

Summary of research proposal LROI



Title:

Effect of Cryo- and Compression therapy after Total Knee and Unicompartmental Knee Arthroplasty, a single-blind Randomised Controlled Trial

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Abstract:

Unicompartmental and total knee replacements are widely accepted and effective treatment options for end-stage osteoarthritis of the knee. The early postoperative phase after both procedures is characterized by pain and swelling due to inflammatory reaction after tissue damage. This may hamper rehabilitation, eventually resulting in stiffness of the knee and patient dissatisfaction, also in the long-term. Postoperative treatment could still be optimized, where especially the negative side effects of opioid analgesics drive the search for alternative pain reducing techniques. Cold therapy (cryotherapy) could play a role in optimizing rehabilitation after surgery. Current studies show that pain can be diminished and opioid use can be reduced using the cold therapy in the postoperative phase. These positive effects were not present anymore on the longer term, possibly because of the relative short period of the use of the cold therapy in these studies (in general for only one week). To our knowledge no studies have administered the cold therapy for multiple weeks. In this project the effect of the use of cryo- and compression therapy during the first 6 postoperative weeks – starting at discharge - after unicompartmental as well as after total knee replacement will be investigated. Effectiveness in terms of pain, opioid use, function and satisfaction will be assessed. This will be done by using questionnaires that are administered as part of usual care, and by additional questionnaires and physical tests to assess the function of the knee. This project gives more insight if the use of cold therapy for several weeks can help in the rehabilitation after a unicompartmental or total knee replacement.

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