

Autologous tolerogenic dendritic cells for rheumatoid and inflammatory arthritis

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

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Scientific

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Additional identifiers

ClinicalTrials.gov (NCT)
NCT01352858

Clinical Trials Information System (CTIS)
2011-001582-41

Protocol serial number
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 (ToDC), 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 (ToDC), 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

Primary study design

Interventional

Study design

Randomised; Interventional; Design type: Treatment

Study type(s)

Treatment

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(s)

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

Key secondary outcome(s)

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)

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 (prednisolone 10mg) 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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12. Stable dose of disease-modifying anti-rheumatic drug (DMARD) for ≥ 8 weeks weeks
13. Target Gender: Male & Female

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 Years

Sex

All

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

United Kingdom

England

Study participating centre

Institute of Cellular Medicine

Newcastle Upon Tyne

United Kingdom

NE1 7RU

Sponsor information

Organisation

Newcastle Hospitals Foundation NHS Trust (UK)

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

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