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Comparing the effects of infliximab and alpha interferon in the treatment of Behçet's Disease

Submission date
09/03/2016

Recruitment status
No longer recruiting

Registration date
09/03/2016

Overall study status
Completed

Last Edited
24/10/2024

Condition category
Musculoskeletal Diseases

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

Plain English summary of protocol

Background and study aims
Behçet's disease (BD) is a rate and poorly understood condition that causes inflammation (swelling) throughout the body. The inflammation associate with BD can cause a wide range of symptoms, including genital and mouth ulcers, eye problems (which can lead to blindness), skin rashes and inflammation of the blood vessels, which increases a person's risk of developing blood clots and stroke. The exact cause of BD is unknown however many believe it is an autoimmune disorder (in which the body's immune system mistakenly attacks the body's own, healthy tissue). Traditional treatments include corticosteroids (anti-inflammatory medicine) and immunosuppressant drugs (medications that reduce the activity of the immune system), but they can have unpleasant side effects. Biologic therapies are a newer type of medication, which target the biological processes involved in the process of inflammation more selectively. Recently, the biologic drugs infliximab and interferon alpha (aIFN) have been used successfully in treating BD however they are expensive (£16,000/year and £4,000/year, respectively), not always effective and there have been very few studies looking at their effectiveness. The Department of Health has recently commissioned three national Centres of Excellence for BD in London, Birmingham and Liverpool, with the remit to deliver care for the approximate 500 UK patients currently with this condition. The aim of this study is to compare the effectiveness of infliximab with aIFN at treating patients with BD.

Who can participate?
Adults with BD who are suitable to receive biological therapy.

What does the study involve?
Participants are randomly allocated to one of two groups. Those in the first group are treated with infliximab. This is given through a drip (intravenous infusion) at the standard dose of 5mg /kg at the start of the study, week 2, week 6 and then every 8 weeks until the end of the study. Those in the second group are treated with aIRN. This is given as an injection under the skin (subcutaneous injection) starting at a dose of 3 million units one a day for 3 days, then 6 million units (for men who weight more than 80kg) or 4.5 million units (for women or men weighing less than 80kg) every day. This dose can be reduced down every 2-4 weeks if necessary to 3 million

units twice a week over the course of the study. After 3 and 6 months of treatment, participants in both groups are assessed in order to find out if there has been any improvement to their condition.

What are the possible benefits and risks of participating?
Not provided at time of registration.

Where is the study run from?
University of Liverpool (UK)

When is the study starting and how long is it expected to run for?
April 2016 to June 2021 (updated 10/11/2020, previously: November 2020) (updated 09/01/2020, previously: December 2019)

Who is funding the study?
Medical Research Council (UK)

Who is the main contact?
Miss Elizabeth Blennerhassett

Contact information

Type(s)
Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
2014-005390-36

Protocol serial number
20233

Study information

Scientific Title

BIO BEHÇET'S: Optimal utilisation of biologic drugs in Behçet's Disease: a randomised controlled trial of infliximab vs alpha interferon, with genotyping and metabolomic profiling, towards a stratified medicines approach to treatment

Acronym
BIO BEHÇET'S

Study objectives
The aim of the study is to create the evidence base to underpin clinically effective prescribing of the biologic drugs infliximab and alpha interferon for Behçet's Disease.

The objectives of the study are to:
1. Undertake a randomised controlled trial to compare IFX versus aIFN in patients with BD who are unresponsive to standard oral therapy
2. Examine whether IFNL3 and IFNL4 SNPs can predict response to aIFN and/or IFX in BD
3. Examine the potential for urine metabolomics to act as biomarker for drug response to IFX and /or aIFN in BD

Ethics approval required
Old ethics approval format

Ethics approval(s)
North West - Liverpool Central Research Ethics Committee, 17/02/2015, 15/NW/0008

Study design
Randomised two-arm parallel open-label design

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Behçet disease

Interventions
Participants are randomly allocated to one of two groups.

Group 1: Participants will receive infliximab at a standard dose of 5mg/kg at week 0, week 2 and week 6 as loading then every 8 weeks for the length of the trial.

Group 2: Interferon alpha (Roferon) subcutaneous injection in tapering dose starting at 3 million units once daily for three days, then 6** million units once daily (male with body weight more than 80 kg) or 4.5 million units once daily (female, or male with weight less than 80 kg). Dose tapered down every 2-4 weeks according to defined clinical criteria to 3 million units twice a week, over the period of the trial.

** The six million units dose will only be administered to males of over 80 kg with major organ threatening disease (e.g., severe eye involvement). Males of less than 80kg or females will start with 4.5 million.

Intervention Type
Other

Primary outcome(s)
Disease severity is measured using the Behcet's disease activity index (BDAI) after 3 months of treatment.

Key secondary outcome(s))
1. Disease severity is measured using the Behcet's disease activity index (BDAI) after six months of treatment,
2. Significant improvement in organ involvement within the primary organ system that resulted in the decision to start a biologic agent and other organ systems assessed by:
2.1. Ocular: reduction in vitreous haze using the SUN consensus group grading scale and visual acuity change from baseline
2.2. Oral ulcer activity: change in ulcer severity score (USS)
2.3. Change in number of genital ulcers
2.4. Musculoskeletal: Likert pain score
3. Adverse events in each group
4. Reduction in dose of prednisolone (or equivalent glucocorticoid) at three months: a clinically meaningful reduction is considered to be 50% of baseline or dose of <15mg/day prednisolone
5. Reduction in dose of prednisolone (or equivalent glucocorticoid) at six months: a clinically meaningful reduction is considered to be 50% of baseline or dose of <7.5mg/day prednisolone
6. Quality of life is measured using EQ-5D and BD-QoL at baseline, 3 and 6 months
7. Disease activity is measured using the Physician’s Global Assessment of disease activity (a 7 point Likert Scale completed as part of (but assessed independently of) the BDAI) at 3 and 6 months

Completion date
30/06/2021

Eligibility

Key inclusion criteria
1. Diagnosed to have BD by International Study Group (ISG) criteria or International Criteria for BD (ICBD)
2. Have refractory disease as defined by the UK Centres of Excellence criteria (failure to respond to steroid and/or immunosuppressive therapy with significant or major organ-threatening disease) and therefore qualify for biologic therapy with either IFX or aIFN
3. Able to give informed consent
4. Have not previously received a biologic agent
5. Aged over 18 years

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Sex
All

Total final enrolment
79

Key exclusion criteria
1. Have a contraindication to either IFX or aIFN (eg active infection, severe liver disease, neutropenia, previous malignancy)
2. Are likely to not comply: for example cannot attend assessments because of excessive travel requirements
3. Are already, or likely to become, pregnant during the study
4. Express a strong preference for one of the two potential therapies
5. Have heart disease or severe heart failure
6. Have been diagnosed with Multiple sclerosis
7. Have evidence of infection with HIV

Date of first enrolment
01/04/2016

Date of final enrolment
28/02/2020

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
University of Liverpool
Department of Health Services Research
1-3 Brownlow Street
Liverpool
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L69 3GL

Sponsor information

Organisation
University of Liverpool

ROR
https://ror.org/04xs57h96

Funder(s)

Funder type
Government

Funder Name
National Institute for Health Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

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
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		21/10/2024	24/10/2024	Yes	No
HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes