Abstract

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Title: Knee osteoarthritis: a biological response to medication class SYSADOA

Problem definition: Knee osteoarthritis is a degenerative joint disease which belongs to the most common musculoskeletal diseases. The disease is associated with pain of the knee joints, which causes patients' limitations in activities of daily living. Therefore, the objective of the treatment of osteoarthritis is to reduce the pain and a progression of the disease. To achieve these aims, conservative or surgical methods are used. The conservative methods include, among others, the pharmacological treatment. Since the medicaments from the class SYSADOA are easily available we can use them during treatment.

Aim of the thesis: The aim of the thesis is to determine the effect of SYSADOA medication on the 2nd and 3rd degree of the knee osteoarthritis. The effect is determined by patients' subjective evaluations and by the changes of the rheological properties of the knee joint.

Method: The survey contains an anamnesis questionnaire and the clinical examination of the knee joint. The rheological properties of the knee joint are evaluated by a special device - knee rheometer that non-invasively and painlessly measures the dependence of the passive resistance of the knee joint on its bending angle. To evaluate the patients' subjective perceptions of the effect of SYSADOA the clinical trial WOMAC was used. The effect was assessed in patients who suffered from the knee osteoarthritis of 2nd and 3rd degree after 13 weeks of usage of the dietary supplement "Proenzi Premium" and the following 6- week period without any treatment.

Results: According to patients' subjective assessments the therapy resulted in the slight improvement of the quality of daily living activities. The improvement persisted even after the 6 week- period without medication. The rheological test results are variable. Test results of majority of patients have demonstrated the improvement of the rheological properties, eventually the disease state remained unchanged. The rheological properties were deteriorated in minority of the patients.

Key words: rheology, knee joint, osteoarthritis, SYSADOA