Therapie Resistentie Voorspellen bij Schizofrenie

Gepubliceerd: 14-08-2018 Laatst bijgewerkt: 19-03-2025

- 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...

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Observationeel onderzoek, zonder invasieve metingen

Samenvatting

ID

NL-OMON21525

Bron
Nationaal Trial Register

Verkorte titel
TREVOS

Aandoening

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

Ondersteuning

Primaire sponsor: Amsterdam UMC, University of Amsterdam
Overige ondersteuning: ZonMw, The Netherlands Organization for Health Research and Development (Veni grant)

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

- 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)

Toelichting onderzoek

Achtergrond van het onderzoek

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.

Doel van het onderzoek

- 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).

Onderzoeksopzet

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.

Onderzoeksproduct en/of interventie

None

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

- First episode psychosis

- Age 18-35 years old

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

- 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

Onderzoeksopzet

Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders

Controle: N.v.t. / onbekend

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	29-05-2018
Aantal proefpersonen:	100
Type:	Verwachte startdatum

Ethische beoordeling

Positief advies

Datum:	14-08-2018
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

ID: 48828
Bron: ToetsingOnline
Titel:

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

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

Resultaten