

Case Report**“EFFECTIVENESS OF HVLAT AND MULLIGAN TECHNIQUE IN THE TREATMENT OF PIVD IN L5-S1 LEVEL:A CASE STUDY”****Anoop T¹, Devendra T², Gaurav M³**

1. Assistant professor, Department of Physiotherapy, Rama Institute of Paramedical sciences.
2. Assistant professor, Department of Physiotherapy, Rama Institute of Paramedical sciences.
3. Assistant professor, Department of Physiotherapy, Ramas Institute of Paramedical sciences.

ABSTRACT: We reported a case of 25 years old male having prolapsed intervertebral disc at L5-S1 level. He was having the symptoms of low back ache and bilateral radicular pain in both lower limbs. Patient was treated with mulligan's approach of movement with mobilisation at level of L4 and L5 level and SNAGs at articular facet level at L4 and L5 level with the rule of four on the beginning day, along with the high velocity low amplitude thrusts (HVLTAs) at L4-5. Afterwards shortwave diathermy was applied in lower lumbar level for 15 minutes. At last patient was taught spine extension exercises and plank exercise at home. The patient exercise program. After treatment schedule of 3 weeks patient is symptomless without any problem and now back to work.

Keywords:-Physical therapy, Mulligan technique, High velocity low amplitude thrusts (HVLTAs)

INTRODUCTION:

In India incidence of low back pain(LBP) has been reported to be 23.09% and has a lifetime prevalence of 60-85%.^[1,2] Causes of LBP with or without radiating pain are idiopathic, degenerative, traumatic, inflammatory, congenital, neoplastic, metabolic, postural, gynecological, renal, rectal or systemic. Prolapsed intervertebral disc (PIVD) is the most common cause of lumbar radiculopathy.^[3] PIVD is collective term, describing a process in which the rupture of annular fibers allow for a displacement of nucleus pulposus within

the intervertebral space, most commonly in posterior or postero-lateral direction.⁴The sequences of changes occurring in PIVD are stage of nucleus degeneration, stage of nuclear displacement (Stage of protrusion, extrusion, sequestration) & stage of fibrosis^[5] The periphery of the disc is nociceptively innervated, the degenerative and or traumatic process of disc herniation may produce discogenic pain by the excessive mechanical strain on the outer annular fibers. PIVD can also cause radicular pain. The clinical manifestations following nerve root compression depends on the involvement of nerve root.^[6] There

are various physiotherapy intervention for treatment of prolapsed intervertebral disc are available such as intermittent lumbar traction, therapy, shortwave diathermy, transcutaneous electrical nerve stimulation and manual therapy interventions.

Brian Mulligan has developed a most ingenious compilation of manual techniques. His principle techniques are sustained natural apophyseal glides (SNAGS) and mobilization with movement (MWMs). SNAGS were the first example of group of techniques known as mobilisation with movement which Mulligan developed to restore pain free unrestricted movement for most joints in body^[7]. Mulligan stated that movement with mobilization correct minor bony positional faults, non palpable or visible on X ray^[8]. SNAGS causes repositioning of articular facets allowing normal pain free function and as such are thought primarily mobilize zygapophyseal joints, and influencing the entire spinal functional unit, including the intervertebral disc^[9].

CASE STUDY

A male patient aged 25 years, works as an computer operator with nature of prolong sitting, and to work on computer for 12-14 hours daily. He was also a regular gym exerciser with lifting heavy weights. His problem also arises due to heavy weight

lifting. Patient was having lowback ache and bilateral radicular pain in both limbs (L>R). Initially he was under medical treatment by a Neurophysician for last 3 months treated with analgesics and strict bed rest. Then the patient visited Rama Hospital, his treatment was started initially with nervous tissue mobilization for sciatic nerve with set of 3 repetition for both legs with 10 seconds hold. Then he was switched over to Mulligan's technique with movement with mobilization at L4 and L5 level at spinous process and facet joints. Then SNAGs at the facet joints of L4 and L5 vertebrae with rule of four on the day first. then electrotherapy treatment was given followed by short wave diathermy for 15 minutes. The was instructed for spinal extension exercise and planks with 15 secs hold for 4-6 repetition and further progress to 20-30 secs hold as pain reduces. He was advice to take treatment for 6 days in first week. Since he was getting relief in symptoms in the second week he was called on alternate days and in the next week for a day only. Now the patient is symptom free and back to work.

CONCLUSION

In conclusion, the present case study provided evidence to support the use of manual therapy techniques.

Mulligan’s mobilisation (SNAGS , MWMs) approach in relieving pain, improving ROM and reducing functional disability in subjects with PIVD with bilateral radiculopathy. In addition home exercise programe with spinal extension exercises and planks provide strength to spine for future prospects.

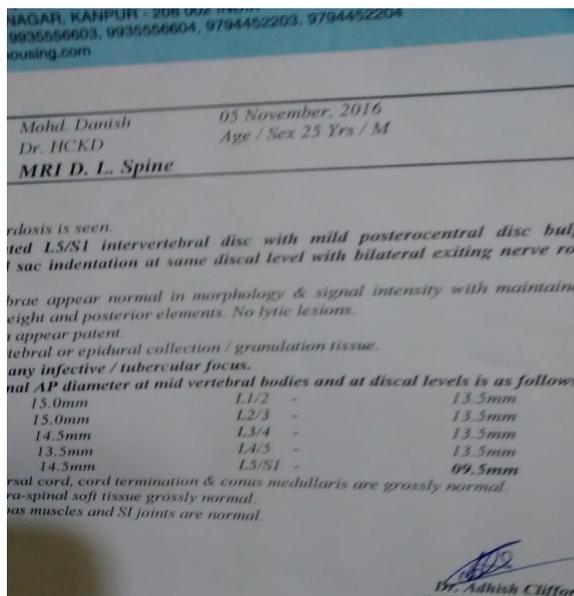


Fig: MRI findings of the patient

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CORRESPONDING ADDRESS

Dr. Anoop. T

Assistant professor, Department of Physiotherapy

Rama Institute of Paramedical Sciences