Radioneucleoplasty Therapy in Intervertebral Disc Herniation

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ABSTRACT  
Disc herniation is a localised displacement of a disc material beyond the limits of the intervertebral disc space. Partial tear of annular ligament with herniation of nucleolus pulposus is termed as contained herniation. Diagnosis contained disc herniation on MRI becomes crucial as radionucleolysis as its treatment has better prognosis as compared to disc protrusion. Clinical signs and symptoms of disc herniation are not only caused by mechanical compression but also by biochemical factors that play an important role in inflammatory sensitization and immune response in the epidural environment of the nerve root pain and inflammation. Management of the patients with radicular pain relies on history taking, clinical examination and investigational modalities which additionally provide information for accurate diagnosis, treatment and later follow up. The use of radionucleoplasty has opened the doors for further modalities. Hence, it is important to diagnose and differentiate these conditions so that early treatment can be given to minimise further complications. However the knowledge of use of radionucleoplasty in treatment of radicular pain is still scant. Hence it was decided to take up the study in this part of country to evaluate radionucleoplasty as treatment modality for radicular pain.

INTRODUCTION:
Low back pain is an extremely common ailment encountered in our day to day practice. The prevalence rate of low back pain in a number of studies ranged from 22% to 65% in one year and the lifetime prevalence ranged from 11% to 84%. Low backache is the leading cause of lost working days all over the world.

The spinal column consist of vertebral bodies, each vertebral body has intervertebral disc which contains jelly like material (proteo-glycan bridges). If this material comes out it is known as protrusion or herniation of disc. This leads to compression on spinal cord, nerve roots and causes radicular pain and numbness.

Radioneucleoplasty is a percutaneous minimal invasive method of decompression in a contained intervertebral disc by using coablation technology which is, cost effective with minimal hospital stay and least complication for discogenic low back pain. This technique chemically disrupts nucleus pulposus by means of percutaneous intradiscal Chemodiscolysis by chimopapain is based on an enzymatic dissolution of the nucleus.

Radioneucleoplasty is used in disc herniation and because of its property to break down the proteo-glycan bridges in the nucleus pulposus of disc and an anti-inflammatory action.

AIMS AND OBJECTIVE
This is a prospective study to determine the efficacy of radio nucleoplasty in Lumbar disc herniation.

The objectives are:
- Visual analog score (VAS)
- Radiological assessment using repeat MRI

MATERIAL AND METHODOLOGY
- This study included 30 patients, aged between 30 to 55 years, treated at a tertiary centre.
- Detailed history and clinical examination was carried out.
- MRI was done as a chief investigation.
- VISUAL analog score was performed pre operatively and immediate postoperatively.

Pre op MRI of lumbar spine, sagittal view showing L4, L5 disc bulge.
REFERENCE