

RESEARCH OF THE CHARACTERISTIC CLINICAL X-RAY AND MAGNETIC RESONANCE IMAGING OF DISC HERNIATION

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SUMMARY

INTRODUCTION: A person's spinal column consists of 33 vertebrae. It can be classified into five segments, these segments include seven cervical vertebrae, twelve thoracic vertebrae, five lumbar vertebrae, five sacral vertebrae and four coccygeal vertebrae. These stacked vertebrae form a canal that protects the delicate spinal cord. The vertebrae are stabilized by ligaments and intervertebral discs, which function as a shock absorber.

RESEARCH PROPOSAL: The purpose of this research is to estimate the main clinical findings and to determine changes in morphological of intervertebral discs to associate with lumbar spondylolisthesis.

METHODOLOGY: This study was prospect and comparative. Through research on 30 patients with lumbar spondylolisthesis were admitted Hue College of Medicine-Pharmacy Hospital, from May,2006 to May,2008. Diagnosis was based on conventional radiography chosen criterias and magnetic resonance imaging combined with clinical examination.

FINDINGS AND DISCUSSION: The spondylolisthesis is displacement of one vertebra over another, usually of the fourth lumbar over the fifth or the fifth lumbar over the sacrum, usually due to a developmental defect in the pars interarticularis, this may be congenital, develop after injury or degenerative. The 30 patients had lumbar spondylolisthesis, mean age $48,5 \pm 11,7$, male 26,7% and female 73,3%, the authors observed that above 70% of the cases at the age after 40, the level of L4-L5 50% and L5-S1 43,3%, due to degeneration 70%, injury 23,4% and congenitality 6,6%.

When a shift of one vertebra upon another, the disc may be bulge, rupture or herniate. This can result in spinal stenosis, this narrowing cause the spinal cord and its many nerve roots to become pinched. The result is usually lumbago, numbness, tingling, weakness or a heavy feeling in the leg. We analyzed the clinical features of 30 cases, in which the main clinical symptom is lumbago (100%), numbness (56,7%), weakness (53,3%), tingling (6,7%).

There are several methods that may be used to diagnose a spondylolisthesis. In this study, we used the X-ray and MRI. The classification of spondylolisthesis on conventional radiography includes grade 1 (60,0%), grade 2 (40%) and the classification of disc herniation on MRI includes grade 1 (23,4%), grade 2 (66,7%), grade 3 (6,6%), grade 4 (3,3%). There are unagreeable for grades between the X-ray and MRI.

CONCLUSION: Conventional radiography has been limited in visualization of soft tissue diseases. Therefore, the role of MRI in the evaluation of soft tissues is very important. MRI is superior to other imaging methods in the assessment of the spinal cord and disc. Consequently, magnetic resonance imaging can help in diagnosis of canal stenosis and provide accurate assessment of location of disc herniation. Once a proper diagnosis is made treatment may be prescribed.