Hippocampal blood flow and electroconvulsive therapy in depression

Published: 01-08-2006
Last updated: 10-08-2024

Our aim is to study the effect of ECT on hippocampal blood flow changes associated with depression.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Mood disorders and disturbances NEC
Study type	Observational non invasive

Summary

ID

NL-OMON29749

Source
ToetsingOnline

Brief title
Hippocampal blood flow and electroconvulsive therapy in depression

Condition

- Mood disorders and disturbances NEC

Synonym
Depression, Depressive disorder

Research involving
Human

Sponsors and support

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

Intervention

Keyword: ASL, Depression, electroconvulsive therapy, MRI

Outcome measures

Primary outcome

The primary study parameter will be changes in hippocampal blood flow as a

result of ECT measured in ml/min/100g

Secondary outcome

Differences in hippocampal bloodflow between depressed patients and healthy

controls measured in ml/min/100mg.

Changes in depression score before and after ECT treatment as measured by means

of the Hamilton depression rating scale.

Study description

Background summary

Dispite the fact that electroconvulsive therapy (ECT) is one of the most effective psychiatric therapies, we still have little understanding of how and why it works. Recent evidence suggests that changes in regional cerebral bloodflow associated with depression can be reversed through treatment with ECT. Because most of the supporting evidence comes from animal studies, a clinical studies are needed to elucidate the pathophysiology in humans. If we are able to show that ECT can change blood flow associated with depression, then we are closer to understanding the mechanisms involved in the pathophysiology of depression and the effect of ECT on these processes. With time this may lead to better therapies for depression and other psychiatric diseases.

Study objective

Our aim is to study the effect of ECT on hippocampal blood flow changes associated with depression.

Study design

Patients meeting the DSM-IV diagnostic criteria for depression will be compared to healthy control subject on the level of their hippocampal blood flow. Within

the patient group the effect of ECT on hippocampal blood flow will be studied. The diagnosis will be based on a stuctured interview (SCID). To measure the level of depression and the effect of ECT the Hamilton Depresion Rating Scale (HDRS) wil be used. To measure the hippocampal blood flow Arterial Spin Labelling (ASL) wil be used. ALS is a new MRI technique wherby the protons of the arterial water in the feeding vasculature of the brain are magnetically labeled and used as an endogenous tracer.

Study burden and risks

The is no burden outside the investment of time. MRI has been used as a diagnostic, clinical tool for over 20 years now and there are no known associated risks. The invested time for the patients amounts to 3.5 hours and for the healthy controls 2 hours.

Contacts

Public
Universitair Medisch Centrum Utrecht

Postbus 85500
3508 GA
Nederland
Scientific
Universitair Medisch Centrum Utrecht

Postbus 85500
3508 GA
Nederland

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

Patients who meet DSM-IV criteria for depressive disorder and meet the Dutch Psychiatric Association criteria for electroconvulsive therapy. Healthy control subjects who do not meet any DSM-IV criteria. Age between 18 and 65.

Exclusion criteria

Patients who do not meet DSM-IV criteria for depressive disorder. Healthy controls who meet the criteria for a DSM-IV diagnosis. Subjects who have severe cognitive impairments (e.g. vascular or Alzheimers dementia), severe medical conditions (e.g. coronaire heart disease, COPD, diabetes), non removable metal objects. Subjects who are pregnant or lactating.

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):	30-09-2006
Enrollment:	90
Type:	Actual

Ethics review

Approved WMO

Date:	01-08-2006

Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

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	NL12141.041.06