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Campath, Calcineurin inhibitor reduction and Chronic allograft nephropathy

Submission date	Recruitment status	[X] Prospectively registered
06/05/2010	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
07/06/2010	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
18/12/2019	Surgery	

Plain English Summary

Background and study aims
In a healthy person, the kidneys are responsible for filtering out the waste products and excess water in the blood, and converting them into urine. If the kidneys suddenly stop working (acute kidney injury) or are suffering from severe, long-term disease of the kidneys (chronic kidney failure) then the body is unable to get rid of the waste products building up in the blood. In some patients, the damage to the kidneys becomes worse over time and so a kidney transplant is their only real option. When a person receives a kidney transplant, they have to take drugs called immunosuppressants, to prevent their immune system rejecting the new kidney (graft). Treatment with these drugs have managed to lower the rate of acute rejection (when the body's immune system rejects the transplant almost immediately), however the long-term survival of kidney transplants has not really improved over the past decade. The commonest cause of graft loss is a condition called chronic allograft nephropathy (CAN) where the graft itself dies over time due to long-term treatment with calcineurin inhibitors (a type of immunosuppressant medication). They work by stopping the activity of a protein called calcineurin which is involved in activating the certain cells of the immune system. A possible way to prevent this is to lower the amounts of calcineurin patients are taken by replacing them with other medications. This study is going to look at the long-term effects of Campath-1H (an initial immunosuppressant treatment that is not a calcineurin inhibitor) and sirolimus (a maintainance immunosuppressant treatment that is not a calcineurin inhibitor) to the standard treatments of the drugs basiliximab (standard treatment) and tacrolimus (a maintainance immunopsupressent that is a calcineurin inhibitor)

Who can participate?
Adults who are scheduled to receive kidney transplant in next 24 hours

What does the study involve?
Participants are randomly allocated to one of two groups. Those in the first group are treated with two doses of 30mg Campath-1H intravenously (directly into a vein) or subcutaneously (injection into the skin) 24 hours apart as well as taking tacrolimus tablets every day at a dose of 5-7 ng/ml for 6 months. Those in the second group are treated with two doses of 20mg basiliximab intravenously (directly into a vein) spaced four days apart (standard treatment) as well as tacrolimus tablets every day at a dose of 5-12 ng/ml for 6 months. After 6 months, the

two groups are randomly allocated to subgroups. From the first group, half of the participants continue taking tacrolimus tablets every day and the other half are given sirolimus tablets to take every day at a dose of 5-10 ng/ml for first 6 months then 5-8 ng/ml. From the second group, half of the particpants continue to take tacrolimus tablets but at a dose of 5-8 ng/ml, and the other half are given sirolimus tablets to take every day at a dose of 5-10 ng/mL for first 6 months, then 5-8 ng/ml. For all groups, study treatments continue (prescribed by the participant's doctor) while their transplant remains functional. All participants are reviewed when they are discharged from hospital and at 1, 3, 6, 9, and 12 months after transplantation, in order to determine the transplant failure rate.

What are the possible benefits and risks of participating?
It is not known as to whether there will be any benefits or risks to those participating in this study.

Where is the study run from?
Oxford Transplant Centre (UK)

When is the study starting and how long is it expected to run for?
September 2010 to August 2017

Who is funding the study?
1. NHS Blood and Transplant Research and Development (UK)
2. Pfizer (UK)
3. Novartis (UK)

Who is the main contact?
Professor Peter Friend
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Study website
http://www.3cstudy.org/

Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

EudraCT/CTIS number
2008-008553-27

IRAS number

ClinicalTrials.gov number
NCT01120028

Secondary identifying numbers
CTSU3C1

Study information

Scientific Title
Open-label, randomised multicentre study of CAMPATH-1H versus basiliximab induction treatment and sirolimus versus tacrolimus maintenance treatment for the preservation of renal function in patients receiving kidney transplants

Acronym
The 3C Study

Study hypothesis
Reducing exposure to calcineurin inhibitors either by using more potent antibody induction (Campath) and/or an elective switch to sirolimus-based immunosuppression may improve function and survival of kidney transplants.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Nottingham Research Ethics Committee (REC) 2 approved on the 2nd of December 2009 (ref: 09 /H0408/101)

Study design
Open label multicentre randomised controlled 2x2 factorial trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Treatment

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

Condition
Kidney transplantation

Interventions
1. Campath-1H: 30 mg on days 0 and 1 (intravenously or subcutaneously)
2. Basiliximab 20mg on days 0 and 4 (intravenously)
3. Tacrolimus: oral tablets
3.1. target trough level 8-12 ng/mL following basiliximab induction for first six months
3.2. target trough level 5-7 ng/mL following Campath-1H induction and in all patients after 6 months, for duration of study.
4. Sirolimus: oral tablets; target trough level 5-10 ng/mL for first 6 months then 5-8 ng/mL. For duration of study.
The total duration of follow up is at least 5 years for all treatment arms.

Intervention Type
Drug

Phase
Not Specified

Drug/device/biological/vaccine name(s)
Campath-1H, basiliximab, tacrolimus, sirolimus

Primary outcome measure
1. Induction therapy comparison: biopsy-proven acute rejection during the first 6 months after transplantation
2. Maintenance therapy comparison: graft function is measured by estimated glomerular filtration rate at 2 years after transplantation

Secondary outcome measures
All secondary outcomes are assessed using a a study-specific questionnaire that has been devised to send to patients and the review of the UK Renal Registry, Hospital Episode Statistics, Office for National Statistics, National Cancer Registry and UK Transplant Registry at 1, 2 and 5 years.

1. Graft function and survival
2. Patient survival
3. Incidence of serious infections
4. Incidence of malignancy
5. Major vascular events

Overall study start date
01/09/2010

Overall study end date
31/08/2017

Eligibility

Participant inclusion criteria
1. Men or women aged over 18 years
2. Recipient of kidney transplant from live or deceased donor

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
800

Total final enrolment
394

Participant exclusion criteria
1. Recipients of multi-organ transplants
2. Previous treatment with Campath-1H
3. Active infection
4. Past history of anaphylaxis to humanized monoclonal antibodies
5. History of malignancy (except for adequately treated non-melanoma skin cancer)
6. Loss of previous transplant within 6 months not due to technical reasons
7. Medical history that might limit the participant's ability to take trial treatments for the duration of the study

Recruitment start date
04/10/2010

Recruitment end date
21/01/2013

Locations

Countries of recruitment
England

United Kingdom

Study participating centre

Oxford Transplant Centre
Churchill Hospital
Old Rd
Headington
Oxford
United Kingdom
OX3 7LJ

Sponsor information

Organisation
University of Oxford (UK)

Sponsor details
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Sponsor type
University/education

Website
http://www.admin.ox.ac.uk/rso

ROR
https://ror.org/052gg0110

Funder(s)

Funder type
Government

Funder Name
NHS Blood and Transplant Research and Development (UK) (ref 09-15-01-03)

Funder Name
Pfizer (UK)

Alternative Name(s)
Pfizer Inc., Pfizer Consumer Healthcare, Davis, Charles Pfizer & Company, Warner-Lambert, King Pharmaceuticals, Wyeth Pharmaceuticals, Seagen

Funding Body Type
Government organisation

Funding Body Subtype
For-profit companies (industry)

Location
United States of America

Funder Name
Novartis (UK)

Alternative Name(s)
Novartis AG, Novartis International AG

Funding Body Type
Government organisation

Funding Body Subtype
For-profit companies (industry)

Location
Switzerland

Results and Publications

Publication and dissemination plan
Planned publication of results and maintenance comparison primary outcome results in a peer reviewed journal.

Intention to publish date
31/12/2014

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	08/11/2014		Yes	No
Results article	results	01/06/2018	18/12/2019	Yes	No
HRA research summary			28/06/2023	No	No