Summary of research proposal LROI

Title:

Is BMI associated with postoperative revision rate after total knee arthroplasty

Authors:

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Abstract:

In 2018 50.2% of the Dutch population of 18 years and older had mild overweight (Body Mass Index; BMI 25-30) or obesity (BMI ≥30). Since 1990 there is a noted increase in the number of patients who are obese. There is a strong correlation between obesity and knee osteoarthritis. As shown in LROI data there is a marked increase in total knee arthroplasty (TKA) since 2010, including revision TKA. Previous research suggest a correlation between BMI and increased morbidity and mortality after TKA. Preoperative BMI levels have shown a strong correlation with complications and levels of functional outcome, which subsequently lead to a higher revision rate. The aim of this pooled-analysis on the data of the LROI (TKA between 2014-2018) is to assess the association between preoperative BMI values and revision rate after adjustment for potential confounders i.e. ASA score, age, gender, smoking, prior operation, diagnosis, Charnley classification, type of prosthesis, bearing type, the use of cement, and/or patella component. By use of a Cox proportional Hazard model, the association between BMI and survival of the TKA will be analysed. An optimal cut-off for pre-operative screening for safe admission for TKA will be defined to identify patients with acceptable risk of revision. Available data on Patient Reported Outcome Measures (PROMs) and patient satisfaction of patients with TKA and morbid obesity (BMI > 40) will be analysed.

Approval date:

Juni 2019