Therapie Resistentie Voorspellen bij Schizofrenie

No registrations found.

Ethical review	Positive opinion
Status	Recruiting
Health condition type	-
Study type	Observational non invasive

Summary

ID

NL-OMON21525

Source
Nationaal Trial Register

Brief title
TREVOS

Health condition

Schizophrenia, treatment resistance, psychosis, schizofrenie, therapie resistentie, psychose

Sponsors and support

Primary sponsor: Amsterdam UMC, University of Amsterdam
Source(s) of monetary or material Support: ZonMw, The Netherlands Organization for Health Research and Development (Veni grant)

Intervention

Outcome measures

Primary outcome

- Treatment resistance

- Neuromelanin contrast ratio on nMRI

- Glutamate/Creatine ratio on MRS in ACC

- Plasma DDC activity

- [18F]F-DOPA influx (Ki) value (for subgroup of 40 patients)

Secondary outcome

- Side effects of antipsychotics

- Symptom scores on PANSS

- Neuropsychological ratings

Study description

Background summary

Treatment resistance (TR) in schizophrenia is a major clinical problem with 20-35% of psychotic patients showing non-response to antipsychotic treatment. This leads to months to years of delay in effective treatment, resulting in hospitalization and unnecessary side effects of ineffective antipsychotics. We need a biomarker that could be used to guide the treatment decision to switch TR patients at an early stage to clozapine, the only antipsychotic with recognized superior effectiveness in TR.

A well-established finding in schizophrenia, using [18F]F-DOPA positron emission tomography (PET) imaging, is increased striatal dopamine synthesis, but interestingly TR patients don’t show this altered synthesis. The gold standard for measuring dopamine synthesis (PET imaging) however is too costly and invasive to use for TR screening. A novel neuromelanin-sensitive MRI sequence (nMRI), which indirectly measures striatal dopamine synthesis, has great potential as biomarker for TR. nMRI indeed shows increased signal in schizophrenia patients, but has not yet been tested in TR. Another potential biomarker is a recently developed plasma measure of dopa decarboxylase (DDC) activity, an enzyme required for dopamine synthesis. Furthermore, the role of other neurotransmitters than dopamine in TR is underexposed, of which glutamate is a likely candidate.

Study objective

- TR patients have lower nMRI signal in the substantia nigra than responders.

- nMRI signal in the substantia nigra correlates positively with striatal dopamine synthesis on [18F]F-DOPA PET.

- TR patients have lower plasma DDC activity than responders.

- Plasma DDC activity correlates positively with striatal dopamine synthesis on [18F]F-DOPA PET.

- TR patients have higher ACC glutamate than responders as measured with magnetic resonance spectroscopy (MRS).

Study design

Participants will have three visits: one baseline visit and two follow-up visits at 6 weeks and 6 months. A subgroup of 40 patients will have an additional visit for an [18F]F-DOPA PET/CT scan.

Intervention

None

Contacts

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Eligibility criteria

Inclusion criteria

- First episode psychosis

- Age 18-35 years old

Exclusion criteria

- Antipsychotic use longer than one year

- Dependence on other substances of abuse than nicotine or cannabis

- Use of amphetamine, cocaine or medication for ADHD (attention deficit hyperactivity disorder), since these drugs influence the dopamine system

-Neurological disorder (e.g. epilepsy) or evidence of brain damage

-Inability to provide informed consent

- Contra-indications for MRI (including pacemaker, ferromagnetic implants, claustrophobia)

- Pregnancy

Study design

Design

Study type:	Observational non invasive
Intervention model:	Other

Control: N/A , unknown

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	29-05-2018
Enrollment:	100
Type:	Anticipated

Ethics review

Positive opinion

Date:	14-08-2018
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

ID: 48828
Bron: ToetsingOnline
Titel:

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

No registrations found.

In other registers

Register	ID
NTR-new	NL7231
NTR-old	NTR7430
CCMO	NL63410.018.17
OMON	NL-OMON48828

Study results