

Surgical wounds healing by secondary intention

Submission date 10/12/2015	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 10/12/2015	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 20/09/2023	Condition category Skin and Connective Tissue Diseases	<input type="checkbox"/> Individual participant data

Plain English summary of protocol

Background and study aims

More than ten million operations happen in the UK every year. Many operations require a cut to be made in the body through which the surgery can be performed (surgical incision), and these cuts are often closed by a surgeon using stitches or staples. In some cases however, surgical wounds may break open or may be left to heal from the bottom up (open wounds). Wound dressings are commonly used to protect wounds from infection and help the healing process, however the type of dressing that is most effective is widely debated. Negative pressure wound therapy (NPWT) is a technique which involves applying gentle suction to the surface of the wound as it heals. This generally involves a specially designed, sealed dressing being applied to the wound, which is connected to a vacuum pump. The vacuum pump applies continuous negative pressure (sucking) which draws fluid out of the wound and increases blood flow to promote healing. In the future, there are plans to set up a large study to find out which treatment works best: wound dressings or negative pressure wound therapy. This study will take place first to make sure a large study would be possible and would give us the answers needed.

Who can participate?

Adults with open wounds following surgery which are suitable for NPWT.

What does the study involve?

Participants are randomly allocated to one of two groups. Participants in the first group receive negative pressure wound therapy (NPWT). Participants in the second group receive usual care which is likely to be wound dressings. Participants in both groups are followed up for three months. This includes weekly or fortnightly assessments with the research nurse to document wound changes, using photographs and a tracing of the wound. Participants are also asked to complete short questionnaires at 2 weeks, 1 month and 3 months which include, at most, an assessment of pain, health and wellbeing, quality of life and medical resource use. Weekly text messages are also sent to request information from participants regarding their current pain levels in relation to their surgical wound.

What are the possible benefits and risks of participating?

There is no direct benefit to the participants taking part in this study. NPWT and wound dressings are often used in clinical care and therefore the associated risks are minimal. Use of

NPWT should not be uncomfortable, however continued monitoring will be completed as per clinical practice. Side effects, although uncommon, will also be monitored during the study to assess patient safety.

Where is the study run from?

Three NHS hospitals in the Yorkshire area (UK)

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

November 2015 to May 2016

Who is funding the study?

National Institute for Health Research (UK)

Who is the main contact?

Miss Catherine Arundel

Contact information

Type(s)

Public

Contact name

Miss Catherine Arundel

Contact details

York Trials Unit

Heslington

York

United Kingdom

YO10 5DD

Additional identifiers

Protocol serial number

20202

Study information

Scientific Title

Surgical Wounds Healing by Secondary Intention (SWHSI): a pilot randomised controlled trial comparing negative pressure wound therapy and usual care for surgical wounds healing by secondary intention

Acronym

SWHSI

Study objectives

More than ten million operations happen in the UK every year. Many operations need a cut to be made and these cuts are often closed by a surgeon using stitches or staples. In some cases however the wounds may break open or may be left to heal from the bottom up.

Dressings or a vacuum pump (called negative pressure wound therapy) are often used to protect the open wound and help it to heal, but we are not sure which of these methods is best to use. In the future, we plan to set up a large trial to find out which treatment works best. This study will take place first to make sure a large study would be possible and would give us the answers we need it to.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Yorkshire and Humber – Leeds East Research Ethics Committee, 08/10/2015, ref: 15/YH/0370

Study design

Pilot feasibility randomized parallel trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Topic: Surgery; Subtopic: Surgery; Disease: All Surgery

Interventions

Participants are randomly allocated to one of two groups.

Group 1: Participants are treated using negative pressure wound therapy (NPWT). This is a vacuum pump which applies gentle suction to a wound. This study will use two types of product routinely used in acute and community settings in Hull and Leeds (VAC (KCI) and Renasys (Smith and Nephew) both of which are CE marked devices. NPWT will be delivered as per normal practice. The only requirement is that use of NPWT is clinically appropriate.

Group 2: Participants are treated using usual care. This is likely to include a dressing in contact with the wound and a secondary dressing over that. The frequency of dressing changes will continue as per standard practice.

Participants in both groups are followed up on a weekly or fortnightly basis for a duration of 3 months by the research nurse to assess changes to the wound.

Participants in both groups will be asked to complete short questionnaires at 2 weeks, 1 month and 3 months which include, at most, an assessment of pain, health and wellbeing, quality of life and medical resource use. Weekly text messages will also be sent to request information from participants regarding their current pain levels in relation to their surgical wound.

Intervention Type

Other

Primary outcome(s)

Time to healing is assessed by clinical assessment of the wound on a weekly basis with date of healing recorded when clinical assessment is that the wound has full epithelialisation and wound healing treatments have ceased.

Key secondary outcome(s)

Assessment of data collection methods for a larger study are assessed on an ongoing basis throughout the study duration.

Completion date

31/05/2016

Eligibility

Key inclusion criteria

1. Aged 18 years or over
2. Receiving care from either within Hull and East Yorkshire, Leeds Teaching Hospitals or from Leeds Community Healthcare NHS Trusts
3. Surgical Wounds Healing by Secondary Intention (SWHSI) who could reasonably be treated with either NPWT (Negative Pressure Wound Therapy) or wound dressings, where SWHSI is defined as an open surgical wound not healing by primary intention but from the 'bottom up'
4. The wound should be considered ready for NPWT treatment (i.e. Contain at least 80% viable tissue or have only a very thin layer of slough requiring no further debridement)
5. The patient should be receiving adequate nutrition, as assessed by the senior nurse responsible for nursing care
6. Patients who are able to give informed consent

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Key exclusion criteria

1. Inability to provide informed consent
2. People with very limited life expectancy e.g. undergoing end stage palliative care
3. Active systemic infection at baseline, defined by clinical and/or laboratory assessment
4. People already receiving Negative Pressure Wound Therapy (NPWT) (or who have received NPWT on their current surgical wound healing by secondary intention (SWHSI))
5. People who have received NPWT whilst in theatre for the surgery relating to their SWHSI
6. People without adequate haemostasis and who are at risk of bleeding

7. People with the following wound characteristics:

7.1. Presence of unclear undermining in the wound cavity, precluding the use of topical negative pressure therapy (i.e., the deepest point of the wound cannot be measured)

7.2. Necrotic tissue and/or eschar present

7.3. Malignant tissue in the wound

7.4. Wounds involving exposed blood vessels and/or organs, anastomotic sites and/or nerves (including the "open abdomen" where the abdominal fascia is open)

7.5. Wounds situated where, in the opinion of the treating clinician, a vacuum seal cannot be obtained

7.6. Chronic wounds such as pressure ulcers or foot ulcers that were non surgical in origin but which have been surgically debrided (we regard these as a very different subgroup)

7.7. People who are unwilling to have photographs taken of their wound

7.8. People who are currently participating in another research study or who have participated within the last 4 weeks

Date of first enrolment

24/11/2015

Date of final enrolment

31/05/2016

Locations

Countries of recruitment

United Kingdom

England

Study participating centre

Hull Royal Infirmary

Hull and East Yorkshire NHS Hospitals Trust

Anlaby Road

Hull

United Kingdom

HU3 2JZ

Sponsor information

Organisation

Hull and East Yorkshire Hospitals NHS Trust

ROR

<https://ror.org/01b11x021>

Funder(s)

Funder type

Government

Funder Name

National Institute for Health Research

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

Not provided at time of registration

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	23/04/2018	29/01/2019	Yes	No
Protocol article	protocol	08/11/2016		Yes	No
Funder report results		01/09/2020	04/01/2023	No	No
HRA research summary			20/09/2023	No	No
Other publications	feedback from research nurses	01/11/2020	08/09/2020	Yes	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes