Summary of research proposal LROI

Title:
The effect of age on survivorship and patient-reported outcomes after cemented and cementless Oxford mobile-bearing medial unicompartmental knee arthroplasty - Results of the Dutch Arthroplasty Register

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Abstract:
Medial unicompartmental knee arthroplasty (UKA) is an highly effective surgical procedure for treating patients with symptomatic isolated medial compartment osteoarthritis. Traditionally, UKA components have been fixated using cement. However, the ideal fixation technique for UKA remains a subject of debate since cementless UKA systems have been introduced. Cementless fixation has gained popularity due to the potentially more durable fixation, which relies on biological fixation through osseointegration. The prevalence of osteoporosis increases with advancing age and has the potential to adversely affect bone quality, which in turn may influence biological osseointegration of cementless implants necessary for successful bone-implant fixation. Early subsidence and loosening of cementless implants due to osteoporotic bone amplify concerns regarding successful fixation. Therefore, it may be necessary to take variables that affect bone quality into account when deciding whether to perform cementless or cemented UKA.

The primary aim of this study is to evaluate how age impacts implant survivorship of cementless and cemented Oxford mobile-bearing medial UKA, using LROI data. Additionally, this study aims to evaluate the association between survivorship and fixation technique in different age groups, compare the failure modes observed in primary cementless and cemented Oxford mobile-bearing UKA and correlate findings with patient-reported outcomes.

Approval date: August 2023