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Autologous tolerogenic dendritic cells for rheumatoid and inflammatory arthritis

Submission date	Recruitment status	[ ] Prospectively registered
27/04/2012	No longer recruiting	[ ] Protocol
Registration date	**Overall study status**	[ ] Statistical analysis plan
27/04/2012	Completed	[X] Results
Last Edited	**Condition category**	[ ] Individual participant data
21/01/2019	Musculoskeletal Diseases	

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number
2011-001582-41

IRAS number

ClinicalTrials.gov number
NCT01352858

Secondary identifying numbers
12108

Study information

Scientific Title
Autologous TOlerogenic Dendritic Cells for Rheumatoid and Inflammatory Arthritis: a randomised controlled trial

Acronym
AuTODeCRA

Study objectives
Current hypothesis as of 10/04/2014:
This is a study which will look at safety, feasibility and acceptability of a new therapy called tolerogenic dendritic cells (TolDC), derived from the patient's own white blood cells, which will be injected into the knee joints of rheumatoid and inflammatory arthritis patients, using a procedure called arthroscopy (a camera examination of a joint). We are also looking to see if the drug has any effect on the disease activity (if it can help in IA) and whether the drug can affect the immune system.

Previous hypothesis:
This is a study which will look at safety, feasibility and acceptability of a new therapy called tolerogenic dendritic cells (TolDC), derived from the patient's own white blood cells, which will be injected into the knee joints of rheumatoid arthritis patients, using a procedure called arthroscopy (a camera examination of a joint). We are also looking to see if the drug has any effect on the disease activity (if it can help in RA) and whether the drug can affect the immune system.

More details can be found at http://public.ukcrn.org.uk/search/StudyDetail.aspx?StudyID=12108

On 10/04/2014 the following changes were made to the trial record:
1. The public title was changed from 'AUTOlogous TOlerogenic DEndritic Cells for Rheumatoid Arthritis' to 'Autologous TOlerogenic Dendritic Cells for Rheumatoid and Inflammatory Arthritis '
2. The scientific title was changed from 'AUTOlogous TOlerogenic DEndritic Cells for Rheumatoid Arthritis: a randomised controlled trial' to 'Autologous TOlerogenic Dendritic Cells for Rheumatoid and Inflammatory Arthritis: a randomised controlled trial'
3. The acronym was changed from 'AUTODECRA' to 'AuTODeCRA'
4. The anticipated end date was changed from 24/02/2013 to 31/08/2014

Ethics approval required
Old ethics approval format

Ethics approval(s)
NRES committee North East Sunderland, 20/01/2012, ref: 11/NE/0140

Study design
Randomised; Interventional; Design type: Treatment

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 the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied
Topic: Musculoskeletal; Subtopic: Musculoskeletal (all Subtopics); Disease: Inflammatory Arthritis

Interventions
Tolerogenic Dendritic Cells, Autologous Tolerogenic Dendritic Cells; Study Entry : Single Randomisation only

12 patients in total, 9 with TolDC and 3 with a control treatment.

Three doses of TolDC will be tested, 3 patients per dose. Subjects will have RA and at least one swollen knee joint. They will undergo a knee ultrasound scan, fill in a series of questionnaires, have their knee aspirated (fluid taken out) and finally undergo a procedure called leukapheresis (removal of white blood cells) from which the treatment will be manufactured. Subsequently they will undergo 3 arthroscopies (camera examination of the knee joint) over a period of about 12 weeks. On the first arthroscopy they will have the TolDC injected into their knee joint. They will then spend the night at the Clinical Research facility for observation. Over the next 5 days they will be telephoned daily by the study doctor to check how they are, and will be reassessed if needed. About 2 weeks later they will have their second arthroscopy to look for effects of treatment, and the third will take place at 13 weeks (end of study) or sooner if the knee appears to get worse.

Intervention Type
Other

Phase
Not Applicable

Primary outcome measure
Proportion of patients experiencing adverse events (AEs) and serious adverse events (SAEs) following administration of TolDC; Timepoint(s): 3 months

Secondary outcome measures
Added 10/04/2014:
1. The proportion of IA patients who enter the study, from whom GMP-grade TolDC of sufficient quality can be prepared (the success rate of the TolDC preparation procedure)
2. The proportion of patients who grade the trial and its related procedures as acceptable (trial participants will assess acceptability of study-specific procedures via an acceptability questionnaire administered at the last study visit)

Overall study start date
24/02/2012

Completion date
31/08/2014

Eligibility

Key inclusion criteria
Current inclusion criteria as of 10/04/2014:
1. Participants will be patients with rheumatoid arthritis according to the 1987 or 2010 American College of Rheumatology (ACR) classification criteria or inflammatory arthritis
2. Able and willing to give informed consent and to comply with the study protocol
3. At least 6 months duration
4. ACR Functional Class I-III (for RA patients)
5. Age 18 years or over
6. Active disease, including an inflamed (native) knee joint
7. Failure (or intolerance of) at least one disease modifying anti-rheumatic drug (DMARD), including current therapy
8. Morning stiffness in the target joint greater than or equal to 30 minutes
9. Willing and able to undergo arthroscopic procedures under local anaesthetic
10. Stable dose of non-steroidal anti-inflammatory drug (NSAID) or corticosteroid (prednisolone10mg) for >/=4 weeks
11. No intramuscular glucocorticoid administration for 6 weeks
12. Stable dose of disease-modifying anti-rheumatic drug (DMARD) for >/= 8 weeks
13. Target Gender: Male & Female

Previous inclusion criteria:
1. Participants will be patients with rheumatoid arthritis according to the 1987 or 2010 American College of Rheumatology (ACR) classification criteria
2. Able and willing to give informed consent and to comply with the study protocol
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13. Target Gender: Male & Female

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
Planned Sample Size: 12; UK Sample Size: 12

Key exclusion criteria
1. Use of other investigational medicinal products within 30 days prior to study entry (defined as date of recruitment into study)
2. Patients who have received rituximab therapy and whose B-cell count remains below the normal range. Patients who have received any other cell depleting therapies and whose cell counts have not returned to the normal range, at the discretion of the principal investigator (PI).
3. Serious or unstable co-morbidity deemed unsuitable by PI, eg. Chronic obstructive pulmonary disease (COPD), cardiac failure
4. History of malignancy (except treated basal cell carcinoma of skin)
5. Known active infection at screening visit or at baseline (except fungal nail infection)
6. Infection requiring hospitalization or IV antibiotics within 6 weeks of baseline
7. Immunization with live vaccine within 6 weeks of baseline
8. History of recurrent or chronic infection
9. History of hepatitis B or C, syphilis, Human immunodeficiency virus (HIV) or Human T-lymphotropic virus (HTLV1/2) infections
10. Injection of target joint with glucocorticoids within 6 weeks of baseline
11. Hb<10g/dL; neutrophils< 2.00 x109/L; platelets <150x109/L; Alanine transaminase/Alkaline phosphatase (ALT/ALP)>2x upper limit of normal; elevated serum creatinine at screening visit
12. Major surgery within 8 weeks of baseline or planned within 3 months from baseline
13. Pregnancy, or women planning to become pregnant within the study period, or women who are breast feeding
14. Females or males of child bearing potential unwilling to use adequate contraception for duration of study
15. Patients taking anticoagulants
16. Hypersensitivity to local or systemic corticosteroid therapy or local anaesthetic
17. Poor venous access or medical condition precluding leukapheresis

Date of first enrolment
24/02/2012

Date of final enrolment
31/08/2014

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
Institute of Cellular Medicine
Newcastle Upon Tyne
United Kingdom
NE1 7RU

Sponsor information

Organisation
Newcastle Hospitals Foundation NHS Trust (UK)

Sponsor details
Wolfson Unit of Clinical Pharmacology, Institute of Cellular Medicine
Framlington Place
Newcastle Upon Tyne
England
United Kingdom
NE2 4HH

Sponsor type
Hospital/treatment centre

ROR
https://ror.org/05p40t847

Funder(s)

Funder type
Charity

Funder Name
Arthritis Research UK (UK)

Alternative Name(s)

Funding Body Type
Private sector organisation

Funding Body Subtype
Other non-profit organizations

Location
United Kingdom

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?
Results article	results	01/01/2017	21/01/2019	Yes	No
HRA research summary			28/06/2023	No	No