

For haemorrhoids that are considered appropriate surgery, does radiofrequency ablation reduce short-term pain, and prevent long-term recurrence compared to current recommended interventions?

Submission date 17/12/2021	Recruitment status No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 17/12/2021	Overall study status Completed	<input checked="" type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 17/12/2025	Condition category Surgery	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Piles (also referred to as haemorrhoids) are very common and in some cases require surgery. There are multiple types of operations to treat the piles however, none are perfect. Some are good at curing the piles but can leave lasting damage to the body. Others may be less painful but the piles may return. There are 'newer' treatments, but these are more expensive than the traditional treatments.

One new treatment for piles is called radiofrequency ablation. This works by using radio waves that destroy the pile. There has been a small amount of testing done on this new treatment, but more testing is needed. From the testing that has been done, we know that it is safe, not too painful and patients recover from the surgery quickly. However, not enough research has been done on this treatment for us to confirm this. Therefore, the purpose of this study is to test if radiofrequency ablation is at least as good as the traditional surgeries for curing piles and at the same time easier for the patient to recover from. If it is, these results could help inform the NHS that this treatment is worth the money, which could help future patients.

Who can participate?

Adult patients who are going to undergo surgery for piles at NHS hospitals

What does the study involve?

Participants will be randomly assigned to have either the new radiofrequency ablation surgery or whatever other type of operation that the surgeon thinks is best. The patient will not know which surgery they have had. After their surgery, each patient will be followed up at numerous time points, up to a year after surgery, to see how they are recovering.

What are the possible benefits and risks of participating?

There are no guaranteed benefits to participating in this research. Participants will receive the

appropriate health care by their consultant whether they choose to participate in the study or not. We do not know which type of surgery will be better in the long term. This is the reason for doing this research. By taking part in this study, participants will be directly helping us to inform the treatment of future patients diagnosed with haemorrhoids that need surgical treatment. All treatments offered in the trial are routinely offered in the NHS; both would be options offered to participants if they did not take part in the trial and are considered to be safe treatments. Although, RFA is not available in all NHS Trusts. There are possible side effects to all surgical treatment options for haemorrhoids, as well as possible side effects of anesthetic. These are listed in the Participant Information Sheet or by talking to your care team. Participants will be asked to give up some of their time to answer the follow-up questions, they may also be asked some sensitive questions about their symptoms.

Where is the study run from?

Sheffield Teaching Hospitals NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?

July 2021 to June 2025

Who is funding the study?

National Institute for Health Research (NIHR) (UK).

Who is the main contact?

Prof Steven Brown, steven.brown13@nhs.net

Study Team, orion@sheffield.ac.uk

Contact information

Type(s)

Scientific

Contact name

Prof Steven Brown

Contact details

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Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

Integrated Research Application System (IRAS)

300449

Protocol serial number

CPMS 50709, NIHR131861, IRAS 300449

Study information

Scientific Title

RadiO fRequency ablatiON for haemorrhoids (ORION)

Acronym

ORION

Study objectives

Radiofrequency ablation will be non-inferior to other current surgical techniques for treating haemorrhoids, and superior in terms of recurrence and pain.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 13/12/2021, London Queen Square REC (Level 3, Block B, Whitefriars, Lewins Mead, Bristol, BS1 2NT, UK; +44 2071048109; queensquare.rec@hra.nhs.uk), ref: 21/LO/0762

Study design

Interventional randomized controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Haemorrhoid surgery

Interventions

Potential patients will be referred to a NHS recruiting centre for the treatment of grade II/III haemorrhoids.

Potential patients will fall into two groups:

1. Patients that present to the surgical outpatient clinic that have symptomatic haemorrhoids. They will have failed conservative therapies and therefore the treatment suggested would be office therapy such as Rubber Band Ligation (RBL) and would therefore likely be an example of grade II haemorrhoids. If the RBL treatment fails, they will be offered entry into the trial.
2. Patients that present to the surgical outpatient clinic with symptomatic haemorrhoids but are considered unsuitable for office therapies such as RBL. These patients would be considered to have grade III haemorrhoids. They will also have failed conservative therapies. These patients will be offered into the trial.

These patients will be identified and a participant information sheet will be posted to them. The patient will attend an outpatient clinic visit where their eligibility for the trial will be assessed. If the patient chooses to take part, informed consent will be taken by research personnel. If the patient is consented onto the study, baseline measures will be taken via questionnaires asked by the research staff in clinic.

Alternatively, patients can be recruited via postal consent. A PIS will be posted out these patients, in addition to two copies of the postal consent form (one for the patient to keep and one to post back to the research team). Once the patient has read the PIS, after 24 hours, if the patient agrees to take part in the trial, they will sign both copies of the consent form. Once the signed consent form has been returned, a member of the delegated research team will call the patient to complete the postal consent review form. The research team may also call the patient prior to receiving the consent form to answer any questions.

Patients will then be randomised into one of the two treatment groups: Radiofrequency Ablation or the surgeon's choice of treatment (Haemorrhoidectomy, Staple Haemorrhoidectomy or Haemorrhoidal Artery Ligation). The baseline measures asked will be asked on the day of surgery due to the wait time between consent and surgery potentially leading to changes in the patient's responses.

Participants will be asked to complete follow-up questionnaires on day 1, 7 and 21 following their intervention via telephone or postal self-report assessment.

Six weeks after their surgery, participants will attend a routine clinic visit. The timing of this follow-up may vary based upon appointment availability at the individual collaborating centres.

Twelve months after the intervention, the participant will complete the final set of follow-up questionnaires via telephone or postal self-report assessment. Also at twelve months, a member of the research team will write to the participant's GP and check their medical notes for information on further haemorrhoid treatment as a supplement to this follow-up. The patient's surgeon will also be asked about any further treatment.

Intervention Type

Other

Primary outcome(s)

1. Recurrence at 12 months post procedure measured using patient records
2. Pain measured by Numeric Pain Rating Scale (NPRS) daily over 7 days post procedure

Key secondary outcome(s)

1. Pain is measured by the 'Numeric Pain Rating Scale' at baseline (day of surgery), 1 day, 7 days, 21 days 6 week and 1 year post procedure
2. Incontinence score is measured by Vaizey incontinence score baseline (day of surgery), 6 weeks post surgery, 1 year post surgery
3. Quality of life measured by EQ5D: baseline (day of surgery), 1 day, 7 days, 21 days 6 week and 1 year post procedure
4. Severity of haemorrhoid measured by haemorrhoid severity score baseline (day of surgery), 6 weeks post surgery, 1 year post surgery
5. Operation details: day of surgery
6. Recurrence of symptoms measured by complications review interview; 6 weeks post surgery, 1 year post surgery
7. Economic impact: days of work lost questionnaire: 6 weeks post surgery, 1 year post surgery
8. Recurrence of hemorrhoid measured by a triangulation of participant question based on Hubble Trial, surgeons questionnaire and GP questionnaire; week 6 post surgery and 1 year post surgery
9. Haemorrhoid severity measured by clinical appearance at proctoscopy: 6 weeks post surgery

Completion date

30/06/2025

Eligibility

Key inclusion criteria

Current inclusion criteria as of 15/07/2022:

1. Adults aged 18 years or over with symptomatic grade II or grade III haemorrhoids
2. And patients who have failed conservative management for haemorrhoids (diet and lifestyle changes) and want further intervention
3. And/or patients who have failed either one episode of Rubber Band Ligation (RBL) or have grade III haemorrhoids considered inappropriate for RBL treatment and/or have grade II or III haemorrhoids which the surgeon feels operative intervention is appropriate

Previous inclusion criteria:

1. Adults aged 18 years or over with symptomatic grade II or grade III haemorrhoids
2. And patients who have failed conservative management for haemorrhoids (diet and lifestyle

changes) and want further intervention

3. And patients who have failed either one episode of Rubber Band Ligation (RBL) or have grade III haemorrhoids considered inappropriate for RBL treatment

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Mixed

Lower age limit

18 years

Upper age limit

99 years

Sex

All

Total final enrolment

384

Key exclusion criteria

1. Patients with known perianal sepsis, inflammatory bowel disease, anal or colorectal malignancy, pre-existing sphincter injury
2. Patients with an immunodeficiency (HIV or other medical issue)
3. Patients who are unable to have general or spinal anaesthetic
4. Patients currently taking Warfarin, Clopidogrel or any other hypercoagulability condition
5. Pregnant women
6. Patients with a pacemaker
6. Patients unable to give full informed consent
7. Patients previously randomised to this trial
8. Patients participating in any other clinical trial

Date of first enrolment

01/03/2022

Date of final enrolment

31/01/2024

Locations

Countries of recruitment

United Kingdom

England

Wales

Study participating centre

Northern General Hospital

Sheffield Teaching Hospitals NHS Foundation Trust

Herries Road

Sheffield

England

S5 7AU

Study participating centre

Queens Hospital

Barking, Havering and Redbridge University Hospitals NHS Trust

Rom Valley Way

Romford

England

RM7 0AG

Study participating centre

Darent Valley Hospital

Dartford and Gravesham NHS Trust

Darent Wood Road

Dartford

England

DA2 8DA

Study participating centre

Basingstoke and North Hampshire Hospital

Hampshire Hospitals NHS Foundation Trust

Aldermaston Road

Basingstoke

England

RG24 9NA

Study participating centre

Queen Elizabeth Hospital

University Hospitals Birmingham NHS Foundation Trust

Mindelsohn Way

Edgbaston

Birmingham
England
B15 2GW

Study participating centre
Basildon Hospital
Nethermayne
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SS16 5NL

Study participating centre
University College London Hospital
250 Euston Road
London
England
NW1 2PG

Study participating centre
Aintree University Hospital
Lower Lane
Liverpool
England
L9 7AL

Study participating centre
University Hospital of Wales
Heath Park
Cardiff
Wales
CF14 4XW

Study participating centre
Kings College Hospital
Mapother House
De Crespigny Park
Denmark Hill
London
England
SE5 8AB

Study participating centre
Royal Blackburn Hospital
Haslingden Road
Blackburn
England
BB2 3HH

Study participating centre
North Tyneside General Hospital
North Tyneside General Hospital
Rake Lane
North Shields
England
NE29 8NH

Study participating centre
Poole Hospital
Longfleet Road
Poole
England
BH15 2JB

Study participating centre
Bolton Royal Hospital
Minerva Road
Farnworth
Bolton
England
BL4 0JR

Study participating centre
Torbay Hospital
Newton Road
Torquay
England
TQ2 7AA

Study participating centre

West Middlesex University Hospital

Twickenham Road
Isleworth
England
TW7 6AF

Study participating centre**Leigh Infirmary**

The Avenue
Leigh
England
WN7 1HS

Study participating centre**Countess of Chester Hospital**

Countess of Chester Health Park
Liverpool Road
Chester
England
CH2 1UL

Study participating centre**St Helens Hospital**

St. Helens Hospital
Marshalls Cross Road
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Sponsor information**Organisation**

Sheffield Teaching Hospitals NHS Foundation Trust

ROR

<https://ror.org/018hjpz25>

Funder(s)

Funder type

Government

Funder Name

NIHR Evaluation, Trials and Studies Co-ordinating Centre (NETSCC)

Funder Name

National Institute for Health Research (NIHR) (UK)

Alternative Name(s)

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type

Government organisation

Funding Body Subtype

National government

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are/will be available upon request. The dataset will be stored at the University of Sheffield on a secure network. Details of the data sharing requirements are not yet available. Various details of the dataset will be included in the publication.

IPD sharing plan summary

Available on request, Stored in non-publicly available repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		09/11/2022	10/11/2022	Yes	No
HRA research summary			28/06/2023	No	No
Participant information sheet	version 1.1	12/11/2021	17/12/2021	No	Yes
Protocol file	version 1.2	15/12/2021	17/12/2021	No	No
Protocol file	version 1.4	19/04/2022	15/07/2022	No	No
Protocol file	version 3.2	03/08/2023	01/03/2024	No	No
Protocol file	version 3.3	30/07/2024	06/03/2025	No	No

Statistical Analysis Plan	version 4.0	08/02/2023	01/03/2024	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes