



Case report

A physiotherapy approach in lumbar spondylosis and PIVD in a 44 years old male patient

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ABSTRACT

Lumbar spondylosis is a low back pain represents nearly 60-65 percent of adults in some cases. The point of their lives, fortunately for the vast majority of citizens. Symptoms are mild and short lived, with 90% of people experiencing relief within 6 weeks. Chronic low back pain, which is characterized as pain that lasts more than three months, affects 15 to 45 percent of the population. The effect on quality of life and economic implications are important in the case of a minority with intractable symptoms. The patient was, 44 years old male presented with the complaint of low back pain since 4 months which was 6 on vas scale. The patient had intermittent attacks of pain with period of total relief. Past history of the patient revealed that while he was playing cricket he experienced a jerk while throwing a ball. Science then he was not even able to get up from the bed. He took rest for few days because the pain was very severe and the patient was not even able to get up from the bed. He also visited a physiotherapist he was relieved by physiotherapy and medicines but the pain use to reoccur. MRI was done which revealed L4 and L5 bulging disc prolapsed. Family history not present. The patient was diagnosed with the lumbar spondylosis and PIVD. This case study shows that regular exercises, back strengthening exercises, therapeutic ultrasound and following proper ergonomics would reduce the symptoms associated with low back pain and PIVD.

Keywords: Low Backpain, PIVD, Disc Prolapse, Rehabilitation.

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INTRODUCTION

In some cases, nearly 60–85 percent of adults suffer from low back pain (LBP). The point of their lives, fortunately for the vast majority of citizens. Symptoms are mild and short lived, with 90% of people experiencing relief within 6 weeks. Chronic low back pain, which is characterized as pain that lasts more than three months, affects 15 to 45 percent of the population. The effect on quality of life and economic consequences are significant in the case of a minority with intractable symptoms. Despite the high prevalence of low back pain in the general population, diagnostic approaches and therapeutic options are varied and frequently inconsistent, resulting in higher costs and inconsistency in management across the world. This is due in part to the difficulty in identifying a straightforward etiology for most patients, despite the fact that documented nociceptive pain generators have been identified in the axial spine. Back pain was referred to as "a disease in search of a disease." Furthermore, after "red flag" diagnoses including cancer and fracture have been ruled out, the differential causes of low back pain remain high, including a wide variety of degenerative changes within the axial spine for which radiological evaluation is non-specific and causal [1]. We'll go through these degenerative

mechanisms in more detail, as well as their clinical consequences. Lumbar spondylosis is a degenerative joint disease that affects the body. It's lumbar spine [2] Lumbar osteoarthritis, disc degeneration, degenerative disc disease, and spondylosis are some of the terms used to describe disc changes. In fact, the condition is called spondylosis. Whenever there is a degeneration co-occurrence in the disc, the lumbar spine, the formation of osteophytes and the associated changes in the nerves and the resulting symptoms of pain. These new bones (osteophytes) are also responsible for the development of backaches depending on their frequency and size. The chances of getting this condition are as high as the age increased. As the day passes, these newly formed bones may compress the adjacent nerves and result in impingement. It could be of three types. Acute (mild) no radiation, sub-acute (moderate) with radiation above the knee, chronic (severe) with radiation below the knee [3].

Patient information

The patient was a 44 year old male with complaints of low back pain since 4 months which was 6 on VAS scale. The patient had intermittent attacks of pain with period of total relief. He had early

morning stiffness. Past history of the patient revealed that while he was playing cricket he experienced a jerk while throwing a ball. Since then he has generalized back pain. He took rest for few days because the pain was very severe and the patient was not even able to get up from the bed. He also visited a physiotherapist he was relieved by physiotherapy and medicines but the pain use to reoccur. MRI was done which revealed L4 and L5 bulging disc prolapse.

Clinical finding

Following the patient's informed consent, a physical examination was performed. On general examination, the patient appeared to be awake, cooperative, and well-oriented in terms of time, place, and person, and was at ease in both the supine and sitting positions. The patient was afebrile at the time of examination. Pulse rate was 73 beats per minutes and respiratory rate was 20 breaths per minutes blood pressure of the patient was 120/90mmhg.

Pain was 6 on vas scale the pain was pricking type of pain. Tenderness was present over the lumbar spine. Respiratory rate was 18 breaths/min, character was regular. Chest appeared bilaterally symmetrical. Heart rate was normal regular rhythm the patient had no heart murmur. S1, S2 present. No focal neurological deficits. Abdominal examination – soft, non-tender, bowel sounds present.

Posture: On examination there was slight postural deviation.

Table 1. Range of Motion

Joint	Movement	Range
Lumbar joint	Flexion	60 degree
	Extension	25 degree
	Lateral flexion (left)	25 degree
	Lateral flexion (right)	25 degree

Muscle power

On clinical examination, we found that the muscle power was grade 3.

The muscle power was tested using manual muscle testing.

Special test

SLR TEST was positive and SLUMP TEST was positive.

Evaluation

The patient lower extremity and upper extremity range of motion and muscle was normal. The patient was able to talk. The patient was able to talk and the patient was able to do his basic activities of daily living, such as bathing, combing and dressing.

Diagnosis

The patient was diagnosed with lumbar spondylosis and PIVD

Therapeutic intervention

Short term goal is to decrease the back pain, improve muscle strength, improve ROM that was reduce due to pain, to reduce muscle stiffness improve posture and reduce secondary complication and increase in ability to relax, to enhance functional abilities, increase independence and prevent disability [4].

Long term goals is to relieve the back pain completely, do not allow the symptoms to reoccur and maintain ROM, improve quality of life of the patient and make the patient return back to his work. Restore muscle strength, endurance and function

ACUTE PHASE 1

1 to 3 weeks

In this phase our priority was to reduce pain, spasm and promote relaxation to the patient. We started first with hot pack to the lumbar region of the patient it provided relaxation to the patient. Modality such as ultrasound was used to relieve pain. The patient was advised to take a bed rest for 3 to 5 days. he was also educated with some basic home exercises such as bridging exercises and walking. Avoid sitting on the floor and avoid bending exercises. Proper postural guidance was given to the patient initially as our aim was to relieve pain.

Figure 1. Static Contraction of Abdominal muscles



Figure 2. Pelvic Bridging



SUBACUTE PHASE

3 to 6 weeks

The phase begins with lumbar support. Gradually mobilization through relaxation was started. Mobilization through relaxation was started. Gentle extension exercises were started. Patient was instructed about basic ergonomics [5].

Home program

The patient was instructed to continue the exercises program and ergonomics advice. He was told to maintain correct posture during work and rest. The patient was asked to take moist heat if pain persists. Exercise causing pain should be totally eliminated. Avoid constant posture for long duration of time.

Follow up and outcome

After 15 days when he came for the follow up he was not having any pain at the rest he was experiencing pain while bending only and heavy weight lifting. The pain was fully resolved. Due to pandemic he could not continue his treatment [6] and now he is almost not having any problem the pain is fully subsided. The patient was feeling good after the first physiotherapy session itself. He is able to do his work without any obstruction and pain. The patient is doing the

DISCUSSION

There are numerous ways to treat low back pain and a pathoanatomical the physiotherapy was used first for the treatment of backpain in the patient. These identifies to know the signs and symptoms to know the disease^{[7][8]}. Starting early physiotherapy shows significant decrease in pain and it increases the mobility. Thermotherapy help in reducing pain and induces relaxation. Some basic home exercises such as bridging exercises walking are used to increase mobility and strengthening^[9]. Ultrasound improves the circulation that reduces the pain it also reduces the inflammation which also helps in healing of the body tissue^[1]. Exercises help in improving range of motion and strengthening the muscle. Bridging exercises helps in improving the core stability and strengthen it and also improves the back muscle and help in better circulation^[2]. Along with exercises stretching also helps in improving muscle activity and reduces pain and relaxes the muscle. After the treatment in OPD home program was given to the patient to maintain the strength and flexibility of the patient^[3].

CONCLUSION

The above study concludes that definitive surgical approach and early physiotherapy rehabilitation lead to enhancement in functional goals of patient which stands a major understanding towards a successful recovery and improves quality of life.

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