ISRCTN94854860 https://doi.org/10.1186/ISRCTN94854860

Can losartan enhance the effects of cognitive behavioural therapy in the treatment of panic disorder?

Submission date
03/02/2016

Recruitment status
No longer recruiting

Registration date
03/02/2016

Overall study status
Completed

Last Edited
27/03/2023

Condition category
Mental and Behavioural Disorders

[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
Anxiety disorders are a group of common disorders in which a person experiences overwhelming and often disabling anxiety. It is thought to affect at least one in five people at some point in their lives, and can involve insecurity in social situations, worrying excessively, or having unexpected panic attacks. Panic disorder is a serious condition where the sufferers experiences sudden periods of extreme fear with no prior warming, in the form of a severe panic attack. Cognitive behavioural therapy (CBT) is a type of talking therapy which works by changing the way that people think and behave. It can be very effective in treating people suffering from anxiety disorders however courses are often time-consuming, expensive and difficult to access. A recent study has shown that just one session of CBT can dramatically improve anxiety symptoms. This is thought to be because the therapy actually changes the way that the brain processes threatening information that could lead to a panic attack (emotional processing). Very early on in treatment, patients already process information in a more positive way, and such early changes are related to how well the patient responds to treatment in the longer term. Treatments which boost these early effects of emotional processing may therefore improve the effectiveness of CBT in the treatment for panic disorder. Losartan is a drug commonly used to treat high blood pressure, as it improves blood flow by preventing blood vessels from narrowing. Animal studies have shown this drug can also help stimulate the part of the brain which plays a role in the ability to make new connections and retain information. The aim of this study is to find out whether a single dose of losartan could help to amplify the effects of a single session of CBT in the treatment of panic disorder, leading to an improvement in emotional processing.

Who can participate?
Adults suffering from panic disorder.

What does the study involve?
Participants are randomly allocated to one of two study groups. Both groups receive a single session of cognitive behavioural therapy (CBT) which lasts for around one hour. Those in the first group are given a single dose of 50mg losartan one hour before the therapy session. Those in

the second group are given an identical looking placebo (dummy) capsule at the same timepoint. At the start of the study and then again one day later, participants in both groups have their emotional processing measured using simple computer tasks and an MRI (brain scan). The participants also have their anxiety levels measured at these times as well as one and six months later to see if the treatment has made any difference.

What are the possible benefits and risks of participating?
Participants may benefit from a reduction in their anxiety levels following the treatment. Risks of taking part are small as there are no reported side-effects for the dose of losartan used in this study. There is a small risk that some participants may find the experience of having an MRI scan to be uncomfortable and may feel claustrophobic (fear of confined spaces).

Where is the study run from?
Warneford Hospital, University Department of Psychiatry (UK)

When is the study starting and how long is it expected to run for?
February 2016 to March 2023

Who is funding the study?
1. National Institute for Health Research (UK)
2. MQ: Transforming Mental health (UK)

Who is the main contact?
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Contact information

Type(s)
Public

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Additional identifiers

Clinical Trials Information System (CTIS)
2015-003542-68

Protocol serial number
20285

Study information

Scientific Title
The effect of single--dose losartan on the basic effects of cognitive-behavioural therapy for panic disorder -A randomized double-blind placebo--controlled trial

Study objectives
Losartan versus placebo augmented cognitive-behaviour therapy:
1. Will lead to greater reduction in threat bias on the day after treatment
2. Will lead to better clinical outcome at 1-month follow-up.

Ethics approval required
Old ethics approval format

Ethics approval(s)
South Central - Oxford A Research Ethics Committee, 28/01/2016, ref: 15/SC/0648

Study design
Randomized double-blind placebo--controlled trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Panic disorder

Interventions
Patients will be randomised to a group receiving losartan or placebo, with the participant and experimenter remaining blind to group allocation throughout the study. Blocked randomisation will be used where patients are allocated to sequential numbers while stratifying for gender and panic diagnosis (with agoraphobia/ without agoraphobia). Both groups will receive a single session of cognitive behavioural therapy (CBT), lasting for around 60 minutes, with the losartan group receiving a single dose of 50mg losartan 1 hour before CBT, and the placebo group receiving an identical-looking placebo capsule. Effects of treatment on emotional processing will be measured on the day after treatment, clinical symptom severity will be measured one day, one month, and six months post-treatment.

Intervention Type
Drug

Phase
Not Applicable

Drug/device/biological/vaccine name(s)

Losartan

Primary outcome(s)
Symptom severity is measured using the clinician-rated questionnaires Panic Disorder Severity Scale and Clinical Global Impression Scale at baseline, one month and six months post-treatment, as well as the self-report questionnaires State-Trait Anxiety Inventory, Beck Depression Inventory, Panic Attack Scale, Agoraphobic Cognitions Questionnaire, Body Sensations Questionnaire, Mobility Inventory, Visual Analogue Scales during Stress at baseline, one day, one month and six months post-treatment.

Key secondary outcome(s))
Emotion processing is measured using behavioural reaction time tasks at baseline and one day post treatment, as well as using a functional MRI one day post treatment.

Completion date
31/03/2023

Eligibility

Key inclusion criteria
1. Participant is willing and able to give informed consent for participation in the study and to comply with all study requirements
2. Aged 18 years or above
3. Diagnosed with DSM-IV panic disorder
4. At least moderate avoidance of agoraphobic situations

*Participants with MRI contraindications (e.g. pacemaker, metal implant, left--handedness) can be included in the study but will not undergo the MRI scan study component.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Total final enrolment
40

Key exclusion criteria
1. Female participant who is pregnant or breast-feeding
2. CNS--active medication during the last 6 weeks

3. Current blood pressure or other heart medication (especially aliskiren or beta blockers)
4. Intravascular fluid depletion
5. Impaired liver or kidney function
6. Lifetime history of epilepsy or other neurological disease, systemic infection, or clinically significant hepatic, cardiac, obstructive respiratory, renal, cerebrovascular, metabolic, endocrine or pulmonary disease or disorder which, in the opinion of the investigator, may either put the participants at risk because of participation in the study, or may influence the result of the study, or the participant's ability to participate in the study
7. Lifetime history of psychosis, bipolar disorder, alcohol, medication or drug abuse or dependence; current primary depressive disorder
8. Insufficient English skills
9. Participated in another study involving certain medication during the last 6 weeks
10. Patient unable to refrain from benzodiazepines 48 hours before treatment and testing sessions

Date of first enrolment
16/02/2016

Date of final enrolment
31/12/2022

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Warneford Hospital
University Department of Psychiatry
Warneford Lane
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Sponsor information

Organisation
University of Oxford

ROR
https://ror.org/052gg0110

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

Funder Name
MQ: Transforming Mental health

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes