

Abstract

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Title of the thesis:

The impact of high intensity laser on the healing of soft tissues of the knee joint in patients after arthroscopy

The bachelor's thesis deals with the issue of soft tissue healing of the knee joint after arthroscopy. The main goal of this work was to monitor the effect of high intensity laser on the healing of soft tissues of the knee joint after arthroscopy. The work consists of theoretical and practical part.

The theoretical part focuses on the description of the anatomy and biomechanics of the knee joint. Further summarizes information about the scar, its formation, types, care options and rating scales. The technical parameters and effects of the laser with a focus on the high intensity laser are also described here. Then, based on the data collection and analysis, the current state of this matter in the Czech Republic and abroad was described and summarized. The research includes 16 studies, which were selected on the basis of selected keywords, data actuality, validity and at the same time their pros and cons were considered.

In the practical part 4 case reports of patients after arthroscopy of the knee joint were processed. Only patients after meniscus surgery were included in the study. Individual therapy in combination with a high intensity laser was chosen for the patients as a physiotherapeutic intervention. Due to the nature of the work, the following parameters were monitored: range of motion, muscle strength, girth, Body Mass Index etc. The functional examination included the Time Up and Go Test and the 10 Meter Walk Test. The following methods were chosen to assess the condition of soft tissues: measurement of pain in pressure by pressure algometry, evaluation of pain using a visual analog scale of pain, palpation, aspiration, anthropometry and evaluation of scars using the POSAS scale. The effect of the physiotherapeutic intervention was assessed using these parameters.

Based on the results from case reports, the positive effect of the high intensity laser on soft tissue healing and scars, was confirmed in all patients.

Key words: knee joint, High Intensity Laser Therapy (HILT), soft tissue healing, scar, arthroscopy, meniscus