Nortriptyline in knee osteoarthritis (NortIKA Study)

Primary Care Information Sheet

Overview

Osteoarthritis (OA) is a common cause of pain and disability. Currently available analgesics are often ineffective, or have unacceptable adverse effects. Tricyclic antidepressants may offer a novel and useful centrally-acting analgesic.

Antidepressants as a novel pain treatment in OA

The discovery of central pain-processing activity in OA has suggested a potential new therapeutic approach for pain control in OA. Recent trials of the serotonin and noradrenalin reuptake inhibitors (SNRIs) venlafaxine and duloxetine have shown statistically and clinically significant reductions in pain in patients with OA. Tricyclic antidepressants (TCAs), which are pharmacologically-related to the SNRIs, are commonly used in other chronic pain conditions, for example, back pain and fibromyalgia. However, their potential benefits in treating OA pain have not yet been tested in a well-designed RCT. Nortriptyline is a comparatively well-tolerated tricyclic antidepressant, readily-available, and cheap. If nortriptyline proves to have a useful analgesic effect and a tolerable side effect burden it will be a valuable addition to the analgesic options for patients with OA.

Methods/Design

The Department of General Practice, University of Otago, Christchurch (UOC), is undertaking a parallel group, two-arm, participant and investigator-blinded, randomised controlled superiority trial comparing nortriptyline with placebo. Two hundred participants with primary knee OA will be enrolled. Participants will take study medication for 14 weeks. They will continue taking all current analgesics. The primary outcome will be a difference between treatment arms in mean pain score measured on the Western Ontario and McMaster Universities (WOMAC) pain scale at 14 weeks.

Participant Assessments

A screening assessment will be conducted by the research nurse to ensure potential participants meet the inclusion and exclusion criteria. Potential participants' GPs will be asked to confirm whether there any contraindications to the use of nortriptyline. The study Clinical Review Team will decide each potential participant's eligibility for the study. Once eligibility is confirmed the research nurse will carry out baseline assessment where the randomised study medication will be given out. This will be followed by two weekly phone calls for further assessments and medication titration (to a total of 25mg - 100mg nortriptyline/placebo) over eight weeks. At week 14 participants will return for an exit interview. At completion, a non-blinded team member will inform the participant and their GP which study arm they were on. Instructions for tapering off medication will be provided to participants as required.

Primary Care Team Participation

Please consider discussing participation in the trial with your knee OA patients. Patient details can be registered on the study website (www.otago.ac.nz/nortika).

During eligibility screening and assessment, a one page eligibility tick-box form will be faxed for the GP to fill out any contraindications to trial participation.

When participant eligibility is confirmed, GPs will be sent a form informing them that their patient is enrolled in the trial. If there is any change in the participant's status (for example, declines further participation for a variety of reasons) the GP will be informed.

At completion of the 14 week study the GP will be informed of whether the participant was on nortriptyline or placebo.