adversive consequences for SAH patients who, after a period of initial recovery, try to go back to work and social life but disturbances in social cognition prevent them from doing so. Deficits in social cognition are often seen in brain damage especially when there is damage to orbitofrontal/ventromedial prefrontal brain circuits. An aneurysm of the Anterior Communicating Artery is the most frequent location of a SAH en disturbances in social cognition are expected here. Besides the specific intervention (clip or coil) could play a role in disturbances of social cognition. Social cognition has not been investigated in

SAH patients while there is evidence that changes in emotion and behaviour are

permanent. However, until now ther were no adequate neuropsychological tests to measure social cognition in brain damaged people. In our clinical pilot we developed a state-of-the-art testset for social cognition to measure all different aspects of social cognition in SAH patients. These supplementary tests for social cognition are necessary in regular neuropsychological diagnostics to measure deficits in social cognition and to develop treatment possibilities in the future. Because of the relatively young age of SAH patients (mean 55 years), these deficits in social cognition can have serious, adverse consequences for the ability of patients to function adequately in daily life, that is engage in social relationships and maintain a job.

#### **Study objective**

To determine the estimation of prevalence of the primary research parameter for deficits in social cognition; e.g. facial emotion perception, after subarachnoid haemorrhage which has been treated through neurosurgical-(clipping) and/or endovascular intervention (coiling). And also to determine the estimated prevalence of the secundary research parameters for deficits in social cognition and general cognition in these patients related to the primary research parameter.

#### Study design

A study of 150 patients who suffered from subarachnoid haemorrhage and received treatment through neurosurgical- (clipping) and/or endovascular intervention (coiling) in a repeated measures design (4.5 months, 20 months and 4 years post SAB) to investigate the prevalence of deficits in social cognition in the subacute, chronic and stable endstage post SAH.

#### Study burden and risks

This research project will have no risks for the patients involved. The neuropsychological investigation will have no adverse consequences for the patients. The burden is minor and mainly mentally, especially when patients are confrontated with neuropsychological impairments during testing. However, this will be carefully monitored and coached by the neuropsychologist who has ample experience with patients suffering from acquired brain injury.

# Contacts

#### Public

Drs. W.S. Veenstra, onderzoeker is tevens verrichter

### UMCG, Hanzeplein 1

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9713 GZ Groningen NL **Scientific** Drs. W.S. Veenstra, onderzoeker is tevens verrichter

UMCG, Hanzeplein 1 9713 GZ Groningen NL

# **Trial sites**

### **Listed location countries**

Netherlands

# **Eligibility criteria**

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

### **Inclusion criteria**

1) subarachnoid haemorrhage, no intervention, neurosurgical (clipping) and/or endovascular intervention (coiling)

# **Exclusion criteria**

 neurodegenerative of psychiatric disorders
severe cognitive comorbidity interfering with the ability to understand test instructions and undergo neuropsychological tests (global aphasia, neglect, amnestic syndrome)

# **Study design**

### Design

Study type: Observational non invasive

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

### Recruitment

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Recruitment status:	Recruitment stopped
Start date (anticipated):	01-02-2010
Enrollment:	150
Туре:	Actual

# **Ethics review**

Approved WMO	
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

# **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 CCMO **ID** NL25822.042.09