Summary of research proposal LROI

Title:
Identifying recovery trajectories after total anatomical and reversed shoulder arthroplasty using data of the Dutch Arthroplasty Register (LROI)

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Abstract:
Although total anatomical and reversed shoulder arthroplasty (ATSA/RTSA) usually lead to substantial improvements in both pain and physical functioning, some patients fail to improve or report persistent pain, indicating heterogenous recovery trajectories after ATSA and RTSA. Understanding differences in recovery trajectories after ATSA and RTSA, as well as patient and procedure characteristics associated with a particular recovery trajectory, may help in clinical decision-making. Latent class growth modelling (LCGM) allows identification of different patient groups based on shared recovery patterns, rather than predefined patient categories.

We aim to identify recovery trajectories after ATSA and RTSA according to patient-reported quality of life, pain or physical function, using data from the LROI. Secondly, we aim to investigated whether recovery trajectories are associated with patient or procedure characteristics.

We will include all primary ATSAs and RTSAs due to osteoarthritis, cuff arthropathy or cuff rupture registered in the LROI between 2014-2022 with patient-reported outcome measurement (PROM) scores available at 2 of the 3 time-points (preoperatively, 3-months postoperatively or 12-month postoperatively). We will use LCGM to identify subgroups of patients according to their trajectory of recovery. Crude and adjusted multinomial logistic regression analyses will be used to explore whether risk factors are associated with class membership.

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