ISRCTN00151053 https://doi.org/10.1186/ISRCTN00151053

REVISE-Diabesity: Randomisation to Endobarrier alone Versus with Incretin analogue in SustainEd Diabesity

Submission date
31/07/2013

Recruitment status
No longer recruiting

Registration date
31/07/2013

Overall study status
Completed

Last Edited
17/05/2021

Condition category
Nutritional, Metabolic, Endocrine

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Effective treatment options for combined diabetes and obesity, sometimes called diabesity, are fairly limited. There are diet and exercise lifestyle options, oral and injectable medications including insulin and Liraglutide (Victoza). Despite current treatment options, diabetes and weight often remain uncontrolled with high blood sugars and obesity. Surgery to reduce stomach size or bypass the intestine may be considered radical. The aim of this study is to find out if a new device called the Endobarrier is an effective treatment option for diabesity either alone or in combination with diabetes medications. We are also seeking to find out how the device works in reducing weight and improving diabetes control.

Who can participate?
Adult patients with type 2 diabetes and obesity can take part if they have tried at least 6 months' treatment with Liraglutide. Participants should be able to attend their local study centre (King's College Hospital, London; Guy's and St Thomas' Hospitals, London; City Hospital, Birmingham, Glasgow Royal Infirmary), so distance from these centres is a factor which may affect participation.

What does the study involve?
Participants will be randomly allocated to one of the following three treatments:
1. Endobarrier alone: Endobarrier implanted for 1 year, inserted and removed by endoscopic procedure. Liraglutide stopped for 2 years.
2. Endobarrier + Liraglutide: Endobarrier implanted for 1 year, inserted and removed by endoscopic procedure. Liraglutide continued for 2 years.
3. Liraglutide alone.
The hospital visits will take place at: City Hospital, Birmingham, King's College Hospital, London or Glasgow Royal Infirmary for routine diabetes care including checks of weight, body mass index, and blood tests. Additional tests will include blood tests, a telephone interview of dietary habits, and stool and urine tests that will be done to better determine how the device works. All patients will be asked to follow a standard diet (liquid/puree food) for the first 2 weeks written in a dietary information sheet that we will provide. For patients in the Endobarrier treatment

groups, they will fast on the day preceding the insertion, which will be done under general anaesthetic. During the procedure, the endoscopy doctor will gently pass an endoscope (a flexible telescope with a light at the end) through the patient's mouth until it is just beyond the stomach. X-rays will also be used to ensure the Endobarrier's position.

What are the possible benefits and risks of participating?
The possible benefits of taking part include an improvement in diabetes and reduction in weight in all treatment groups. It is possible that these benefits may be considerable. However, this cannot be guaranteed. The information we get from this study may help us to treat future patients with diabesity better. There are risks that the device may fail, move, become blocked, block the intestine, or cause bleeding or pain. The overall risk for this is low (<5%). If this occurs, another endoscopic procedure will be required to remove the device. Bleeding or perforation complications will usually become evident within a few hours of the procedure (abdominal pain) so patients will be observed following the procedure. If there is severe pain, bleeding or black tarry stool in the days following the procedure, the Emergency Department should be contacted (and inform the research team but this should not delay you attending the Emergency Department). It is possible that if the treatment is given to a pregnant woman it will harm the unborn child. Pregnant women must not therefore take part in this study, neither should women who plan to become pregnant during the study. Women who are at risk of pregnancy may be asked to have a pregnancy test before taking part to exclude the possibility of pregnancy. Women who could become pregnant must use an effective contraceptive during the course of this study. Any woman who becomes pregnant during the study should immediately tell her research doctor. In this trial, x-rays will be used to guide the Endobarrier device into place and check its position after insertion. We are all exposed to a background level of radiation from natural and artificial sources; the radiation received as part of this trial is equivalent to about 3 years' worth of this background radiation. It is similar to the maximum dose that someone working with radiation is allowed to receive each year. There is a small risk to patients from this radiation: the likelihood of detrimental effects is estimated to be 1 in 2,500. This small risk is considered to be acceptable when compared with the potential benefits from having the device fitted.

Where is the study run from?
The lead site is City Hospital, Birmingham (the sponsor is Sandwell and West Birmingham Hospitals NHS Trust, which is organising and overseeing it). Other locations are London and Glasgow.

When is the study starting and how long is it expected to run for?
The study began recruiting patients in June 2013 and the first study-related Endobarrier insertion procedure was done in July 2013. The study is expected to finish in November 2015.

Who is funding the study?
The research is funded by the Association of British Clinical Diabetologists (ABCD). The research team is not funded by the device manufacturers.

Who is the main contact?
Dr Piya Sen Gupta - Research Fellow
piya.sengupta@nhs.net

Study website
http://www.diabetologists-abcd.org.uk/Research/endobarrier_study.htm

Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

EudraCT/CTIS number
2012-004988-42

IRAS number

ClinicalTrials.gov number
NCT02055014

Secondary identifying numbers
14147

Study information

Scientific Title
REVISE-Diabesty: Randomisation to Endobarrier alone Versus with Incretin analogue in SustainEd Diabesity

Acronym
REVISE-Diabesity

Study objectives
Methodology: open label multicentre randomised controlled clinical trial (RCT) involving the use of a novel device (Endobarrier) that achieves 60cm of duodeno-jejunal exclusion and can improve metabolic and weight control without surgery in obese type 2 diabetic (T2DM) patients failing to achieve treatment targets with their current therapy.

Seventy-two patients with T2DM and obesity (HbA1c>=7.5%, BMI>=35kg/m2) with at least 6 months' liraglutide treatment, will be recruited from the following NHS centres: City Hospital,

Birmingham; Kings College Hospital; Guys and St Thomas Hospitals and Glasgow Royal Infirmary. Enrolled patients will be studied over 24 months (seen every 3 months) and randomised to receive one of:
1. Control group: increase Liraglutide dose 1.2mg to 1.8mg
2. Endobarrier alone group: stop Liraglutide therapy, undergo Endobarrier insertion
3. Endobarrier+Liraglutide group: continue Liraglutide 1.2mg, undergo Endobarrier insertion

We will establish the mechanisms of action and their time course by repeated measures of: 1. glycated haemoglobin; weight; BMI, waist and neck circumference; 2. fasting glucose, insulin, c-peptide and HOMA-IR; 3. Imaging of liver and pancreas fat stores (MRI, ultrasound, dual energy CT) and 4. the insulin, c-peptide, incretin and bile acid response to a mixed meal challenge; 5. Stool microbiota; calprotectin and intestinal permeability and absorption.

Objectives:
1. To assess, in an NHS setting, the metabolic effectiveness of Endobarrier alone versus combined Endobarrier-Liraglutide therapy in patients with obesity and type 2 diabetes mellitus (T2DM) who remain overweight and with suboptimal glycaemic control despite Liraglutide treatment
2. To understand the mechanisms of action of Endobarrier by assessing the biological response to its placement.

Hypothesis: the combined Endobarrier-Liraglutide treated patients will maintain lower HbA1c better than the Endobarrier without Liraglutide patients.

Ethics approval required
Old ethics approval format

Ethics approval(s)
NRES Committee West Midlands - Edgbaston, First MREC approval date 02/01/2013, ref: 12/WM/0408

Study design
Interventional open label multicentre randomised controlled clinical trial; Design type: Treatment

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Treatment

Participant information sheet
Not available in web format, please use the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied
Topic: Diabetes Research Network; Subtopic: Type 2; Disease: Diabetic Control, Device studies, Metabolic, Obesity

Interventions
1. Endobarrier alone, Endobarrier implanted for 1 year, inserted and removed by endoscopic procedure. Liraglutide stopped for 2 years.
2. Endobarrier+Liraglutide, Endobarrier implanted for 1 year, inserted and removed by endoscopic procedure. Liraglutide continued for 2 years (for the first year, combined with Endobarrier).
3. Liraglutide 1.8mg, Active Control Group

Follow Up Length: 24 months

Study Entry : Single Randomisation only

Secondary address for contact:
King's College London
Research Fellow Office
3rd Floor - Diabetes
WEC, 10 Cutcombe Road
London SE5 9RS
United Kingdom

Intervention Type
Drug

Phase
Phase IV

Drug/device/biological/vaccine name(s)
Liraglutide

Primary outcome measure
HbA1c; Timepoints: End of Study & interim 0, 6, 12 months

Secondary outcome measures
1. Fasting Insulin Resistance; Timepoints: Day 0, 2, 4, 7 implant; day 0, 2, 4, 7 explant and end of study
2. Gut microbiota, stool calprotectin, intestinal permeability and absorption; Timepoints: 0, 6 & 18 months 3. 3. Hepatic and pancreatic fat stores; Timepoints: 0, 3 months
4. Insulin, Bile Acids, Gut Peptides, Adipokines response to meal; Timepoints: Day 0, 7 implant; Day 0, 7 explant & end of study
5. Nutrition & Food Group Evaluation; Timepoints: 0, 1 year & end of study
6. Quality of Life Evaluation (EQ-5D); Timepoints: 0, 1 year & end of study
7. Weight, BMI; Timepoints: End of Study & interim at 6 months and 1 year

Overall study start date
10/06/2013

Completion date

30/11/2015

Eligibility

Key inclusion criteria
1. Participation in the Association of British Clinical Diabetologists' Nationwide Liraglutide Audit with data for at least 6 months
2. Type 2 diabetes with latest HbA1c >/=7.5%
3. Obesity with body mass index (BMI) >=35kg/m2 (or >=30kg/m2 for South Asian origin patients)
4. Treatment with liraglutide for at least 6 months with baseline and follow-up HbA1c and weight data available*. Stable weight and HbA1c in preceding 3 months (<3kg reduction in weight and <0.3% reduction in HbA1c).
5. Target Gender: Male & Female ; Lower Age Limit 18 years

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
UK Sample Size: 72

Key exclusion criteria
1. <18 years of age
2. Abnormal intestinal anatomy
3. Contraindication to oesophago-gastroduodenoscopy
4. Previous bariatric surgery or bowel surgery
5. Active infection or C-reactive protein (CRP)>10mg/dL
6. Anticoagulation therapy which cannot be discontinued/ coagulopathy INR>1.3
7. Estimated Glomerular Filtration Rate (eGFR)<30
8. Known portal hypertension
9. Previous pancreatitis or amylase >3 times the upper limit of normal
10. Uncontrolled cardiovascular disease
11. Lactating or pregnant females
12. Patients taking aspirin in whom it should continue (e.g. active ischaemic heart disease or cerebrovascular disease)

Date of first enrolment
10/06/2013

Date of final enrolment
30/11/2014

Locations

Countries of recruitment
England

Scotland

United Kingdom

Study participating centre
City Hospital Birmingham
Birmingham
United Kingdom
B18 7QH

Study participating centre
King's College Hospital
London
United Kingdom
SE5 9RS

Study participating centre
Guy's and St Thomas' Hospital
London
United Kingdom
SE1 7EH

Study participating centre
Glasgow Royal Infirmary
Glasgow
United Kingdom
G4 0ET

Sponsor information

Organisation
Sandwell and West Birmingham Hospitals NHS Trust (UK)

Sponsor details

Lyndon
West Bromwich
England
United Kingdom
B71 4HJ
-
swbh.randd@nhs.net

Sponsor type
Hospital/treatment centre

Website
https://www.swbh.nhs.uk/

ROR
https://ror.org/05mzf3276

Funder(s)

Funder type
Research council

Funder Name
Association of British Clinical Diabetologists (ABCD)

Results and Publications

Publication and dissemination plan
13/04/2018: The results were presented at the Endocrine Society's 98th Annual Meeting and Expo 2016: http://press.endocrine.org/doi/abs/10.1210/endo-meetings.2016.DGM.19.SAT-690

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No