

Proactive against reactive treatment for lichen sclerosus

Submission date	Recruitment status	[X] Prospectively registered
09/01/2024	Recruiting	[X] Protocol
Registration date	Overall study status	[] Statistical analysis plan
08/03/2024	Ongoing	[] Results
Last Edited	Condition category	[] Individual participant data
15/01/2026	Skin and Connective Tissue Diseases	[X] Record updated in last year

Plain English summary of protocol

Background and study aims

Lichen sclerosus (LS) is a long-term, itchy and distressing condition affecting vulval skin (the skin around the outside of the vagina). It needs ongoing treatment with steroid creams to manage flares of symptoms. If untreated, it may lead to scarring causing the labia minora (inner lips) to fuse together or the entrance to the vagina to narrow. People with LS are at higher risk of developing vulval cancer. Vulval LS can affect everyone, but most commonly children and women of any age, particularly women who have gone through the menopause and children before puberty. This study will try to find out what is the best way to manage future flares of LS: using a steroid treatment regularly (e.g. twice a week), even when symptoms are controlled OR using a steroid cream only during a flare.

Who can participate?

Female patients with LS aged 5 years and over

What does the study involve?

Participants are randomly allocated to either use their steroid cream twice a week or to only use it if they experience symptoms. The researchers will compare how many people in each group develop LS flares. With the optional consent of the participant/parent/guardian, photographs will be taken at baseline to check if scarring worsens during the trial. The researchers will follow patients for 2 years to gather data. With participants' consent (optional), the researchers will check their medical records at a later stage (after the trial ends) to see how many patients in each treatment group develop cancer. They will conduct an optional qualitative study and interview patients (those who consented to participate in qualitative sub-study) to explore how they feel about the trial and the different ways of treating LS that we are testing. The researchers will also compare the costs and outcomes of the two treatments used in the trial to see if one is better value for money for the NHS. If successful, the study results will be used to change clinical practice for the treatment of patients with LS.

What are the possible benefits and risks of participating?

The study treatment involves topical steroid ointment/cream, which is normally prescribed to patients as their routine care for LS. The only difference between the study treatment and the routine care may be the treatment regimen. It is, therefore, believed that the risk associated

with the study due to the intervention is negligible. Participants will be asked to attend research appointments. Every effort will be made to coincide these appointments with participants' clinical appointments.

Safety data will be collected for the duration of participation and will be reported as per sponsor guidelines. Although the steroid treatment can be safely applied to the whole body in a single dose with minimal risk of adverse reactions, there is however a risk of adverse reactions following long-term use of topical corticosteroid on localised areas of skin (e.g. skin thinning, telangiectasia). These will be monitored during clinical examination at follow-up visits (or at an unscheduled trial visit, as necessary).

Where is the study run from?

Nottingham Clinical Trials Unit (UK)

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

March 2023 to March 2028

Who is funding the study?

NIHR Health Technology Assessment Programme (UK)

Who is the main contact?

PEARLS study team, PEARLS@nottingham.ac.uk

Contact information

Type(s)

Scientific, Principal investigator

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Public

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Dr PEARLS Study Team

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Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

Integrated Research Application System (IRAS)

1008267

ClinicalTrials.gov (NCT)

Nil known

Protocol serial number

23055, CPMS 61122

Study information

Scientific Title

Proactive against reactive therapy for the prevention of lichen sclerosus exacerbation and progression of disease – a pragmatic, parallel group randomised controlled trial with embedded economic evaluation and process evaluation

Acronym

PEARLS

Study objectives

Primary objective:

Compare the clinical and cost-effectiveness of a twice-weekly topical corticosteroid maintenance strategy (proactive therapy) with as-required treatment (reactive therapy) in the management of vulval lichen sclerosus (LS)

Secondary objectives:

1. Assess the effectiveness of proactive versus reactive use of topical corticosteroids (TCSs) over 24 months in reducing disease progression
2. Assess the clinical effectiveness of proactive versus reactive strategies for the management of vulval LS for up to 24 months
3. Assess the safety of using potent and superpotent TCSs in the vulval area over 24 months
4. Assess the cost-effectiveness of the two treatment strategies
5. Understand the acceptability of reactive and proactive long-term treatment strategies and the barriers and facilitators to continuing with prescribed treatment

Ethics approval required

Ethics approval required

Ethics approval(s)

Study design

Open randomized controlled parallel-group trial

Primary study design

Interventional

Study type(s)

Efficacy, Safety

Health condition(s) or problem(s) studied

Vulval lichen sclerosis

Interventions

In the intervention group participants will be asked to apply potent or superpotent topical corticosteroid (TCS) on two non-consecutive days per week even in the absence of symptoms (proactive treatment). In the comparator group participants will be asked to apply potent or superpotent TCS as required to treat a LS flare (reactive treatment).

Eligible patients will be individually allocated in a 1:1 ratio to either proactive or reactive use of TCS. Treatment will be assigned randomly using a minimisation algorithm with a random element, balancing across groups on the recruiting site, age, time since last flare and strength of prescribed TCS.

The choice of TCS will be according to the patient's usual care. PEARLS is a pragmatic trial, and the researchers will test the strategy of proactive vs reactive treatment using the potency of topical corticosteroid recommended by the treating clinician (potent or superpotent). There are several generic names available for these prescribed TCSs and all available brands and forms can be prescribed. The examples of the most commonly prescribed brands/products of the TCS class are:

1. Dermovate ointment - superpotent TCS
2. Elocon® 0.1% w/w ointment - potent TCS

The topical dosage of TCSs for both trial groups will be recommended in Fingertip Units (FTU) depending upon the area affected by LS (typically 0.5-1 FTU). FTU is the amount of topical steroid (ointment or cream) that is applied along an adult's fingertip to the first crease in the finger. One FTU is sufficient to treat an area of skin twice the size of the flat of an adult's hand with the fingers together (i.e. a 'handprint'). FTU is also used to treat an area of skin on a child. The treating physician will advise on the dosage for adults or children.

Intervention Type

Drug

Phase

Phase IV

Drug/device/biological/vaccine name(s)

Topical Corticosteroid (TCS)

Primary outcome(s)

Number of flares over 12 months. Flare is defined as the worsening of symptoms requiring increased application of TCS, measured via text/app/email reminders every 2 weeks for 12 months.

Key secondary outcome(s)

Clinical effectiveness:

1. Progression of scarring, assessed by a blinded assessor at 12 and 24 months by comparing the post-randomisation assessment to baseline photographs (if patients consented), or assessed clinically if consent has not been given for photographs:
 - 1.1. Adults: scarring worsened (yes/no).
 - 1.2. Children and adolescents: failure of normal vulval development (clinical assessment) and/or evidence of scarring (yes/no)
2. Vulval Architectural Severity Scale (VASS) at 12 and 24 months post-randomisation, assessed clinically
3. Time to first flare, measured via text/app/email reminders at the point of first flare
4. Clinician global severity assessment of LS using a 5-point ordinal scale at 3, 6, 12, 18 and 24 months. Also assessed by a blinded assessor at 12 and 24 months. This will be measured via clinical assessment.
5. Condition-specific quality of life (QoL) measured at 3, 6, 12, 18 and 24 months using:
 - 5.1. Vulvar Quality Life Index (VQLI) (adults)
 - 5.2. Children's Dermatology Life Quality Index (CDLQI) (adolescents and children)
 - 5.3. Sexual function (adults only) assessed using the Female Sexual Function Index at 12 and 24 months

Safety:

1. Adverse reactions (e.g. stinging, skin thinning) measured throughout the trial by patient-reported symptoms and clinical examination from randomisation over 24 months
2. Development of vulval intraepithelial neoplasia or vulval squamous cell carcinoma at 24 months, measured by clinical assessment and/or medical notes

Treatment acceptability and potential barriers/facilitators to treatment:

1. Acceptability of treatment strategy measured using a Likert scale at 12 and 24 months
2. Adherence to treatment measured using a bespoke questionnaire completed by participants at 3, 6, 12, 18 and 24 months
3. Qualitative interview sub-study at 12 months

Cost-effectiveness:

1. Generic utility instrument to measure QoL at 3, 6, 12, 18 and 24 months with EQ-5D-5L (adolescents and adults) and Child Health Utility Instrument - Nine Dimensions (CHU-9) (children)
2. Resource use including prescription, direct and indirect healthcare and out-of-pocket costs associated with vulval LS at 3, 6, 12, 18 and 24 months, measured via a bespoke questionnaire

Completion date

01/03/2028

Eligibility

Key inclusion criteria

1. Clinical or biopsy confirmed diagnosis of vulval LS
2. Currently controlled disease (asymptomatic with minimal clinical evidence of active disease) at baseline
3. Age \geq 5 years
4. Able to give consent/child assent plus parental consent

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Mixed

Lower age limit

5 years

Upper age limit

100 years

Sex

Female

Total final enrolment

0

Key exclusion criteria

1. Previous vulval intraepithelial neoplasia (VIN) or vulval squamous cell carcinoma (SCC)
2. Contraindications to topical steroids
3. Concomitant use of other topical anti-inflammatory vulval treatments
4. Using systemic immunosuppressants (for any indication)
5. Using systemic treatment for LS
6. Patients with surgical alteration of vulval skin as part of gender reaffirming surgery, or patients not born with a vulva
7. Pregnant and breastfeeding women

Date of first enrolment

01/04/2024

Date of final enrolment

31/03/2026

Locations

Countries of recruitment

United Kingdom

England

Scotland

Wales

Study participating centre

Axess Sexual Health, Royal Liverpool University Hospital

Mount Vernon St
Liverpool
England
L7 8XP

Study participating centre

Liverpool Women's Hospital

Liverpool Womens Hospital
Crown Street
Liverpool
England
L8 7SS

Study participating centre

Aberdeen Royal Infirmary

Foresterhill Road
Aberdeen
Scotland
AB25 2ZN

Study participating centre

Royal Blackburn Hospital

Haslingden Road
Blackburn
England
BB2 3HH

Study participating centre

The James Cook University Hospital

Marton Road
Middlesbrough
England
TS4 3BW

Study participating centre

St Mary's Hospital

Oxford Road

Manchester

England

M13 9WL

Study participating centre

Market Street Health Centre, Oxleas

16-20 Market Street

Woolwich

London

England

SE18 6QR

Study participating centre

Whipps Cross University Hospital

Whipps Cross Road

Leytonstone

London

England

E11 1NR

Study participating centre

Queen Elizabeth Hospital

Sheriff Hill

Gateshead

England

NE9 6SX

Study participating centre

Florence Nightingale Community Hospital

London Road

Derby

England

DE1 2QY

Study participating centre

Royal Derby Hospital

Uttoxeter Road

Derby

England
DE22 3NE

Study participating centre

Churchill Hospital

Churchill Hospital

Old Road

Headington

Oxford

England

OX3 7LE

Study participating centre

Leicester Royal Infirmary

Infirmary Square

Leicester

England

LE1 5WW

Study participating centre

Nottingham City Hospital

Hucknall Road

Nottingham

England

NG5 1PB

Study participating centre

Princess Royal Hospital

Apley Castle,

Grainger Drive

Apley

Telford

England

TF1 6TF

Study participating centre

East Surrey Hospital

Canada Avenue

Redhill

England

RH1 5RH

Study participating centre

Norfolk and Norwich University Hospital
Colney Lane
Colney
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England
NR4 7UY

Study participating centre

County Durham and Darlington NHS Foundation Trust
Darlington Memorial Hospital
Hollyhurst Road
Darlington
England
DL3 6HX

Study participating centre

Cumberland Infirmary
Newtown Road
Carlisle
England
CA2 7HY

Study participating centre

Modality Community Gynaecology Service
Nishkam Pharmacy, 21 Soho Road
Birmingham
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B21 9SN

Study participating centre

Hull University Teaching Hospitals NHS Trust
Hull Royal Infirmary
Anlaby Road
Hull
England
HU3 2JZ

Study participating centre
Cardiff & Vale University Lhb
Woodland House
Maes-y-coed Road
Cardiff
Wales
CF14 4HH

Sponsor information

Organisation
Nottingham Clinical Trials Unit

Funder(s)

Funder type
Government

Funder Name
Health Technology Assessment Programme

Alternative Name(s)
NIHR Health Technology Assessment Programme, Health Technology Assessment (HTA), HTA

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

The datasets analysed during the current trial will be available upon request from the NCTU (ctu@nottingham.ac.uk), a minimum of 6 months after publication of the main results paper. Access to the data will be subject to review of a data sharing and use request by a committee including the CI and sponsor and will only be granted upon receipt of a data sharing and use agreement. Any data shared will be anonymised which may impact on the reproducibility of published analyses.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file	Old version, not in use version 2.0	05/02/2024	01/08/2024	No	No
Protocol file	version 5.1	03/09/2025	15/01/2026	No	No