

Summary of research proposal LROI Research Grants



Title:

How to define poor response to total knee replacement?

Authors:

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Abstract:

Total knee replacement (TKR) is considered to be a cost-effective intervention for the treatment of advanced knee osteoarthritis (OA). However, increasing evidence shows that a significant proportion of patients (around 20%) could be considered as a poor responder to TKR (i.e. show no or too little improvement) in terms of chronic knee pain, functional disability, poor quality of life, and dissatisfaction after TKR .

There is no international consensus on the definition of “poor response” to knee replacement. Indeed, a preliminary set of domains for joint replacement clinical trials was proposed by international experts that included pain, function, patient satisfaction, joint revision, adverse events, and death, but the relative importance of those domains is not established yet. In addition, the need to use a combined endpoint has been recognized to accurately describe failure (i.e. poor response) after TKR.

The overall aim of the study is to achieve international consensus on the clinical definition of poor response to TKR. The research objectives are:

- what is the performance of existing and newly developed definitions of poor response?
- what definitions for poor response are highly ranked by a panel of international experts?

An expert group will review definitions for poor response identified in the literature and propose new definitions on the basis of results of our previous work (literature review and qualitative study on the perspective of both orthopaedic surgeons and patients about relevant domains that should be incorporated in a definition for poor response to TKR).

Then, we will examine, where applicable, the discriminant validity, the specificity/sensitivity of existing and the overlap of existing and newly developed definitions in the Dutch Arthroplasty Register (LROI database) and the database of the Osteoarthritis Initiative (OAI).

The results of those analyses will be the basis for a Delphi procedure among at least 50 international knee specialists. This panel of knee specialists will be asked in several rounds to rate candidate definitions, to motivate their ranking and to propose, if applicable, new definitions.

Finally, we will prioritize the 20 highest rated definitions in the Delphi procedure. For this purpose, we will perform a best-worst scaling experiment among the panel of knee specialists and among the patients who participated in our qualitative study and patients participating in the Knee Panel. This final step will give insight in differences in perspective between patients and knee specialists.

This study is funded by LROI Research Grants (LROI-RG).

Approval date

December 2019