

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

Submission date

23/08/2007

Recruitment status

No longer recruiting

Registration date

23/08/2007

Overall study status

Completed

Last Edited

31/12/2020

Condition category

Nutritional, Metabolic, Endocrine

☐ Prospectively registered

☐ Protocol

☐ Statistical analysis plan

☒ Results

☐ Individual participant data

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

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Additional identifiers

Protocol serial number

NTR1004

Study information

Scientific Title

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

Study objectives

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.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Not provided at time of registration

Study design

Non-randomised cross over study. Patients are their own controls.

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Gastroparesis, diabetes mellitus type 1 (DM type I)

Interventions

Gastric emptying rate (GER) was measured by standardised 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.

Intervention Type

Drug

Phase

Not Specified

Drug/device/biological/vaccine name(s)

Apple cider vinegar

Primary outcome(s)

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

Key secondary outcome(s)

No secondary outcome measures

Completion date

01/09/2005

Eligibility

Key inclusion criteria

Type 1 diabetes patients with diagnosed gastroparesis

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Not Specified

Sex

Not Specified

Total final enrolment

10

Key exclusion criteria

1. Renal failure
2. Prior gastric outlet obstruction
3. Connective tissue diseases

Date of first enrolment

01/09/2002

Date of final enrolment

01/09/2005

Locations

Countries of recruitment

Netherlands

Sweden

Study participating centre

Department of Medicine

Malmo

Sweden

205 02

Sponsor information

Organisation

Malmö University Hospital (Sweden)

ROR

<https://ror.org/02z31g829>

Funder(s)**Funder type**

Research organisation

Funder Name

Malmö Diabetes Association (Sweden)

Results and Publications**Individual participant data (IPD) sharing plan****IPD sharing plan summary**

Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	20/12/2007	31/12/2020	Yes	No