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Study to explore whether Andrographis (a herbal medicine) can help to treat sore throats, coughs and colds (acute respiratory tract infections (ARTIs))

Submission date
06/12/2018

Recruitment status
No longer recruiting

Registration date
04/01/2019

Overall study status
Completed

Last Edited
04/07/2019

Condition category
Respiratory

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

Plain English summary of protocol

Background and study aims
Acute respiratory infections (ARTIs) such as cough, sore throat and sinusitis are common, distressing and costly both for individuals and the NHS. Antibiotics have limited benefits in most ARTIs and commonly have side effects. A herbal medicine called Andrographis (Andrographis paniculata) is a promising candidate to treat ARTIs. Andrographis extract is derived from the leaf of the plant Andrographis paniculata. Andrographis is currently used in Western, Ayurvedic and Chinese herbal traditional medicines for respiratory and digestive illnesses. Results from muultiple trials suggests that Andrographis performed better than placebo after 5-7 days. This study aims to investigate the feasibility of carrying out a trial of providing Andrographis capsules to adults who visit their GP with ARTI symptoms, where the GP thinks the symptoms are caused by an infection (bacterial or viral) but NOT pneumonia. It aims to find out whether patients find it acceptable to take the Andrographis capsules, whether enough patients can be recruited into the study, whether the people involved complete the study documents, and how many of the patients complete the study diary after the treatments have been given. The investigators have previously completed interviews with health professionals treating patients in order to understand the issues around herbal medicines for ARTIs, and this has helped us design this feasibility study.

Who can participate?
Patients aged 18 or over who have visited their GP surgery with a sore throat, acute cough (less than 7 days' duration) or cold where pneumonia is not suspected.

What does the study involve?
Participants will be randomly allocated to receive capsules containing 250 mg Andrographis paniculata or placebo (dummy) capsules (capsules that look, taste and smell the same but have no active ingredients) for a week. They will be asked to take 3 capsules 4 times a day with water before food. Treatments will be randomly allocated and double-blinded (meaning that no one, including the doctor and the participant, will know which participant is getting which treatment).

Both groups will continue to receive standard care and GPs can prescribe antibiotics if needed to participants in either group, either taken immediately, or issued as a delayed prescription.The GP will decide which antibiotic is prescribed. Participants will be asked to wait 7-10 days before collecting the delayed prescription unless their symptoms show substantial worsening.

What are the possible benefits and risks of participating?
It is not known whether participants will have any additional benefit from taking part in this trial. However their participation will help to give important information about how best to treat people with ARTIs in the future. It is unlikely but participants may experience mild side effects from taking the trial medication.

Where is the study run from?
University of Southampton (UK)

When is the study starting and how long is it expected to run for?
June 2017 to August 2019

Who is funding the study?
Pukka Herbs (UK)

Who is the main contact?
1. Mrs Jackie Seeley, GRAPHALO@soton.ac.uk
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Scientific

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Additional identifiers

Integrated Research Application System (IRAS)
208314

Protocol serial number
IRAS 208314

Study information

Scientific Title
GRAPHALO: A double blind randomised placebo controlled feasibility study evaluating the effect of Andrographis paniculata (Immunographis) in the treatment of adults with acute respiratory tract infections (ARTIs)

Acronym
GRAPHALO

Study objectives
Acute respiratory infections (ARTIs) (such as cough, sore throat and sinusitis) are common, distressing, and costly both for individuals and the NHS. Antibiotics have limited benefits in most ARTIs and commonly have side effects. A herbal medicine called Andrographis (Andrographis paniculata) is a promising candidate to treat acute respiratory tract infections. In a recent systematic review of randomised controlled trials, Andrographis performed better than placebo after 5-7 days. The main objective of this trial is to determine the feasibility of running a full-scale trial of Andrographis paniculata leaf extract in a UK primary care setting.

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. Hampshire B Research Ethics Committee and the Health Research Authority, 22/11/2018, ref: 208314, University of Southampton Ethics and Research Governance Online (ERGO) number: 27851

Study design
Double-blind placebo-controlled randomised feasibility study

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Acute respiratory tract infections with symptoms such as cough, sore throat, fever and muscle ache where pneumonia is not suspected

Interventions
This is a multicentre, double-blind placebo-controlled feasibility study of Andrographis paniculata leaf extract. The study aims to recruit 60 participants.

Patients will eligible for the trial if they are over 18 years of age and present to their GP with a potential ARTI. Adults 18 years and over presenting with an acute cough (≤7 days' duration) or sore throat as their main symptom and, with symptoms localising to the upper respiratory tract (e.g. runny nose, sneezing, fever, muscle ache), for which non-infective diagnoses are judged very unlikely.

Participants will be randomised to 1 week of active treatment using Andrographis capsules or placebo. The capsules contain 250 mg of dried Andrographis paniculata. Participants will take 3 capsules 4 times a day with water before food. Treatments will be randomly allocated and double-blinded so that no one, including the doctor and the participant, will know which participant is getting which treatment. Both groups will continue to receive standard care and GPs can prescribe antibiotics if needed to participants in either group, either taken immediately, or issued as a delayed prescription.

Intervention Type
Supplement

Primary outcome(s)
All of the feasibility timepoints will be evaluated after the study finishes (16 weeks):
1. Feasibility of eligibility criteria, assessed using number of patients included and number excluded (and reasons for exclusion) from the trial recorded in on-site screening logs
2. Feasibility of recruitment (ability to recruit patients into the intervention from those attending primary care) assessed using on-site enrolment record, with monthly rate/site adjusted for site list size.
3. Feasibility of randomisation (willingness to be randomised) assessed using the proportion of eligible patients recruited
4. Retention rate calculated from records of enrolment, withdrawal and completed diaries returned after 2 weeks
5. Intervention compliance assessed using patient-record diary data and returned intervention capsules
6. Suitability of the patient diaries and patients’ willingness to complete them and the importance of telephone/text contact from quantitative data collection - percentage of patients returning completed diaries

Key secondary outcome(s))
Rates of antibiotic prescription assessed using the participant's record in the diary of the day they started taking antibiotics, evaluated after the study finishes (16 weeks)

Completion date
31/08/2019

Eligibility

Key inclusion criteria
1. Aged over 18 years
2. Present to GP with a potential ARTI
3. Acute cough (≤7 days' duration) or sore throat as main symptom
4. Symptoms localising to the upper respiratory tract (e.g. runny nose, sneezing, fever, muscle ache), for which non-infective diagnoses are judged very unlikely
5. Willing and able to give written informed consent.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Total final enrolment
38

Key exclusion criteria
1. Pregnant (or suspected to be pregnant) or breast feeding; patients who become pregnant during the trial will be asked to discontinue with the trial
2. Women at risk of pregnancy (i.e. not on effective contraception – combined oral contraceptive pill, an intrauterine hormonal device or subcutaneous hormonal trial implant)
3. Unable to complete trial documentation, including consent form and symptom diary including those who have difficulty understanding English
4. Already taking Andrographis or other herbal medicine for ARTIs
5. Known immunodeficiency state or undertaking chemotherapy treatment
6. Allergic/hypersensitive to Andrographis or capsule material (cellulose)
7. Already taking medication for ARTIs (paracetamol and ibuprofen will be allowed)
8. Severe hepatic and renal diseases (Chronic Kidney Disease Stage 4, GFR <30), as no adequate data are available on safe use of Andrographis in these conditions
9. Suspected pneumonia (i.e., complicated lower-respiratory-tract infection) on the basis of focal chest signs (focal crepitations, bronchial breathing) and systemic features (high fever, hypoxia, tachypnoea)
10. Serious chronic disorders where antibiotics are needed (e.g. cystic fibrosis, valvular heart disease)
11. Signs of severity which may warrant hospital admission (e.g. SpO2 <91%, systolic BP <90

mmHg, heart rate >130 bpm)
12. Recently/currently involved in a respiratory trial
13. Unable to provide informed consent or complete outcome measures
14. Are already involved in an ongoing trial or have recently been involved in a trial

Date of first enrolment
14/02/2019

Date of final enrolment
06/06/2019

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
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Sponsor information

Organisation
University of Southampton

ROR
https://ror.org/01ryk1543

Funder(s)

Funder type
Industry

Funder Name
Pukka Herbs (UK)

Results and Publications

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?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes