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Oral vs Intravenous Antibiotics (OVIVA) for Bone and Joint Infection

Submission date
12/02/2013

Recruitment status
No longer recruiting

Registration date
14/02/2013

Overall study status
Completed

Last Edited
05/08/2019

Condition category
Musculoskeletal Diseases

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

Plain English summary of protocol

Background and study aims
A long course of antibiotic therapy given intravenously (i.e., by injection or via a 'drip') is the recommended treatment for many serious bacterial infections. It is costly and inconvenient for the patient to remain in hospital for treatment, so outpatient antibiotic therapy (OPAT) programs have been established in many centres to deliver intravenous antibiotics safely and conveniently. Most patients referred to OPAT programs have bone and joint infections. However, there is no clear evidence that bone and joint infections really require long courses of intravenous antibiotics rather than oral antibiotics (tablets). We will compare the outcome of treatment with intravenous and oral antibiotic therapy for patients with bone and joint infection.

Who can participate?
Patients aged 18 or over with an infection in a bone or joint that needs treatment with a long course of antibiotics.

What does the study involve?
The choice of antibiotic is complex, and antibiotics that are suitable oral choices are often not suitable intravenous choices and vice versa. Participants will therefore be randomly allocated to an oral or intravenous 'strategy', rather than to individual antibiotics. Patients will be followed up carefully by the study staff for a year; clinical follow up beyond this point may still be required outside the context of the study. We will also look for differences between the two groups in terms of quality of life, side effects, complications, cost and adherence to prescribed antibiotics.

What are the possible benefits and risks of participating?
There are no direct benefits from taking part in the study other than in helping to identify the best treatment strategy for future patients. However, there are advantages and disadvantages of both intravenous and oral antibiotics. Patients allocated to the intravenous group are likely to be closely supervised by specialist nurses. However, many patients find intravenous therapy inconvenient. On the other hand, patients allocated to oral treatment may find the tablets easier and more convenient but they are less likely to be closely supervised by nurses and may therefore be at greater risk of missing doses. At the moment we do not know which antibiotic strategy (intravenous or oral) is most effective, or whether any difference in effectiveness might

be balanced by a difference in side effects. If there is a difference, you might be allocated (by chance) to an antibiotic strategy that turns out at the end of the study either to have more side effects or to be less effective. The various antibiotics used to treat bone and joint infections all have different side effects, which the doctor looking after you will explain. In general, antibiotics tablets are more likely to cause nausea and vomiting than antibiotics given by injection. Both tablets and antibiotic injections may cause diarrhoea or a rash. The initial insertion of an intravenous line used for administering antibiotics by injection involves some discomfort but this is usually mild. Intravenous lines have a small risk of becoming infected themselves and very occasionally, they can cause irritation or blood clots in the vein. Under these circumstances, the line may have to be removed. It is important to remember that risks would be no different if you chose not to be in the trial because it is currently standard practice in your hospital to give antibiotics intravenously in the treatment of bone and joint infection.

Where is the study run from?
The Botnar Research Centre, University of Oxford (UK).

When is the study starting and how long is it expected to run for?
From March 2013 to February 2017.

Who is funding the study?
NIHR Health Technology Assessment Programme - HTA (UK).

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

ClinicalTrials.gov (NCT)
NCT00974493

Protocol serial number

HTA 11/36/29; 13780

Study information

Scientific Title
Randomised open-label study of oral versus intravenous antibiotic treatment for bone and joint infections requiring prolonged antibiotic treatment: multi-centre study

Acronym
OVIVA

Study objectives
We will compare the outcome of treatment with intravenous and oral antibiotic therapy for patients with bone and joint infection.

More details can be found at: http://public.ukcrn.org.uk/Search/StudyDetail.aspx?StudyID=13780
More details can be found at: http://www.nets.nihr.ac.uk/projects/hta/113629
Protocol can be found at: http://www.nets.nihr.ac.uk/__data/assets/pdf_file/0003/81156/PRO-11-36-29.pdf

On 02/06/2015 the overall trial end date was changed from 28/02/2016 to 28/02/2017.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Oxford REC B, 08/01/2013, ref: 13/SC/0016

Study design
Multi-centre randomised open-label study

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Bone and joint infection

Interventions
Patients will be randomised to either oral or intravenous antibiotics for the treatment of bone or joint infection

Follow Up Length: 12 month(s)

Intervention Type
Drug

Phase

Not Applicable

Primary outcome(s)
Treatment failure; Timepoint(s): Recurrence of infection within one year of randomisation

Key secondary outcome(s))
No secondary outcome measures

Completion date
28/02/2017

Eligibility

Key inclusion criteria
1. A clinical syndrome comprising any of the following
1.1. Localized pain OR
1.2. Localized inflammation OR
1.3. Temperature >38.0°C OR
1.4. A discharging wound AND
2. Willing and able to give informed consent
3. Male and female aged 18 years or above
4. The patient has received 7 days or less of intravenous therapy after an appropriate surgical intervention to treat bone or joint infection (regardless of pre-surgical antibiotics) or, if no surgical intervention is required, the patient has received 7 days or less of intravenous therapy after the start of the relevant clinical episode.
5. Has a life expectancy > 1 year
6. Has a bone and joint infection in one of the following categories
6.1. Native osteomyelitis (i.e., bone infection without metal implants such as artificial joints) affecting limb bone, skull, foot or other site OR 6.2. Native joint infection treated by surgical excision OR
6.3. Prosthetic joint infection treated by debridement and retention of the prosthesis, by one stage exchange of the prosthesis or by excision of the prosthetic joint (with or without planned re-implantation) OR
6.4. Orthopaedic device or bone-graft infection treated by debridement and retention, or by debridement and removal OR
6.5. Spinal infection

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex

All

Total final enrolment
1054

Key exclusion criteria
1. Staphylococcus aureus bacteraemia (blood stream infection) on presentation or within the last 1 month
2. Bacterial endocarditis (heart valve infection) on presentation or within the last month (NB there are no study mandated investigations. Participants are not required to have echocardiograms, blood cultures, or any other investigations to exclude endocarditis in the absence of a clinical indication)
3. Any other concomitant infection which, in the opinion of the clinician responsible for the patient, required a prolonged intravenous course of antibiotics (e.g. central nervous system infection)
4. Mild osteomyelitis, defined as osteomyelitis which, in the opinion of the clinical investigator, would not usually require a 6 week course of intravenous antibiotics
5. An infection for which there are no suitable antibiotic choices to permit randomization between the two arms of the trial (for instance, where organisms are only sensitive to intravenous antibiotics, which occurred in <5% of patients during recruitment for our pilot study)
6. Previous enrolment in the trial
7. Septic shock or systemic features requiring intravenous antibiotics in the opinion of the treating clinician (the patient may be re-evaluated if these features resolve)
8. The patient is unlikely to comply with trial requirements following randomization (including specific requirement for PO or IV course) in the opinion of the investigator
9. There is laboratory evidence of mycobacterial (e.g. tuberculosis), fungal, parasitic or viral etiology
10. The patient is receiving an investigational medical product as part of another clinical trial.

Date of first enrolment
01/03/2013

Date of final enrolment
28/02/2016

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
The Botnar Research Centre,
University of Oxford
Oxford
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OX3 7LD

Sponsor information

Organisation
Oxford Radcliffe Hospitals NHS Trust (UK)

ROR
https://ror.org/03h2bh287

Funder(s)

Funder type
Government

Funder Name
Health Technology Assessment Programme

Alternative Name(s)
NIHR Health Technology Assessment Programme, Health Technology Assessment (HTA), HTA

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	31/01/2019		Yes	No
Results article	results	01/08/2019	05/08/2019	Yes	No
Protocol article	protocol	21/12/2015		Yes	No

HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes