Summary of research proposal LROI

Title:
Is Reverse Total Shoulder Arthroplasty for Fractures Associated with Higher Revision Rates Compared to Degenerative Indications? An analysis from the Dutch Arthroplasty Register

Authors:
MPJ van den Bekerom, RWA Spek, J Vanhommerig, RL Jaarsma, JN Doornberg, A van Noort, HC van der Veen, PC Jutte

Abstract:
Background: Given the traumatic nature of proximal humerus fractures, functional outcome and longevity between reverse total shoulder arthroplasty (RTSA) for degenerative conditions and fractures are likely to be different.

Research questions: Is RTSA for fractures associated with (1) higher revision rates and (2) inferior patient reported outcomes compared to RTSA performed for degenerative conditions? (3) Does the time to revision differ between these two indications?

Method: A Kaplan-Meier estimate will be calculated to show the survival for RTSA performed for fractures and degenerative conditions. Both groups will be compared with the log rank test. Differences between patient reported outcomes will be assessed with linear mixed modelling and differences in time to revision with hazard ratios derived from a Cox proportional-hazards model.

Contribution: This is a hypothesis generating study, so causal relationships cannot be determined. Outcomes of this project are useful to assist in patient consultation and managing patients' expectations on shoulder revision surgery. Better insights on revision rates also helps hospitals and insurance companies to risk stratify patients and potentially use it as an indicator for expected costs and resource utilisation.

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