Title:Ankylosing spondylitis, comparision of diagnostic methods and production of digital 3D model

Aim: The aim of this thesis was to explore the issue of diagnosis of ankylosing spondylitis (AS). Describe the investigative methods used to diagnose and monitor the progress of the disease and try to create 3D geometric model of two vertebrae from magnetic resonance images (MRI) has demonstrated the possibilities of this process and possibly illustrate the pathological processes taking place on the monitored vertebrae.

Method: The thesis is elaborated in the form of annotated literature review. They were used the available literature sources from which the information was drawn for determination of pathological processes, clinical symptoms, diagnostic methods and on therapy in AS.
The practical part is used for creating 3D model of MR images in the program Scanview and Amira program for creating 3D objects. Software has Amira
correction options and adding image data with a lack of meaningful that MR images show.

Keywords: ankylosing spondylitis, diagnostic methods, 3D model, magnetic resonance imaging