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GAIT ANALYSIS AFTER UNI KNEE ARTHROPLASTY

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Introduction: The aim of this study was analyzing gait of patients with gonarthrosis before and after unicondilar knee arthroplasty. Methods: Ten patients with diagnozed unilateral degenerative knee disease were included in the study. Movement kinematics were analyzed using data recorded with infrared cameras (OptiTrack system), that followed the positions of passive markers placed on anatomic positions of patients' lower extremities. Data was then processed using the MATLAB programme. Gait was analyzed one day before surgery and 6 weeks after knee arthroplasty. Results: Results were shown through graphs and tables displaying differences in anterior posterior (AP) translation, internal external (IE) rotation and flexion/extension levels of the knee joint. On the damaged knee joints, the measured values of AP translation and IE rotation were within normal ranges for the healthy knees, while the values of flexion/extension were significantly limited on the damaged joint. After uniknee replacement, AP translation and IE rotation were still within normal ranges, while flexion of the operated knee joint was significantly increased. Conclusion After uni knee arthroplasty, movement ranges in the knee joint were significantly improved compared to the movement ranges before the operation (flexion/extension movement).