Metformin and sitagliptin in patients with impaired glucose tolerance and a recent TIA or minor ischemic stroke: A multicenter, randomized, open-label phase II trial.

No registrations found.

Ethical review	Positive opinion
Status	Recruitment stopped
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON25556

Source
NTR

Brief title
MAAS trial

Health condition

Stroke, transient ischemic attack, impaired glucose tolerance.

Herseninfarct, TIA, gestoorde glucose tolerantie.

Sponsors and support

Primary sponsor: Erasmus Medical Center
Source(s) of monetary or material Support: fund = initiator = sponsor

Intervention

Outcome measures

Primary outcome

1. Baseline adjusted difference in 2-hour post-load glucose levels at 6 months

Secondary outcome

1. Baseline adjusted difference in fasting glucose levels at 6 months
2. Baseline adjusted difference in glycosylated hemoglobin 1c (HbA1c) levels at 6 months
3. Tolerability of metformin and sitagliptin assessed as number of patients still on treatment after 6 months;
4. Safety of treatment with metformin and sitagliptin assessed as percentage of (serious) adverse events in the treatment groups at 6 months;
5. Percentage of patien2ts with a normal glucose tolerance at 6 months.

Study description

Background summary

Rationale:

Impaired glucose tolerance (defined as a 2-hour post load glucose level 7.8-11.0 mmol/L) is present in one third of the patients with a TIA or ischemic stroke, and is associated with a two-fold risk of recurrent stroke. Intensive glucose control with oral antidiabetic drugs have been shown to reduce the rate of progression to diabetes type II in patients with impaired glucose tolerance. Our recent study suggests that the widely used oral glucose-lowering drug metformin is safe and improves glucose tolerance in patients with TIA or minor ischemic stroke and impaired glucose tolerance, but often leads to gastro-intestinal side effects resulting in permanent discontinuation. The novel antidiabetic drug sitagliptin seems equally effective with fewer side effects in patients with impaired glucose tolerance.

Objective:

We aim to compare the effectiveness, feasibility and safety of both metformin and sitagliptin in patients with TIA or minor ischemic stroke and impaired glucose tolerance. We will assess whether a slow increase in dose of metformin and better support and information on this treatment will reduce the incidence of side effects in these patients, and whether it will improve treatment compliance.

Study design:

Phase 2, multicenter, randomized, controlled, open-label trial with blinded outcome assessment.

Study population:

Patients 18 years or older with recent (<6 months) TIA or minor ischemic stroke (mRS≤3) and impaired glucose tolerance.

Intervention:

Patients will be randomized to receive either open-label metformin or sitagliptin or “no metformin” in a 1:1:2 ratio for 6 months. Patients allocated to metformin will start with 500 mg twice daily, which will be slowly increased in 6-weeks time to a daily dose of two times 1000 mg. Patients allocated to sitagliptin will be treated with a daily dose of 100 mg.

Main study parameters/endpoints:

Primary outcome measures were baseline adjusted differences of 2-hour post-load glucose; secondary outcome measures fasting glucose, glycosylated hemoglobin 1c (HbA1c) levels, tolerability and safety of metformin and sitagliptin at 6 months.

Study objective

We aim to compare the effectiveness, feasibility and safety of both metformin and sitagliptin in patients with TIA or minor ischemic stroke and impaired glucose tolerance. We will assess whether a slow increase in dose of metformin and better support and information on this treatment will reduce the incidence of side effects in these patients, and whether it will improve treatment compliance.

Study design

At 2 weeks, 6 weeks and 3 months to record possible adverse events and to support continuation of treatment.
At 6 months to assess the primary and secondary outcome measures.

Intervention

Patients will be randomized to receive either open-label metformin or sitagliptin or “no

metformin” in a 1:1:2 ratio for 6 months. Patients allocated to metformin will start with 500 mg twice daily, which will be slowly increased in 6-weeks time to a daily dose of two times 1000 mg. Patients allocated to sitagliptin will be treated with a daily dose of 100 mg.

Contacts

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Eligibility criteria

Inclusion criteria

1. 18 years or older;

2. Clinical diagnosis of TIA, amaurosis fugax or minor ischemic stroke within the previous 6 months;

3. Impaired glucose tolerance (2-hour post-load glucose level 7.8-11.0mmol/L).

Exclusion criteria

1. Diabetes mellitus;

2. History of diabetic ketoacidosis;

3. Symptoms of type 1 diabetes mellitus;

4. Signs of renal impairment (creatinin of 135 µmol/L or higher for men, and 110 µmol/L or higher for women);

5. Known liver disease or disturbed liver function tests (alanine amino transferase, aspartate amino transferase, alkaline phosphatase, or γ glutamyl transferase increased to more than twice the upper limit of typical values);

6. History of lactic acidosis;

7. Heart failure requiring pharmacological therapy;

8. Pancreatitis;

9. Chronic hypoxic lung disease;

10. Use of digoxin;

11. Pregnancy;

12. Breast feeding.

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)
Control:	Active

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-01-2014
Enrollment:	100
Type:	Actual

IPD sharing statement

Plan to share IPD: Yes

Ethics review

Positive opinion

Date:	15-12-2011
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	NL3048
NTR-old	NTR3196
Other	Erasmus Medical Center : MAAS
ISRCTN	ISRCTN wordt niet meer aangevraagd.

Study results

Summary results
N/A