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Hydroxychloroquine (HCQ) in patients with inflammatory osteoarthritis (OA) of the hands

Submission date
10/05/2011

Recruitment status
No longer recruiting

Registration date
09/06/2011

Overall study status
Completed

Last Edited
19/05/2022

Condition category
Musculoskeletal Diseases

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] 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

Clinical Trials Information System (CTIS)
2011-001689-16

Protocol serial number
2011 05 30-1

Study information

Scientific Title

Prospective, randomised, double-blind, placebo-controlled clinical trial with hydroxychloroquine (HCQ) in patients with inflammatory osteoarthritis (OA) of the hands

Acronym
OA Treat

Study objectives
Osteoarthritis (OA) is a heterogeneous group of conditions with a disturbed integrity of articular cartilage and changes in the underlying bone. The pathogenesis of OA is multifactorial and involves a complex interplay of genetic, metabolic, biochemical, and biomechanical factors with variable components of inflammation. The disease, as one of the most prevalent musculoskeletal diseases, leads to pain in and around the affected joints and to swelling, stiffness, deformity, and gradual loss of function. It is not just a disease of elderly people, but also affects the younger working age population. Hydroxychloroquine (HCQ) is a disease modifying anti-rheumatic drug (DMARD) that in clinical practice is also used for inflammatory OA and has been employed for the treatment of various rheumatic and dermatologic diseases. Current research has further enhanced our understanding of the pharmacologic mechanisms of action of these drugs involving inhibition of endosomal toll - like receptor (TLR) signalling, which limits B cells and dendritic cell activation. Three studies of HCQ in OA, including one abstract and one letter are available. Most studies show that currently a wide variety of outcome measures are used in rather small patient populations.

Despite initial indications for a good effect of HCQ, there has been no randomized, double-blind, and placebo-controlled trial in a larger patient group. In the European League Against Rheumatism (EULAR) evidence based recommendations for the management of hand OA HCQ was not included as a therapeutic option, apparently because of the currently missing randomized clinical trials. The aim of the proposed study is to investigate the efficacy of HCQ by clinical and radiological outcome compared to placebo in patients with severe and refractory inflammatory hand OA.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved as of 17/04/2013

Study design
Interventional randomised placebo-controlled double-blind multicentre study

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Refractory inflammatory hand osteoarthritis

Interventions

Arm 1:
1. Capsules body weight adapted to pharmaceutical package (30 - 49 kg one capsule with 200 mg HCQ as daily single dose
2. 50 64 kg one capsule with 200 mg HCQ as single dose on day 1 and two capsules with 200 mg HCQ as single dose on day 2
3. > 65 kg two capsules with 200 mg HCQ as single dose

Arm 2:
One capsule with oral placebo application characteristics

Intervention Type
Drug

Phase
Phase III

Drug/device/biological/vaccine name(s)
Hydroxychloroquine

Primary outcome(s)
1. Australian-Canadian OA Index (AUSCAN, German version) for pain, and hand disability as co-primary clinical outcome at week 52
2. Radiographic co-primary endpoint: Radiographic progression assessed by the Kallman Score at week 52

Key secondary outcome(s))
1. Efficacy of HCQ with respect to AUSCAN at week 26 to patients global assessment of disease activity, patients assessment of stiffness, and physicians global assessment of disease activity at week 26, 52
2. To compare pain, functioning, disability, quality of life, patient-acceptable symptoms and health (HAQ, SF-36, SACRAH, FiHOA, AUSCAN, Backman score, etc.) week 0, 26, 52
3. To assess and to compare the inflammatory status using the following parameters: joint pain and joint swelling, night pain, morning stiffness, local erythema/redness, CRP - and ESR - levels from baseline to week 26, 52
4. To compare cumulative dosage of consumption per week of standard therapy (NSAIDs, COXibs)
5. Assessment of safety: Safety and tolerability of HCQ with reports on adverse event (AE) and serious advere event (SAE)
6. The eye examination will be performed by an ophthalmologist (baseline and every 6 months)

Completion date
05/07/2018

Eligibility

Key inclusion criteria
1. Men and women from 40 to 80 years
2. Presence of clinical hand OA according to American College of Rheumatology (ACR) criteria
3. Conforming to the ACR criteria for hand OA with recent X ray, dating less than 6 months ago, X ray of the hands showing radiological signs of digital OA in one or more joints as defined by grades 2 or higher, per Kellgren and Lawrence scale or alternatively using the Kallman method

or alternativly using the Verbruggen Score;
4. Symptomatic digital OA with more than three finger joints for more than 3 months (at least every other day) despite taking analgesics and non-steroidal anti-inflammatory drugs (NSAIDs)
5. Pain above 35 mm as evaluated by the Australian/Canadian Osteoarthritis Hand Index (AUSCAN) -Visual Analogue Scale(VAS) (0 - 100 mm)
6. Function as co-primary clinical outcome with ≥ 9 using the AUSCAN LK function subscale, or ≥ 225 F (out of maximum of 800) on the AUSCAN VA function subscale

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. Patients who have already been treated with HCQ
2. Existence of painful syndrome of upper limbs likely to interfere with the monitoring of pain
3. Patients suffering or having suffered from secondary OA after one of the following diseases (e.g. infectious arthritis, acromegaly, ochronosis, haemochromatosis, gout, etc.) or inflammatory joint diseases
4. Any unstable medical condition which would put the patient at an unacceptable risk
5. Planned Surgery
6. Local injection with glucocorticoids or other medications within the previous three months
7. Oral glucocorticoids
8. Presence of retinopathy

Date of first enrolment
04/12/2011

Date of final enrolment
31/12/2015

Locations

Countries of recruitment
Germany

Study participating centre
Charité - University of Medicine, Berlin
Berlin
Germany
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Sponsor information

Organisation
Charité - University of Medicine, Berlin (Germany)

ROR
https://ror.org/001w7jn25

Funder(s)

Funder type
Government

Funder Name
German Federal Ministry of Education and Research (Bundesministerium Fur Bildung und Forschung [BMBF]) (Germany)

Results and Publications

Individual participant data (IPD) sharing plan
Not provided at time of registration

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article	protocol	27/10/2014		Yes	No
Basic results		21/03/2022	19/05/2022	No	No