

Reversibility of impaired cerebrovascular reactivity in patients with hypertension: comparison of losartan and atenolol

Submission date 08/09/2005	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 27/10/2005	Overall study status Completed	☐ Statistical analysis plan ☐ Results
Last Edited 11/10/2016	Condition category Circulatory System	☐ Individual participant data ☐ Record updated in last year

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Scientific

Contact name

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Additional identifiers

Study information

Scientific Title

Reversibility of impaired cerebrovascular reactivity in patients with hypertension: comparison of losartan and atenolol

Study objectives

To investigate the effect of both losartan and atenolol upon impaired cerebrovascular reactivity in hypertension.

Ethics approval required

Old ethics approval format

Ethics approval(s)

West Ethics Committee of NHS Greater Glasgow and Clyde, 18/12/2003, ref: 03/118 (1)

Primary study design

Interventional

Study design

Randomised controlled trial

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Hypertension

Interventions

Patients will undergo baseline assessment of cerebrovascular reactivity. Mean flow velocity (MFV) in the middle cerebral artery (MCA) will be measured using transcranial Doppler. Each subject will then receive an intravenous infusion of acetazolamide after which MFV will be measured. MFV in the internal carotid artery and peripheral arterial stiffness using Sphygmocor will also be assessed pre- and post-infusion. Patients then receive a supply of either losartan and atenolol tablets for 4 weeks after which they will undergo cardiovascular reactivity (CVR) assessment as before. A 1-week washout period of no medication will follow, then the protocol repeated with the alternated tablet.

Intervention Type

Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

Losartan, atenolol

Primary outcome(s)

Changes in cerebrovascular reactivity.

Key secondary outcome(s)

Not provided at time of registration

Completion date

01/02/2006

Eligibility

Key inclusion criteria

1. Male: 50-80 years
2. Electrocardiogram (ECG) evidence of left ventricular hypertrophy (LVH)
3. Blood pressure (BP) 150-200/90-115

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

Male

Key exclusion criteria

1. >70% internal carotid artery (ICA) stenosis
2. Middle cerebral artery (MCA) stenosis
3. Contra-indication to losartan, atenolol or acetazolamide
4. Serum creatinine >130 µmol/l
5. Prior treatment with angiotensin converting enzyme (ACE)-1/angiotensin II receptor blocker (ARB)/beta blocker unless able to stop 4 weeks prior to recruitment

Date of first enrolment

01/08/2004

Date of final enrolment

01/02/2006

Locations

Countries of recruitment

United Kingdom

Scotland

Study participating centre

Western Infirmary

Glasgow

United Kingdom

G11 6NT

Sponsor information

Organisation

University of Glasgow (UK)

ROR

<https://ror.org/00vtgdb53>

Funder(s)

Funder type

University/education

Funder Name

University of Glasgow

Alternative Name(s)

The University of Glasgow

Funding Body Type

Private sector organisation

Funding Body Subtype

Universities (academic only)

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not provided at time of registration