ABSTRACT

Title: Human axial system: identification of connective tissues changes

Objectives: The main objective of this thesis was to compile a review of techniques and methods currently used in identification of connective tissues changes.

Methods: The method used in this thesis is a critical literature review – a study of research papers from available information sources accompanied by author's comments. Foreign sources are represented mostly by research papers accessible via electronic archives such as ScienceDirect, Pubmed, Springer, Wiley. Also other foreign publications were used. The theoretical part is focused on basic anatomy and physiology of the spine and states main methods of identification of connective tissues changes involved in this area. The main part describes particulars of researches dedicated to identification of functional and morphological characteristics of different spinal components.

Results: In addition to classic methods of spinal research, the thesis introduces also new developing techniques and methods. Procedures used in current research are described; their advantages and limits are explained.

Key words: spine, biomechanics, loading, intervertebral disc, method