LIMIT-1: Lowering the Incidence of vascular complications with Metformin in patients with Impaired glucose tolerance and a recent TIA or minor ischemic stroke: a phase 2, randomized, controlled trial

No registrations found.

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

Summary

ID

NL-OMON26223

Source
Nationaal Trial Register

Brief title
LIMIT-1

Health condition

glucose intolerance
metformin
TIA
stroke, ischemic
trial

Sponsors and support

Primary sponsor: S.E. Vermeer, MD, PhD
Source(s) of monetary or material Support: No funding parties

Intervention

Outcome measures

Primary outcome

1. Tolerability of metformin treatment (measured as number of patients still on treatment after 3 months);
2. The safety of metformin treatment (which will be continuously monitored)
3. The adjusted difference in 2-hour post-load glucose levels at 3 months.

Secondary outcome

1. Differences in fasting glucose levels;
2. Insulin resistance;
3. Body mass index;
4. Percentage of patients with a normal glucose tolerance at 3 months.

Study description

Background summary

Abstract
Background Impaired glucose tolerance, an intermediate metabolic state between normal glucose tolerance and diabetes mellitus defined by 2-hour post-load glucose levels of 7.8-11.0 mmol/L, is associated with an increased risk of stroke in patients with cardiovascular disease. Intensive glucose control with oral antidiabetic drugs have been shown to reduce the diabetes incidence in patients with impaired glucose tolerance without cardiovascular disease. Whether pharmacotherapeutical intervention reduce the risk of cardiovascular events in patients with TIA or minor ischemic stroke and impaired glucose tolerance is unknown.
Aim To examine the safety, tolerability, and effect on glucose metabolism of metformin treatment in non-diabetic patients with TIA or minor ischemic stroke and impaired glucose tolerance.
Design This is a phase 2, randomized, controlled, open-label trial with blind outcome assessment among 40 non-diabetic patients with impaired glucose tolerance who recently had a TIA or minor ischemic stroke. Patients will be randomized for metformin or no oral antidiabetic drug on top of optimal standard treatment including lifestyle advice. The primary outcomes will be the safety, and tolerability of metformin treatment and the adjusted difference in 2-hour post-load glucose levels at 3 months between treatment groups. Secondary outcomes will be the difference in fasting glucose levels, insulin resistance, body mass index, and percentage of patients with a normal glucose tolerance. All analyses will be done according to the intention-to-treat principle.

Study objective

Metformin will be tolerated in patients with TIA or minor ischemic stroke and will result in blood glucose lowering.

Intervention

Patients will be randomized for metformin or no oral antidiabetic drug (open-label) on top of optimal standard treatment, including lifestyle advice aimed at weight reduction and regular physical exercise. Patients allocated to metformin will be treated with metformin for 3 months from the day of randomization until study end. They will start with a daily dose of 500 mg that will be slowly increased in one-month time to a daily dose of 2,000 mg in two gifts. All patients will be followed for 3 months.

Contacts

Public
Erasmus MC
Room Ee 22.42
Trial office - Section of Neurovascular Diseases
PO Box 1738
Rotterdam 3000 DR
The Netherlands
+31 10 4087818
Scientific
Erasmus MC
Room Ee 22.42
Trial office - Section of Neurovascular Diseases
PO Box 1738
Rotterdam 3000 DR
The Netherlands
+31 10 4087818

Eligibility criteria

Inclusion criteria

1. Men or women 18 years and over;
2. TIA/minor ischemic stroke (modified Rankin Score 3 or less) within 6 months;
3. Impaired fasting glucose (fasting glucose level of 5.6 to 6.9 mmol/L) and/or impaired

glucose tolerance (2-hour post-load glucose level of 7.8 to 11.0 mmol/L);
4. Informed consent

Exclusion criteria

1. Known or newly diagnosed diabetes mellitus;
2. Contraindication for metformin:
a. renal impairment (serum creatinine >135 micromol/L for men, and >110 micromol/L for women),
b. hepatic disease (liver enzymes increased twice the upper limit of normal), c. a past history of lactic acidosis,
d. cardiac failure requiring pharmacological therapy,
e. chronic hypoxic lung disease,
f. pregnancy,
g. breast feeding;
3. Severe comorbidity interfering with follow-up

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Masking:	Single blinded (masking used)
Control:	N/A , unknown

Recruitment

NL

Recruitment status:	Recruiting
Start date (anticipated):	01-02-2007
Enrollment:	40
Type:	Anticipated

Ethics review

Positive opinion

Date:	09-03-2007

Application type: First submission

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
NTR-new	NL905
NTR-old	NTR929
Other	:
ISRCTN	ISRCTN54960762

Study results