Probiotic formulation for patients with psychotic or bipolar disorder who have screened positive for increased intestinal permeability

No registrations found.

Ethical review	Positive opinion
Status	Recruiting
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON24444

Source
NTR

Brief title
GUTS

Health condition

schizophrenia disorder (295.x)
schizo-affective disorder(295.x)
schizophreniform disorder (295.x)
bipolar disorder (296.x)

Sponsors and support

Primary sponsor: Prof. Dr. I.E.C. Sommer Universitair Medisch Centrum GroningenDepartment of Neuroscience i.e.c.sommer@umcg.nl
Source(s) of monetary or material Support: Stanley Medical Research Institute (SMRI)

Nonprofit organisation supporting research on the causes of, and treatments for, schizophrenia and bipolar disorder

Intervention

Outcome measures

Primary outcome

Primary outcome measurements are psychiatric symptoms severity as assessed with the Brief Psychiatric Rating Scale (BPRS) and cognition as assessed with the Brief Assessment of Cognition in Schizophrenia (BACS) and the Stroop task

Secondary outcome

Secondary outcomes are immune parameters, metabolic syndrome features, side-effects, general functioning (World Health Organization's Disability Schedule (WHO-DAS II)) and gastro-intestinal complaints. Stool and blood samples are analysed to identify optimal biomarkers (serum LBP, fecal calprotectin, intestinal microbiome) for response to probiotics.

Study description

Background summary

Schizophrenia and bipolar disorder are severe mental disorders, both placing significant burden on global health. In both disorders, patients suffer from a variety of psychotic, depressive and manic symptoms. Additionally, the risk for developing metabolic syndrome and neurocognitive decline is increased in both disorders. Besides the overlap in psychiatric symptomatology, cognitive and biological functioning, there is also a large genetic overlap. Nowadays it is generally assumed that psychotic disorders (including schizophrenia, schizo-affective disorder) and bipolar disorder are disorders that are not entirely separated, but represent different stages of a continuum of clinical pictures.

Although the introduction of antipsychotic medications in the 1950s has substantially improved clinical symptoms of schizophrenia, the disease is still causing considerable morbidity and mortality. In bipolar disorder, lithium is since many years the first-choice maintenance-treatment, with anticonvulsants and antipsychotics as major alternatives. However, up to 50% of patients with bipolar disorder do not respond adequately to these treatments and still suffer from manic and/or depressive episodes, often severely affecting functioning.

Recent investigations have pointed to the gut-brain axis as a new venue for treatment, with increased inflammation stemming from increased intestinal permeability to further affect brain functioning in a significant subset of patients. In multiple studies increased intestinal permeability in schizophrenia and bipolar disorders is demonstrated by translocation of food and bacterial antigens, as well as intestinal microbiome disturbances. This is associated with

dysregulation of the immune system, precipitation and exacerbation of psychiatric symptomatology, metabolic complications and increased cognitive impairment. Probiotics are promising candidates to improve patients' symptomatology and functioning and there are rational methods to personalize its application with accessible and tolerable predictive biomarkers.

We hypothesize that treating patients with intestinal permeability improving probiotics (in addition to usual treatment; antipsychotic / mood stabilizing treatment) will cause a decrease in psychiatric symptoms (measured with the Brief Psychiatric Rating Scale (BPRS)), such as psychotic, depressive and manic symptoms, in patients with psychotic and bipolar disorders with increased intestinal permeability. We also expect improvement of intestinal permeability and inflammation, immune parameters, metabolic syndrome features, cognition, general functioning and gastro-intestinal (GI) complaints in these patients. Additionally, we hypothesize that individual treatment response to intestinal permeability improving probiotics can be predicted by measurement of intestinal permeability, intestinal inflammation, or a combination of these and other immunological, medical or psychiatric factors.

Study objective

We hypothesize that treating patients with intestinal permeability improving probiotics (in addition to usual treatment; antipsychotic / mood stabilizing treatment) will cause a decrease in psychiatric symptoms (measured with the Brief Psychiatric Rating Scale (BPRS)), such as psychotic, depressive and manic symptoms, in patients with psychotic and bipolar disorders with increased intestinal permeability. We also expect improvement of intestinal permeability and inflammation, immune parameters, metabolic syndrome features, cognition, general functioning and gastro-intestinal (GI) complaints in these patients. Additionally, we hypothesize that individual treatment response to intestinal permeability improving probiotics can be predicted by measurement of intestinal permeability, intestinal inflammation, or a combination of these and other immunological, medical or psychiatric factors.

Study design

Primary outcome is psychiatric symptoms severity as assessed with the Brief Psychiatric Rating Scale (BPRS)

Intervention

Patients screened positive for LBP and other inclusion criteria will enter a 12 week treatment period in which they are randomized 1:1 to either twice daily 2 gram probiotic formulation (Ecologic®Barrier; Bifidobacterium bifidum W23, Bifidobacterium lactis W51, Bifidobacterium lactis W52, Lactobacillus acidophilus W37, Lactobacillus brevis W63, Lactobacillus casei W56, Lactobacillus salivarius W24, Lactococcus lactis W19, Lactococcus lactis W58; 1x1010 colony forming units/day) or placebo twice daily. Outcome measurements will be assessed at baseline, half way treatment, end of treatment, and at a follow-up 3 months post-treatment.

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Eligibility criteria

Inclusion criteria

1. Age ≥ 18
2. The participant understands the study and is capable of providing written informed consent
3. The participant has a DSM-IV-R or DSM-5 diagnosis of: 295.x (schizophrenia, schizophreniform disorder or schizo-affective disorder) or bipolar disorder 296.x

Exclusion criteria

1. Pregnancy or breastfeeding (assessed through anamnesis)
2. Mental retardation (IQ score <60)
3. Active liver-, kidney- or pancreas disease as defined by alanine amino transferase (ALAT) levels more than two times the upper boundary of normal levels
4. Any clinically significant or unstable medical disorder as determined by the investigators, including inflammatory bowel disease, short-bowel syndrome or acute/chronic pancreatitis

Study design

Design

Study type: Interventional

Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)
Control:	Placebo

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	15-05-2019
Enrollment:	145
Type:	Anticipated

IPD sharing statement

Plan to share IPD: Yes

Plan description
The

Ethics review

Positive opinion

Date:	13-12-2018
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

ID: 53363
Bron: ToetsingOnline
Titel:

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

No registrations found.

In other registers

Register	ID
NTR-new	NL6385
NTR-old	NTR7657
CCMO	NL67848.042.18
OMON	NL-OMON53363

Study results