



Universität
Basel

Research Project

Gangbild nach Knie- bzw. Hüft-TE

Project funded by own resources

Project title Gangbild nach Knie- bzw. Hüft-TE

Principal Investigator(s) [Mündermann, Annegret](#) ; [Pagenstert, Geert](#) ;

Co-Investigator(s) [Ismailidis, Petros](#) ;

Project Members [Nüesch, Corina](#) ; [Egloff, Christian](#) ;

Organisation / Research unit

Departement Klinische Forschung

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Status Completed

In this study, we will first identify objective parameters describing gait asymmetry that can be used as outcome measures for future clinical trials. We propose that gait asymmetry can be assessed using a body-worn inertial sensor system (RehaGait[®]), and that these parameters differ between pre- to post-operative measurements in patients undergoing total arthroplasty and between patients with endstage knee or hip osteoarthritis (OA) and healthy subjects. In a second step we will show that joint biomechanics in the lower extremity of the affected and the contralateral side is influenced by OA and arthroplasty and that gait asymmetry is explained by muscle strength, muscle activity, joint moments and/or passive range of motion. We will include persons with endstage knee (n=50) or hip (n=50) OA and age matched healthy persons (n=50). Gait asymmetry assessed using a portable gait analysis will be compared to that assessed using established laboratory systems and compared between different patient groups and between patients and healthy subjects. Muscle strength, muscle activity, joint moments and range of motion will be tested and related to gait asymmetry. Potential confounders pain and health and functional status will be assessed.

Keywords knee; hip; arthroplasty; gait analysis

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Other funds

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Specify cooperation partners