

Bibliographic record

KULHÁNKOVÁ, Eliška. *Diagnosis and treatment of back injuries in children with a focus on compressive fractures of vertebral bodies*. Prague, 2021, 51 pages, 11 attachments. Bachelor thesis. Charles University, 2nd Faculty of Medicine, Department of Rehabilitation and Sports Medicine. Supervisor Radovan Hudák.

Abstract

Even though compressive vertebral fractures are one of the more frequent injuries among children and adolescents, there is no clear diagnostic procedure established that would lead to a correct diagnosis and suitable therapy. This bachelor thesis summarizes the available information about anatomy and kinesiology of the spine, classification and origin of these fractures and their actual adequate therapy. The practical part describes dependence of clinical examination and imaging methods on the final diagnosis of patients. Furthermore, this thesis looks into the patient's receding pain in time. For the purpose of the study, 30 pediatric patients with spinal compression fracture diagnosis, suspected compression fracture and back contusion were selected. Their collected data from clinical examination and imaging methods (skiagraphy and magnetic resonance imaging) were evaluated using statistical tests.

The evaluation indicates that there is no statistically significant relationship between clinical examination and the diagnosis of a vertebral compression fracture determined by the imaging methods. This indicates that there might be numerous false diagnoses of vertebral compression fractures instead of mere contusion or back blockage. Another important outcome of this bachelor thesis is that the patient's pain disappears on average during 23 – 47 days and that is for all the defined diagnoses. Given these facts, the currently set three-month rest period may be unnecessarily long and may lead to prolonged reduced mobility and its associated comorbidity in already recovered patients.

The conclusion of this thesis cannot be interpreted as recommendations for clinical practice, but as an incentive for further research on this subject, so that the treatment of these diagnoses was as fast and as effective as possible.

Keywords

Compressive fractures. Pediatric fractures. Clinical examination. X-ray. Magnetic resonance. Back pain.