FATLOSE 2 trial (Fecal Administration To LOSE insulin resistance).

No registrations found.

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

Summary

ID

NL-OMON21653

Source
NTR

Brief title
FATLOSE2

Health condition

insulin resistance, obesity, gut microbiota, SCFA

Sponsors and support

Source(s) of monetary or material Support: Academic Medical Center (AMC)

Intervention

Outcome measures

Primary outcome

The primary endpoint is changes in weight in relation to fecal flora composition and short chain fatty acid metabolism in fecal samples after 3, 6, 12 and 18 weeks.

Secondary outcome

Secondary endpoints are changes in insulin resistance/fatty acid metabolism (assessed by

hyperinsulinemic euglycemic clamp and stable isotope glucose infusion) and postprandial lipid metabolism (mixed meal test) at baseline and after 6 and 18 weeks. Before each mixed meal test a subcutaneous adipose tissue biopsy will be obtained to assess phosphorylation status of the insulin signalling cascade in relation to metabolic genes (perilipin3). Finally, during positioning of duodenal tube, biopsies will be taken at baseline and after 6 & 18 weeks to study small intestine epithelium composition.

Study description

Background summary

Objective:

To investigate whether single vs multiple doses of fecal therapy by infusion of allogenic (lean donor feces in the bowel) or autologous (own feces) have differential effect on longterm reduction of insulin resistance, postprandrial dyslipidemia and short chain free fatty acid metabolism.

Study design:

Double blind randomized controlled single center trial.

Study Population:

Male obese patients with metabolic syndrome.

Treatment:

Patients will be randomised to one of the three treatment arms: Single (baseline) or multiple (at baseline and after 6 weeks) allogenic feces (infusion of lean donor feces by duodenal tube) or single autologous (own) feces at baseline.

Outcome measures:

The primary endpoint changes in fecal flora composition and shortchain fatty acid metabolism in fecal samples after 3, 6, 12 and 18 weeks. Secondary endpoints are changes

in insulin resistance/fatty acid metabolism (assessed by hyperinsulinemic normoglycemic clamp and stable isotope glucose) and postprandrial lipidmetabolism (mixed meal test) at baseline and after 6 and 18 weeks. Finally, changes in gutregulatory hormones in plasma (leptin, adiponectin and GLP-1) will be assessed.

Sample Size:

It is estimated that a total of 45 patients (15 MS patients per treatment arm) and 30 healthy lean volunteers are need.

Study objective

Recent research shows that obesity is associated with changed bowel flora composition with a relative abundance of the two dominant bacterial divisions, the Bacteroidetes and the Firmicutes. Interestingly, this specific bacteria associated condition is transmissible: colonization of obese mice with an 'leanmicrobiota' results in a significantly greater decrease in total body fat (-30%) than colonization with a 'obese microbiota' (+5%). In addition, Bacteroidetes species are decreased and Firmicutes increased in feces of obese people compared to lean people . We recently finished the FATLOSE trial, in which we studied the therapeutic effect of donor feces infusion from screened volunteers after 6 weeks on insulin resistance (hyperisulinemic clamp with stable isotopes) in male patients with metabolic syndrome. We found significant reduction in both periferal and hepatic insulin resistance implicating substantial effects of whole body glucose metabolism. Moreover, we found significant reductions in fasting lipidprofiles after allogenic fecal therapy, which are in line with previously published data suggesting a direct effect between duodenal lipid uptake and glucose production orchestrated by gutmicrobiota driven brain-gut axis. The efficacy of fecal therapy is explained by enhanced production of specific short chain free fatty acid butyrate produced by the infused lean donor feces, which probably restores normal fecal physiology by implantation of missing lean-figure flora components.

Study design

Baseline, 3, 6, 12 and 18 weeks.

Intervention

Patients will be randomised to one of the three treatment arms:

Single (baseline) or multiple (at baseline and after 6 weeks) allogenic feces (infusion of lean donor feces by duodenal tube) or single autologous (own) feces at baseline and after 6 weeks.

Contacts

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Eligibility criteria

Inclusion criteria

1. Male obese subjects with metabolic syndrome (n=45);

2. 21 to 69 years-old;

3. Body mass index (BMI) 30 to 43 kg/m2);

4. At least 3 out of 5 NCEP metabolic syndrome criteria.

Exclusion criteria

1. Cardiovascular event (MI or pacemaker implantation);

2. Use of medication including PPI and antibiotics;

3. (Expected) prolonged compromised immunity (due to recent cytotoxic chemotherapy or HIV infection with a CD4 count < 240).

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):	01-05-2011
Enrollment:	45
Type:	Anticipated

Ethics review

Positive opinion

Date:	18-01-2011
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	NL2580
NTR-old	NTR2705
Other	CCMO : 35474
ISRCTN	ISRCTN wordt niet meer aangevraagd.

Study results

Summary results
N/A