To rescue cognition in schizophrenia with valaciclovir: a focus on hippocampal inflammation

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Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Schizophrenia and other psychotic disorders
Study type	Interventional

Summary

ID

NL-OMON38222

Source
ToetsingOnline

Brief title
To rescue cognition with valaciclovir

Condition

- Schizophrenia and other psychotic disorders

Synonym
psychiatric disorder, schizophrenia

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: Stanley Medical Research Institute;USA

Intervention

Keyword: neurinflammation, schizophrenia, valaciclovir, virus

Outcome measures

Primary outcome

The main study parameters are the pre-and post-treatment [11C]-PK11195 binding potential in the hippocampus.

Secondary outcome

Secondary study parameters are the pre- and post-treatment performance on the PANSS, the attention, memory and IQ test, the antibodies against common viruses and the pre- and post-treatment [11C]-PK11195 binding potential in other brain areas than the hippocampus.

Study description

Background summary

Schizophrenia is a chronic and disabling brain disease, with unknown aetiology. Recently, we have shown the presence of an inflammatory process in the hippocampus of schizophrenic patients during psychosis. In addition, we found evidence for the presence of herpes viruses in the temporal lobe of schizophrenic patients during psychosis. Taken together, we hypothesize that the hippocampal inflammation is caused by the presence of herpes viruses and that this inflammation interferes with the normal involvement of the hippocampus in cognition. Anti-viral treatment, with valaciclovir, that reduces the presence of active herpes virus in the hippocampus could reduce the neuroinflammation and thus improve cognition and symptoms in schizophrenia.

Study objective

The main objective is to find a pre- and post-valaciclovir treatment difference in hippocampal inflammation, as measured with positron emission tomography, in schizophrenic patients exposed to a psychotic episode. The secondary objective is to improve cognition by the supposed anti-inflammatory effect on the

hippocampus of valaciclovir.

Study design

The study is double-blind randomized placebo-controlled trial

Intervention

Of the 24 included patients, 12 patients will receive 8 g (4x2 g per day) of valaciclovir daily for a period of 7 consecutive 24-h periods and 12 patients will receive 8 g (4x2 g per day) of placebo daily for 7 consecutive days.

Study burden and risks

Patients will be admitted to a psychiatric hospital, if not already admitted as a part of their regular treatment, and treated with valaciclovir for a period of 7 days. Patients have to fill in a questionnaire and have to undergo a part of the SCAN2 interview and a MRI scan once, and have to undergo a PANSS interview, attention, memory and IQ tests, and PET scan twice. A total of 345 ml of blood will be taken for the determination of kidney and liver function, herpes virus antibodies, acyclovir levels in blood and for the PET scan data-analysis. Treatment with valaciclovir may cause nausea and headache but the risk of serious side effects is low (<1 out of 10.000). For the PET scan, the arterial catheterization can cause discomfort and the patients are exposed to radioactivity with minor to moderate risk. The patients treated with valaciclovir can have direct benefit form the treatment, because it may reduce symptoms. In general, when this study finds evidence for the involvement of herpes viruses in schizophrenia, this can lead to improved treatment of these patients in the near future.

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

-Age above 18
-Written informed consent for participation
-Diagnosis: schizophrenia, all subtypes
-Psychosis

Exclusion criteria

-Pregnancy, or presumption of pregnancy
-The use of benzodiazepines
-The use of NSAID or paracetamol in week before the PET scans and during the treatment of valaciclovir
-Use of somatic medication which may affect the immune system
-Use of any investigational drug
-Current or recent (<1 year) alcohol or substance abuse
-Disturbed kidney function and/or liver function
-Current or recent (<4 weeks) infectious or inflammatory disease
-Participation in a scientific research study (<1 year) involving radiation
-Claustrophobia
-Presence of materials in the body that can be magnetized

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)
Control:	Placebo
Primary purpose:	Treatment

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-04-2011
Enrollment:	24
Type:	Actual

Medical products/devices used

Product type:	Medicine
Brand name:	Zelitrex (ook bekend als valtrex)
Generic name:	Valaciclovir
Registration:	Yes - NL outside intended use

Ethics review

Approved WMO Date:	16-04-2009
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO Date:	04-06-2009
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO Date:	19-04-2011
Application type:	Amendment

Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO Date:	30-03-2012
Application type:	Amendment
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	ID
EudraCT	EUCTR2009-011900-45-NL
CCMO	NL27749.042.09