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Spironolactone TO Prevent cardiovascular events in early stage Chronic Kidney Disease (CKD)

Submission date
04/04/2013

Recruitment status
No longer recruiting

Registration date
04/04/2013

Overall study status
Completed

Last Edited
29/02/2016

Condition category
Urological and Genital Diseases

[X] Prospectively registered

[X] Protocol

[_] Statistical analysis plan

[X] Results

[_] Individual participant data

Plain English summary of protocol

Background and study aims
About 1 in 10 people are living with reduced kidney function because mild (early stage) chronic kidney disease (CKD) is common and kidney function reduces with age. Patients with CKD have reduced survival rate due to high rate of heart and blood vessel diseases. Even people with mild CKD have premature stiffening and reduced function of their heart and blood vessels. Our previous research of 112 people with early CKD from a specialist hospital kidney clinic showed that a 'water tablet' called spironolactone improves heart structure and function as well as reduced blood vessel stiffness. This study aims to confirm the findings in people with early CKD managed at general practices.

Who can participate?
The study will recruit 240 adult patients from 20 general practices in South Birmingham area who have estimated kidney function between 30- 59% on the blood test (mild CKD).

What does the study involve?
Patients who are willing to participate in the study will be assigned to receive study medication, which are either spironolactone or placebo (dummy capsules) at random. Both participants and doctors will not know who is taking which capsules. Blood and urine test, blood pressure and blood vessel stiffness will be measured before starting the study medication. Blood vessel stiffness is measured by how fast the pulse travels from neck to groin using cuffs which detect pulse on both sites. Participants will be taking the study medication for 40 weeks, during which time they will be followed-up and monitored regularly at their local general practices with blood tests, blood pressure measurements and side effect questionnaire. After 40 weeks of receiving the study medication, all participants will have repeat blood and urine tests, blood pressure and blood vessel stiffness measured. All the tests will be repeated 6 weeks after stopping the study medication. The total duration of the study is 46 weeks.

What are the possible benefits and risks of participating?
Our previous research study showed that spironolactone improves heart function and reduces hardening of the blood vessels in patients with mild kidney disease in specialist hospital kidney

clinic setting. Patients participation in this study will contribute to an improved understanding of spironolactone and its effects on blood vessel and kidney disease in the primary care setting. The information gained from this study will also contribute to further studies and may help improve the treatment of people with kidney disease in the future. The most common side effects from spironolactone are diarrhoea, drowsiness, headache, nausea, stomach cramping and vomiting. Such effects are usually mild and temporary and resolve when the drug is stopped. Other less common but serious side effects are severe allergic reactions (rash, hives, itching, difficulty breathing, tightness in the chest, swelling of the mouth, face, lips, or tongue), black, tarry, or bloody stools, change in the amount of urine produced, confusion, dark urine, decreased sexual ability, enlarged breasts in men, irregular or missed menstrual periods, severe or persistent stomach pain, symptoms of abnormal fluid or electrolyte levels (i.e.: fast, slow, or irregular heartbeat, increased thirst, muscle weakness, severe or persistent dry mouth, nausea, or vomiting, severe or persistent dizziness or drowsiness, unusual fatigue or sluggishness, tingling sensation), yellowing of the skin or eyes. With the exception of the blood tests, study procedures should not cause any pain or discomfort. There are small risks of increased levels of salts in the blood, reduced kidney function or low blood pressure with the use of spironolactone, requiring the withdrawal of the study medication. However, the dose of the trial medication is relatively low and all participants will be closely monitored by kidney specialists during study to ensure that those risks are minimised.

Where is the study run from?
The study is run from the local general practices in South Birmingham area

When is the study starting and how long is it expected to run for?
June 2013 to June 2015

Who is funding the study?
National Institute for Health Research - Research for Patient Benefit (UK)

Who is the main contact?
Dr Odettte Chagoury
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Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
13983

Study information

Scientific Title
Spironolactone TO Prevent cardiovascular events in early stage Chronic Kidney Disease (CKD): A pilot trial

Acronym
STOP-CKD

Study objectives
About 1 in 10 people are living with reduced kidney function because mild (early stage) chronic kidney disease (CKD) is common and kidney function reduces with age. Patients with CKD have reduced survival rate due to high rate of heart and blood vessels diseases. Even people with mild CKD have premature stiffening and reduced function of their heart and blood vessels. Our previous research of 112 people with early CKD from a specialist hospital kidney clinic showed that a 'water tablet' called spironolactone improves heart structure and function as well as reduced blood vessel stiffness. STOP-CKD study aims to confirm the findings in people with early CKD managed at general practices. The study will recruit 240 patients from 10 general practices, who have estimated kidney function between 30-59% on the blood test (mild CKD). Patients who are willing to participate in the study will be assigned to receive 'study tablets', which are either spironolactone or placebo (dummy tablet) at random. Both patients and doctors will not know who is taking which tablets. Blood and urine test, blood pressure and blood vessel stiffness will be measured before starting the tablets. Blood vessel stiffness is measured by how fast the pulse travels from neck to groin using cuffs which detect pulse on both sites. Patients will be taking the tablets for 40 weeks, during which time; they will be followed-up and monitored regularly at their local general practices with blood test, blood pressure measurement and side effect questionnaire. After 40 weeks of receiving the tablets, repeat blood and urine test, blood pressure and blood vessel stiffness will be measured on the patients. After stopping the 'study tablets' at 40 weeks, patients participating in the study will have repeat blood and urine tests, blood pressure and blood vessel stiffness measured at week 46.

More details can be found at: http://public.ukcrn.org.uk/search/StudyDetail.aspx?StudyID=13983

Ethics approval required
Old ethics approval format

Ethics approval(s)
12/WM/0168

Study design
Randomised double-blinded placebo-controlled interventional trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
GP practice

Study type(s)
Prevention

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

Health condition(s) or problem(s) studied
Early Stage Chronic Kidney Disease

Interventions
Spironolactone 25mg once daily (OD) or Placebo for 40 weeks

Intervention Type
Drug

Phase
Not Applicable

Drug/device/biological/vaccine name(s)
Spironolactone

Primary outcome measure
Change in carotid-femoral pulse wave velocity measured at baseline and 40 weeks

Secondary outcome measures
1. Change in blood pressure measured at baseline and 40 weeks
2. Change in estimated Glomerular Filtration Rate (eGFR) measured at baseline and 40 weeks
3. Incidence of hyperkalaemia measured at baseline and 40 weeks
4. Incidence of hypotension (<100mmHg or >20mmHg systolic drop on standing) measured at baseline and 40 weeks

Overall study start date
01/06/2013

Completion date
01/06/2014

Eligibility

Key inclusion criteria
1. Male and female, age over 18 years
2. Diagnosis of CKD stage 3

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
UK Sample Size: 500

Key exclusion criteria
1. Diabetes Mellitus
2. Terminal disease or felt otherwise unsuitable by their general practitioner
3. Chronic heart failure i.e. a clinical diagnosis or known ejection fraction <55%
4. Atrial fibrillation
5. Alcohol or drug abuse
6. Inability to comply with trial medication and follow-up
7. Documented previous hyperkalaemia or intolerance of spironolactone
8. Documented Addisonian crisis and/or on fludrocortisone
9. Severe hypertension: blood pressure >= 180/110 mmHg
10. Systolic blood pressure < 120mmHg
11. Recent acute kidney injury or hospital admission (within past 6 weeks)
12. Chronic diarrhoea
13. Albumin:creatinine ratio (ACR) >= 70mg/mmol
14. Serum potassium >= 5 mEq/L on screening blood test
15. Concomittant co-trimoxazole medication
16. Concomittant angiotensin-converting enzyme inhibitor and angiotensin II receptor blocker medication
17. Pregnancy

Date of first enrolment
01/06/2013

Date of final enrolment
01/06/2014

Locations

Countries of recruitment

England

United Kingdom

Study participating centre
University of Birmingham
Birmingham
United Kingdom
B15 2TT

Sponsor information

Organisation
University of Birmingham (UK)

Sponsor details
School of Health and Population Sciences
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Sponsor type
University/education

Website
http://www.birmingham.ac.uk/

ROR
https://ror.org/03angcq70

Funder(s)

Funder type
Government

Funder Name
NIHR (UK) - Research for Patient Benefit; Grant Codes: PB-PG-0110-21226

Results and Publications

Publication and dissemination plan
Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article	protocol	06/05/2014		Yes	No
Results article	results	25/02/2016		Yes	No
HRA research summary			28/06/2023	No	No