

Effects of addition of low-dose oral daily corticosteroids to the initial anti-rheumatic therapy on radiographic damage and disease activity in patients with early rheumatoid arthritis

Submission date 27/12/2013	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 04/02/2014	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 11/03/2015	Condition category Musculoskeletal Diseases	☐ Individual participant data

Plain English summary of protocol

Background and study aims

Rheumatoid arthritis (RA) is an autoimmune disorder when the body tissue is mistakenly attacked by its own immune system. This causes inflammation of the joints, with destruction of bone around the involved joints. Experts suggest that preventing early joint damage can have huge long-term benefits. Early, aggressive treatment is the key to slowing or stopping RA progression and joint destruction. Corticosteroids (prednisolone) decrease inflammation and reduce the activity of the immune system. Added to other anti-rheumatic medication, low doses of corticosteroids may provide significant relief from pain and stiffness for people with rheumatoid arthritis. Our aim was to find out if addition of low-dose corticosteroids to the usual treatment soon after diagnosing RA may help to stop joint damage, improve inflammatory-related signs and symptoms of RA and improve disease outcomes in the long run. Further, we wanted to study if these effects could be achieved without serious toxicity issues.

Who can participate?

Adult men and women aged 18-80 years with newly diagnosed active RA can participate in this study.

What does the study involve?

Eligible patients were allocated at random to take either prednisolone (corticosteroids) daily or no prednisolone over a period of two years. Other anti-rheumatic drugs were selected by the treating specialist according to current recommendations. Participants were seen at the beginning of the study and at 3, 6, 12, 18, and 24 months for follow up. Disease activity was measured and questionnaires about physical function were completed. X-ray of the hands and feet were obtained at study entry and after 1 and 2 years. Participants were also invited to give blood to a biobank for studies of prediction of RA disease course and complications.

What are the possible benefits and risks of participating?

Taking corticosteroids may reduce the rate of worsening of the disease in the affected joints. This study may help in deciding the best treatment for future patients with early RA. We believe that this study may also help to tailor the treatment to the individual patient's characteristics and needs. Possible side effects as high blood pressure, increased lipid content in blood and heart-related complications were looked for and registered if they occurred at all.

Where is the study run from?

This study took place in six rheumatologic clinics (Helsingborg, Kristianstad, Mölndahl, Spenshult, Kalmar, Huddinge) in southern Sweden.

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

Participants were recruited between September 1995 and December 1999. However, the study follow-up was extended beyond two years of follow up, as we wanted to look at participants' health over many years to assist future studies about the course, treatments and complications of RA disease.

Who is funding the study?

1. The Swedish Rheumatism Association (Sweden)
2. King Gustav V 80-years foundation (Sweden)
3. The Ugglas Foundation (Sweden)
4. The Börje Dahlins Foundation (Sweden)
5. The Gorthon Foundation in Helsingborg (Sweden)
6. Foundation for assistance to disabled people in Skåne (Stiftelsen för Rörelsehindrade i Skåne) (Sweden)

Who is the main contact?

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Contact information

Type(s)

Scientific

Contact name

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Additional identifiers

Study information

Scientific Title

Effects of addition of low-dose oral daily prednisolone to the initial disease-modifying anti-rheumatic drugs (DMARD) therapy on progression of radiographic damage and disease activity in patients with early rheumatoid arthritis, as well as effects on adverse outcomes and toxicity

Study objectives

To evaluate if low-dose prednisolone, 7.5 mg daily, added to DMARD therapy over the first two years after diagnosis of RA was able to reduce the progression of joint destruction and provide sustained reduction of disease activity with an acceptable level of toxicity/adverse outcome, including effect on bone mineral density.

Ethics approval required

Old ethics approval format

Ethics approval(s)

1. Lund University, ref: LU 154-95
2. Gothenburg University, ref: Gbg M45-95
3. Karolinska Institutet (Karolinska Institute), ref: KI 153-95
4. Linköping University, ref: Li 123-95

Primary study design

Interventional

Study design

Comprehensive cohort study incorporating a randomised controlled trial

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Rheumatoid arthritis

Interventions

The patients were recruited from the 6 centres involved in the BARFOT (Better Anti-Rheumatic FarmacOTherapy) Study Group in southern Sweden. The randomization was done as block randomization for each centre according to a central randomization with stratification for sex. At start of the first DMARD the participants had been randomised to either 7.5 mg prednisolone daily, orally (P group), or no prednisolone (NoP group) for the first 2 years. The choice of DMARD was left to the treating physicians, who followed the recommended treatment strategy in Sweden at the time of the study. All patients were given 1000 mg calcium per day.

Study entry: registration only

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

The difference in changes in radiographic damage scores after 2 years

Timepoint(s): Pre- and post-intervention. Clinical assessment at the start of the study and at 3, 6, 12, 18, and 24 months. Radiographic evaluation at baseline and after 1 and 2 years

Key secondary outcome(s)

1. Remission rates and differences in disease activity and function
2. Adverse events

Completion date

01/12/1999

Eligibility

Key inclusion criteria

1. Diagnosis of RA according to the 1987 revised criteria of the American College of Rheumatology (ACR)
2. Age 18-80 years
3. Disease duration of ≤ 1 year
4. Active disease defined as a Disease Activity Score in 28 joints (DAS28) of >3.0
5. Started by the treating rheumatologist on the first DMARD

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 Years

Upper age limit

80 Years

Sex

All

Key exclusion criteria

1. Earlier treatment with glucocorticoids for RA or other diseases
2. Previous treatment with DMARDs
3. Contraindication for glucocorticoid therapy
4. Previous fragility fractures
5. Patients aged < 65 years with a T-score lower than -2.5 on bone densitometry; and patients aged ≥ 65 years with a Z-score of less than -1

Date of first enrolment

01/09/1995

Date of final enrolment

01/12/1999

Locations

Countries of recruitment

Sweden

Study participating centre

Karolinska University Hospital Huddinge

Stockholm

Sweden

14186

Sponsor information

Organisation

Karolinska Institute (Karolinska Institutet) (Sweden)

ROR

<https://ror.org/056d84691>

Funder(s)

Funder type

Research organisation

Funder Name

The Swedish Rheumatism Association (Sweden)

Funder Name

King Gustav V 80-years foundation (Sweden)

Funder Name

The Ugglas Foundation (Sweden)

Funder Name

The Börje Dahlins Foundation (Sweden)

Funder Name

The Gorthon Foundation in Helsingborg (Sweden)

Funder Name

Foundation for assistance to disabled people in Skåne (Stiftelsen för Rörelsehindrade i Skåne) (Sweden)

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	01/11/2005		Yes	No
Results article	results	01/11/2008		Yes	No
Results article	results	01/04/2013		Yes	No
Results article	10-year follow-up results	07/04/2014		Yes	No
Results article	results	30/07/2014		Yes	No