Placebo gecontroleerd onderzoek naar het effect van 6 maanden behandeling met doxycycline op pijn en functie in patiënten met artrose van de knie.

Gepubliceerd: 05-11-2007 Laatst bijgewerkt: 18-08-2022

Null hypothesis: OMERACT response percentages will not differ in patients with symptomatic and radiographic knee osteoarthritis treated with doxycycline 2dd100 mg during 24 weeks compared to placebo.

Ethische beoordeling	Positief advies
Status	Werving gestart
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON26143

Bron
Nationaal Trial Register

Verkorte titel
DKOA

Aandoening

1. Knee osteoarthritis (knie artrose);

2. osteoarthritis (artrose).

Ondersteuning

Primaire sponsor: Reumacentrum Sint Maartenskliniek Nijmegen
Overige ondersteuning: Reumacentrum Sint Maartenskliniek Nijmegen

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Primary endpoint:
Percentage of the patients achieving clinical response on pain and function, as defined by the OMERACT-OARSI set of responder criteria based on the KOOS dutch version - pain (sumscore question 5 to 9) and function sumscore question 1-17 – and VAS patient Global Assessment at week 24 compared between placebo and verum.

Toelichting onderzoek

Achtergrond van het onderzoek

Knee osteoarthritis (Knee OA) is a prevalent chronic disease characterized by cartilage failure resulting in pain, stiffness and function loss. Symptomatic treatments for knee OA include medical treatment with analgesics (acetaminophen, NSAIDs), paramedical treatment including occupational and physical therapy, weight reduction, and eventually joint replacement. Although NSAIDs have been extensively studied and used for OA, there are some important drawbacks to consider: inefficacy and gastrointestinal and cardiovascular safety issues and possibly increased progression of knee OA. Therefore the search for a DMOAD with both symptomatic and structural effects has been intensified in recent years. Doxycycline is a tetracycline class antibiotic agent. Besides being an antimicrobacterial agent, it is a metalloproteinase inhibitor and inhibits the collagenase that splices collagen type IX that is present in articular cartilage. Doxycycline has been studied in human OA in one clinical trial by Brandt et al. Although effect on structural change has been shown for doxycycline, whether it also modifies symptoms for osteoarthritis has not been established yet. Side effects were mild and drop-out due to side effects was rare (<5%).

A possible beneficial effect of doxycycline on pain and function in knee OA would allow this drug to be introduced in the non-invasive treatment of knee OA for both symptomatic and structural benefit. Because doxycycline is not associated with the important adverse effects of NSAIDs like gastrointestinal and cardiovascular morbidity and mortality this could be of high clinical relevance. In addition, doxycycline can be expected to have a beneficial effect on cartilage compared to the possible deleterious effect of NSAIDs on cartilage.

Objective of the study:

To asses the short term effect on pain and function and the safety of doxycycline in patients with mild to severe pain due to established knee OA.

Doel van het onderzoek

Null hypothesis: OMERACT response percentages will not differ in patients with symptomatic

and radiographic knee osteoarthritis treated with doxycycline 2dd100 mg during 24 weeks compared to placebo.

Onderzoeksopzet

N/A

Onderzoeksproduct en/of interventie

The intervention-group will receive 2dd100 mg doxycycline monohydrate during 24 weeks. The control group will receive 2dd placebo during 24 weeks.

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Inclusion criteria:

1. Knee OA (index knee) according to the 1986 proposed ACR classification tree using clinical and radiological criteria (18): knee pain (VAS > 40mm during > 50% of last month), the presence of osteophytes and one of the following: age >50, crepitus, or morning stiffness < 30 minutes;

2. Kellgren Lawrence score II or III;

3. Criteria for mild to severe pain (KOOS pain sumscore question 5 to 9 > 100 in the index knee) must be fulfilled (19);

4. Ability to read and communicate well in Dutch.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

Exclusion criteria:

1. Other rheumatic diseases like rheumatoid arthritis, ankylosing spondylitis, systemic lupus erythematodes or psoriatic arthritis;

2. The presence of secondary OA including OA caused by orthopaedic problems (severe malalignment, trauma), ochronosis, acromegaly, calcium pyrophosphate deposition disease (CPPD), haemochromatosis;

3. Severe functional problems related to diseases other than OA (functional class ARA IV);

4. Cognitive deficits affecting the scoring processes;

5. Severe OA (Kellgren Lawrence score IV);

6. Ipsilateral hip prosthesis in situ;

7. Contraindications for doxycycline use like allergy for tetracyclines and prior adequate treatment with doxycycline (>100mg for > 6 weeks for OA);

8. Planned other major interventions within 24 weeks, including lower limb surgery and intensive multidisciplinary approaches;

9. Recent intra-articular hyaluronic acid or corticosteroid application (<3 months) or surgery (<1 year) in the index knee;

10. Recent participation in other study (< 3 months);

11. (planned) pregnancy or reproductive state without proper contraceptive method.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Gerandomiseerd
Blindering:	Dubbelblind
Controle:	Placebo

Deelname

Nederland

Status:	Werving gestart
(Verwachte) startdatum:	01-12-2007
Aantal proefpersonen:	230
Type:	Verwachte startdatum

Voornemen beschikbaar stellen Individuele Patiënten Data (IPD)

Wordt de data na het onderzoek gedeeld: Ja

Ethische beoordeling

Positief advies

Datum:	05-11-2007
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL1078
NTR-old	NTR1111
Ander register	Reumacentrum Sint Maartenskliniek : DKOA21
ISRCTN	ISRCTN wordt niet meer aangevraagd

Resultaten

Samenvatting resultaten
https://pubmed.ncbi.nlm.nih.gov/21551510/