

Research Project

BASEL STUDY OF EARLY OSTEOARTHRITIS (BaSE-OA)

Third-party funded project

Project title BASEL STUDY OF EARLY OSTEOARTHRITIS (BaSE-OA)

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Organisation / Research unit

Bereich Operative Fächer (Klinik) / Orthopädie (Valderrabano)

Department

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Status Completed

Background: Osteoarthritis (OA) is the leading degenerative musculoskeletal disorder, affecting millions of people worldwide. Inflammation in OA is typically encountered in the early phase of the disease. The exact molecular inflammatory pathomechanism of OA in early OA is unclear. Aims and methods: The aim of this prospective study is to better understand characteristics that are associated with the progression of early onset OA. Specifically, we want to study inflammation, which is known to be more prevalent in the early phase of OA. We hope that the characterisation of inflammation in early OA will permit a deeper understanding of the mechanisms and possibly the identification of risk factors of OA progression. Unlike previous investigations, this study will take into account biomechanical dysfunction. We aim to investigate inflammatory pathways, particularly the cytokine expression patterns and cell activation in synovial fluid and synovial tissue. To this end, we focus patients undergoing arthroscopy for mechanical pain without radiological signs of advanced OA. Furthermore we want to apply our knowledge of metabolomics in synovial fluid from previous studies to study metabolic profile of synovial fluid in the early phase of OA. Clinical, radiological, biochemical and histological data of patients suffering from early onset OA will be assessed prospectively in an interdisciplinary rheumatological and orthopaedic ?early OA clinic? at the Universitätsspital Basel. Significance: This study potentially will discover specific inflammatory pathways in the important early stage of OA where structural damage has not yet occured and thus might reveal new targets for treating OA.

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