Effect of apple cider vinegar on delayed gastric emptying in people with type 1 diabetes mellitus.

No registrations found.

Ethical review	Not applicable
Status	Recruitment stopped
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON23269

Source
NTR

Brief title
N/A

Health condition

Type 1 diabetes mellitus, gastroparesis.

Sponsors and support

Primary sponsor: Malmö University Hospital.
Source(s) of monetary or material Support: This study was supported by grants from Malmö diabetes association Sweden.

Intervention

Outcome measures

Primary outcome

The effect of vinegar on the rate of gastric emptying was statistically significant (p <0.05).

Secondary outcome

N/A

Study description

Background summary

Diabetes mellitus is a growing problem globally and according to Swedish national guidelines does it affect 3-4 % (300000- 350000) of the Swedish population. Studies have shown that 30-50 % of diabetes patients have a delayed gastric emptying and this is believed to be, at least partially, due to vagal denervation caused by autonomic neuropathy. Delayed gastric emptying may cause poor glycemic control especially in those with preprandial antidiabetic treatment giving postprandial hypoglycaemia and symptoms from the gastro intestinal tract like postprandial nausea, vomiting, bloating and early satiety.

Studies have shown that vinegar reduces postprandial blood glucose in healthy subjects and it has been discussed whether this could be explained or not by a delayed gastric emptying. However, the effect of vinegar on gastric emptying in diabetic patients with gastroparesis has not been studied previously.

The aim of this study was therefore to evaluate the influence of vinegar on the gastric emptying in insulin-dependent diabetes mellitus patients with diabetic gastroparesis.

Study objective

The aim was to study the effect of apple cider vinegar on the rate of gastric emptying on insulin-dependent diabetes mellitus patients with diabetic gastroparesis.

Study design

N/A

Intervention

Gastric emptying rate (GER) was measured by standardized real time ultrasonography on the condition that fasting blood glucose was 3.5 to 9.0 mmol/l. Gastric emptying rate was calculated as the percentage change in the antral cross-sectional area 15 and 90 minutes after ingestion of 300 g rice pudding and two decilitres of water or 300 g rice pudding and two decilitres of water and 30 millilitres of apple cider vinegar. The subjects drank 200 ml water daily before breakfast one week before the measurement of GER. The same subjects drank 200 ml with 30 ml vinegar daily before breakfast for two weeks before the measurement of GER.

Contacts

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Eligibility criteria

Inclusion criteria

Type 1 diabetes patienets with diagnosed gastroparesis were included in the study.

Exclusion criteria

1. Renal failure;

2. Prior gastric outlet obstruction;

3. Connective tissue diseases.

Study design

Design

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

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-09-2002
Enrollment:	10
Type:	Actual

Ethics review

Not applicable

Application type:	Not applicable

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	NL976
NTR-old	NTR1004
Other	:
ISRCTN	ISRCTN33841495

Study results

Summary results

BMC Gastroenterol. 2007 Dec 20;7:46.

This study is one of five studies for a PhD graduation. One of the studies has been publicatied by The American Journal of Clinical Nutrition.