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Alendronate in ankylosing spondylitis trial

Submission date
02/12/2015

Recruitment status
No longer recruiting

Registration date
15/12/2015

Overall study status
Completed

Last Edited
13/01/2017

Condition category
Musculoskeletal Diseases

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[X] Results
[ ] Individual participant data

Plain English summary of protocol

Background and study aims
Ankylosing spondylitis (AS) is a long-term condition in which the spine becomes inflamed. It is usually treated with anti-inflammatory drugs, but they do not reduce the rate of disease progression. Patients with AS have reduced bone density of the spine and hip and are at increased risk of fractures of the spine. Such microfractures may be responsible for pain in AS. Studies using a drug called pamidronate, which belongs to a group of drugs know as bisphosphonates, given into a vein have suggested these drugs may improve the clinical features of AS. An oral form of a bisphosphonate, called alendronate, is used to treat osteoporosis. The aim of this study is to see if alendronate improves outcomes in patients with AS over a 2 year period when compared to a placebo (dummy drug).

Who can participate?
Patients aged over 21 with AS.

What does the study involve?
Participants are randomly allocated to be treated weekly with either oral alendronate or a placebo (dummy drug). We then study the disease outcome and the effects on bone density.

What are the possible benefits and risks of participating?
Alendronate may improve disease activity in AS. The risks are possible upper gastrointestinal (digestive system) side effects, arthralgia (joint pain), and rare complications of osteonecrosis (bone disease) of the jaw.

Where is the study run from?
Royal National Hospital for Rheumatic Diseases (UK).

When is the study starting and how long is it expected to run for?
May 2004 to August 2010.

Who is funding the study?
Arthritis Research UK and the National Ankylosing Spondylitis Society.

Who is the main contact?
Dr Ashok Bhalla

Contact information

Type(s)
Scientific

Contact name
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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
BSR / Arthritis Research UK project grant (14585)

Study information

Scientific Title
Clinical efficacy of oral alendronate in ankylosing spondylitis: a randomised placebo-controlled trial

Acronym
BIAS (Bisphosphonates in Anklyosing Spondylitis)

Study objectives
To investigate the potential disease modifying properties of alendronate in a population of ankylosing spondylitis (AS) patients with a spectrum of mild to severe disease activity, reflecting routine clinical practice.

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. Trent MREC, 10/05/2004, REC ref: 04/4/023
2. Site-specific approval was obtained from the all UK recruiting centres

Study design
Double-blind randomised controlled 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 the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied
Ankylosing spondylitis

Interventions
Oral alendronate 70 mg weekly or placebo

The total duration of treatment was 2 years and follow-up for all treatment arms was 2 years from enrolment.

Intervention Type
Drug

Phase
Phase I

Drug/device/biological/vaccine name(s)
Alendronic acid

Primary outcome measure
Bath Ankylosing Spondylitis Global score (BAS-G), assessing overall change in patient's symptoms and general health over the preceding month. Scored at baseline, 3, 6, 12, 18 and 24 months

Secondary outcome measures
1. Disease activity (Bath AS Disease Activity Index (BASDAI) scored at baseline, 3, 6, 12, 18 and 24 months
2. Physical function (Bath AS Functional Index (BASFI) scored at baseline, 3, 6, 12, 18 and 24 months
3. Mobility (Bath AS Metrology Index (BASMI) measured at baseline and 24 months
4. Laboratory measurements:
4.1. At baseline and 6 months blood was taken for measurement of cytokines and metalloproteinases

4.2. The inflammation marker, CRP, was measured at baseline, 3, 6, 12 and 24 months
5. Radiographic features were assessed by modified Stoke Ankylosing Spondylitis Spinal Score (mSASSS) and Bath AS Radiology Index (BASRI) at 0 and 24 months
6. Assessment in SpondyloArthritis international Society (ASAS) 20 and ASAS40 at 0 and 24 months

Overall study start date
01/05/2004

Completion date
30/08/2010

Eligibility

Key inclusion criteria
1. Patients had to meet the modified New York criteria for the diagnosis of AS, which we refined to allow for MRI diagnosis of sacroiliitis, and a requirement for a minimum pre-defined movement restriction
2. Fulfil ASAS criteria for axial SpA
3. Aged over 21 years
4. If taking NSAID, have been on a stable dose for at least 4 weeks
5. There was no minimal level of disease activity required for entry to the study

Participant type(s)
Patient

Age group
Adult

Sex
Both

Target number of participants
The study was powered to detect a minimal clinically important difference of 1.5 in the primary outcome measure (BAS-G). With 95% power to reach 5% level of significance this required a total sample size of 140 (70 in each group). Assuming a 20% dropout rate, 90 patients were required in each group to obtain a sample size of 70.

Key exclusion criteria
1. Any intervention or underlying disease with the potential to effect disease activity or bone density, including treatment with anti-TNF
2. Patients with bilateral hip replacements or previous back surgery that would prevent accurate bone density measurement by dual x-ray absorptiometry (DXA)

Date of first enrolment
01/05/2005

Date of final enrolment
28/02/2009

Locations

Countries of recruitment
England

United Kingdom

Study participating centre
Royal National Hospital for Rheumatic Diseases
Upper Borough Walls
Bath
United Kingdom
BA1 1RL

Sponsor information

Organisation
Royal National Hospital for Rheumatic Diseases (UK)

Sponsor details
Upper Borough Walls
Bath
England
United Kingdom
BA1 1RL

Sponsor type
Hospital/treatment centre

ROR
https://ror.org/05va5gy74

Funder(s)

Funder type
Charity

Funder Name
Arthritis Research UK (BSR/Arthritis Research UK Project Grant (14585))

Alternative Name(s)

Funding Body Type
Private sector organisation

Funding Body Subtype
Other non-profit organizations

Location
United Kingdom

Funder Name
National Ankylosing Spondylitis Society

Results and Publications

Publication and dissemination plan
The plans were to present results at national meeting of the British Society for Rheumatology (BSR) and publish in peer-reviewed journal.

Intention to publish date

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	01/05/2017		Yes	No