ISRCTN74484952 https://doi.org/10.1186/ISRCTN74484952

A clinic feasibility study to assess whether the use of two combined medicines (pentoxifylline and tocopherol) can prevent radiotherapy-related changes of the mouth and face compared to the current standard of care in the head and neck cancer population

Submission date
02/08/2019

Recruitment status
No longer recruiting

Registration date
27/08/2019

Overall study status
Completed

Last Edited
23/05/2025

Condition category
Cancer

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] Individual participant data

Plain English summary of protocol
See https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-study-treatment-prevent-radiation-fibrosis-radiotherapy-head-neck-cancer-can-cause-penve (added 15/01/2021)

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Type(s)
Public

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Additional identifiers

EudraCT/CTIS number
2018-001153-27

IRAS number
223295

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
1.0; CPMS: 40028

Study information

Scientific Title
A prospective randomised controlled trial comparing the use of open-label pentoxifylline and tocopherol versus current standard of care for the prevention of fibrosis-related outcomes in irradiated head and neck oncology patients (feasibility study)

Acronym
PenVe

Study objectives
The use of pentoxifylline and tocopherol reduce radiation-induced fibrosis events such as osteoradionecrosis, trismus and dysphagia.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 22/02/2019, London - Harrow Research Ethics Committee (Level 3, Block B Whitefriars Lewins Mead, Bristol, BS1 2NT, UK; Tel: +44 (0)20 7104 8057; Email: nrescommittee.london-harrow@nhs.net), ref: 18/LO/1910

Study design
Open-label two-arm randomised control trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Prevention

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

Health condition(s) or problem(s) studied
Osteoradionecrosis (ORN) of the jaws, trismus and dysphagia following radiotherapy in patients with head and neck cancer

Interventions
Participants requiring head and neck radiotherapy as part of their standard treatment for cancer are randomised to one of two groups. Participants will be randomised in a 3:1 ratio (intervention: standard care) to enable better assessment of outcomes in the intervention group, including patient preference for drug formulation and the side effect profile. Randomisation will use permuted blocks of varying sizes and will be undertaken via a bespoke online randomization service provided by King's Clinical Trials Unit (KCTU). This is an open-label study. Neither patients, researchers nor statisticians will be blinded.

Both groups will continue to receive best standard of care in current practice, but group B will additionally receive pentoxifylline 400 mg BD and tocopherol 1000IU OD after their radiotherapy. Group B will also receive additional follow up calls. All participants will be in the trial for 6 months and have 4 study visits.

Maximum duration of treatment of a participant: 6 months.

Intervention Type
Drug

Phase
Phase II

Drug/device/biological/vaccine name(s)

Pentoxifylline, tocopherol

Primary outcome measure
Feasibility of the trial:
1. Patient's preference of drug formulation and subsequent side effects, assessed through:
1.1. Patient contact by daily telephone call in the first 2 weeks, 3 weekly telephone calls (+/- 1 week) in conjunction with patient diary, 3 monthly clinical follow up, 6 monthly clinical follow-up. This will be recorded in the patient notes and transcribed to the eCRF
1.2. Independent and reflective patient feedback at focus groups
2. Recruitment and retention to the trial, and patient adherence to the drugs, assessed through:
2.1. Screening and enrolment log which is overseen by the PI and research nurse. The numbers consented and randomised will be recorded in the eCRF
2.2. Patient contact at 6 monthly clinical follow-up. This will be recorded in the patient notes and transcribed to the eCRF
2.3. Daily telephone call in the first 2 weeks, 3 weekly telephone calls (+/- 1 week) in conjunction with patient diary, 3 monthly clinical follow up, 6 monthly clinical follow-up. This will be recorded in the patient notes and transcribed to the eCRF
2.4. Independent and reflective patient feedback at focus groups
2.5. Vitamin E blood test taken at baseline, 3 months and 6 months
2.6. Patients asked to bring any remaining pentoxifylline and vitamin E for measurement of liquid or tablets left at formulation changeover and at month 6
3. Appropriateness and acceptability of the outcome measurement tools, assessed through completed questionnaires at trial visits and through focus groups

Secondary outcome measures
1. Presence of osteoradionecrosis assessed by clinical review including an oral examination at month 3 and month 6
2. Mouth opening measured using ruler at baseline, month 3 and month 6
3. Swallowing capacity assessed using Sydney swallow questionnaire at baseline, month 3 and month 6
4. Quality of life assessed using Washington quality of life questionnaire at baseline, month 3 and month 6

Overall study start date
22/04/2019

Completion date
30/09/2023

Eligibility

Key inclusion criteria
1. Patients (≥18 years) presenting with a primary head and neck (H&N) tumour requiring radiotherapy treatment and placing them in the highest risk group for developing osteoradionecrosis, trismus and dysphagia. These include:
1.1. Oropharynx (tonsil, base of tongue)
1.2. Nasopharynx
1.3. Floor of mouth
1.4. Lateral aspect of the tongue
2. Oncology treatment aiming for the intent to cure
3. Patients able to consent and willing to participate

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
68

Total final enrolment
54

Key exclusion criteria
1. Previous history of H&N cancer
2. Patients treated with any drug implicated to cause medication-related osteonecrosis of the jaw (MRONJ). These include bisphosphonates, denosumab, radium 223, tyrosine kinase inhibitors and bevacizumab
3. Any patient with significant medical history where taking part in this study may potentially compromise their health.
4. Women who are pregnant or breastfeeding or of childbearing age not on adequate contraception
5. Patients lacking capacity to consent
6. Oncology treatment for palliative care
7. Patients deemed to have a high risk of recurrent tumour
8. Patients with a previous history of cerebral haemorrhage, extensive retinal haemorrhage, acute myocardial infarction, severe cardiac arrhythmias and impaired renal function, impaired liver function which in the expert opinion of the principal 9. investigator present a risk to the patient
10. Known drug allergy or sensitivity to pentoxifylline (or methylxanthines) and alpha-tocopheryl or any constituents of the medication (e.g. methyl and propyl hydroxybenzoates or rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency)
11. Patients taking theophylline or oestrogens
12. Patients with metastatic disease
13. Patient participating in other drug (CTIMP) trials

Date of first enrolment
29/07/2019

Date of final enrolment
13/07/2022

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
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Sponsor information

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Sponsor type
Hospital/treatment centre

ROR
https://ror.org/00j161312

Funder(s)

Funder type
Government

Funder Name
Research for Patient Benefit Programme

Alternative Name(s)
NIHR Research for Patient Benefit Programme, RfPB

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Publication and dissemination plan
Scientific journal and international conferences

Intention to publish date
01/06/2024

Individual participant data (IPD) sharing plan
The data sharing plans for the current study are unknown and will be made available at a later date

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No
Other unpublished results			23/05/2025	No	No