WWTF Project LS11-018

Quantitative MRI assessment of cartilage glyco-saminoglyacan content in the ankle

Abstract

Approximately 20% of the population in western civilization suffer from osteoarthritis (OA). Cartilage glycosaminoglycan (GAG) loss is considered to happen at early stages of the disease and is therefore considered an important effect size for clinical research. In the ankle, OA frequently occurs in the course of traumatic cartilage defects. Cartilage repair surgery (CRS) aims to fill the defect and good results have been reported after various surgical technques, however the data on RT quality remain limited.
This project aims to evaluate new MRI techniques for the assessment of cartilage GAG content in-vivo, to optimize these techniques for the ankle and to use them to assess patients after surgical cartilage repair and cases with OA.
We expect to gain knowledge in the field of surgical treatment of cartilage defects and OA in the ankle, however, this project will yield new quantitative non-invasive in-vivo effect sizes for the use in clinical research on OA.

Keywords:
High field MRI, cartilage repair, ostearthritis, ankle, biochemical imaging

Principal Investigator:	Stephan E.R. Domayer
Institution:	Medical University of Vienna
Further collaborators:	Reinhard Windhager (Medical University of Vienna) Siegfried Trattnig (Medical University of Vienna) Jochen Hofstätter (Medical University of Vienna)

Status: Completed (01.11.2011 - 30.04.2016) 54 months

Funding volume: EUR 508,800

Further links about the involved persons and regarding the project you can find at
https://archiv.wwtf.at/programmes/life_sciences/LS11-018