Restoring Frontal Asymmetry in Antisocial Personality Disorder: a combined EEG-tDCS study

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To study the feasibility of applying tDCS to APD subjects to a) influence prefrontal asymmetries and b) assess whether the restoration of prefrontal electrophysiological balances is reflected in improved social-behavioral performance.

Ethical review	Approved WMO
Status	Recruiting
Health condition type	Personality disorders and disturbances in behaviour
Study type	Interventional

Summary

ID

NL-OMON39854

Source
ToetsingOnline

Brief title
Restoring frontal asymmetry in APD

Condition

- Personality disorders and disturbances in behaviour

Synonym
antisocial personality disorder, psychopathy

Research involving
Human

Sponsors and support

Primary sponsor: Universiteit Utrecht
Source(s) of monetary or material Support: FES gelden: hersenen en cognitie

Intervention

Keyword: antisocial behavior, feasability study, frontal imbalance, prefrontal cortex

Outcome measures

Primary outcome

Gaze latencies in the eye-tracking task and startle amplitudes and skin

conductance amplitudes in the threat-of-shock-task.

Secondary outcome

n/a

Study description

Background summary

A series of studies suggest that psychopathic tendencies associated with a hypoactive right versus left prefrontal cortex PFC, a region importantly involved in emotion regulation. In the current study, we will attempt to manipulate a prefrontal imbalance of activation using non-invasive transcranial direct current stimulation (tDCS). The hypothesis is that after tDCS treatment psychopathic behaviour will be reduced.

Study objective

To study the feasibility of applying tDCS to APD subjects to a) influence prefrontal asymmetries and b) assess whether the restoration of prefrontal electrophysiological balances is reflected in improved social-behavioral performance.

Study design

The present study employs a double-blind, within-subjects, counterbalanced, randomized, placebo-controlled design.

Intervention

The intervention is a tDCS (placebo and sham) stimulation.

Study burden and risks

Subjects will be subjected by the slight discomfort during the Proximity of Threat task, during which electric shocks will be applied. These shocks are however, uncomfortable, but not experienced as painful. Furthermore, subjects will invest time in participating in the study. The benefit for the participant is a financial compensation of for participation, which is explicitly stated in the participant information. With regard to the slight investment by the subjects, and the difficulty in performing fundamental research in people with APD, we think the benefits for society outweighs the discomfort by the subjects.

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

- Male
- Right-handedness
- Aged between 18-45 years
- Normal or corrected-to-normal vision
- Signed informed consent
- Diagnosis of APD
- Dominant left-hemispheric EEG asymmetry

Exclusion criteria

- Metal in cranium
- History of closed-head injury
- History of neurological disorders
- Medication: current use of any psychotropic medication (benzodiazepines, antidepressants, antipsychotics, anticonvulsants)

Study design

Design

Study type: Interventional

Masking:	Double blinded (masking used)
Control:	Uncontrolled
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	20-11-2014
Enrollment:	51
Type:	Actual

Ethics review

Approved WMO

Date:	04-06-2013
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)
Approved WMO Date:	16-09-2014
Application type:	Amendment
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	NL41521.041.12