Physical Therapy vs. Surgery in Terms of Pain Relief for Patients with Lumbar Spinal Stenosis

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Introduction

- Lumbar Spinal Stenosis (LSS) is prevalent in 4.7% of the general population and although that does not seem like a large percentage, it continues to increase to 20% at ages greater than 40 and 47.2% from ages 60-69 (Kalichman 2009). When comparing LSS to other health conditions in elderly patients, it is easily one of the most common. Because of this, lower back surgeries remain a frequent procedure among the elderly population. LSS in elderly patients usually comes with pain of the back and legs or even numbness of the legs (Tidy 2017). Many patients look for a way to lessen the pain so that they can go back to living a normal life. This often leads the patient to turn to surgery as a quick solution to the problem. Another solution is physical therapy. The major question that will be focused on is what is the better option for pain relief for patients with LSS, physical therapy or surgery?

Background

Spinal stenosis is the term that is used to describe the narrowing of the spinal canal. This means that there is less space for the spinal cord and nerves.

There are two types of spinal stenosis:
- congenital stenosis (i.e. present from birth)
- acquired

The acquired type is often caused by one of the following:
- Inflammatory disorders
- Endocrinopathies
- Calcium disorders
- Bone overgrowth
- herniated disks,
- thickened ligaments
- spinal injuries. (Ratan 2019)

Review of Physical Therapy and Therapy and Surgery on Cervical Spine Injuries:

- It was found that CST or light-touch sham treatments to test if the theory was valid. After the data was analyzed, it was found that CST was both specifically effective and safe in reducing neck pain intensity and may improve functional disability and the quality of life up(Haller 3).
- The researchers found low quality evidence that surgery provided pain relief faster than physiotherapy or hard collar immobilization in cervical radiculopathy, but there was no or little evidence in the long term (Sugawara 3).

Review of Physical Therapy and Surgery on Thoracic Spine Injuries:

- Thoracic spine mobilization in addition to performing the stabilization exercises. The results revealed that before and after exercises within each group showed the change in the muscular strength and mobility within the thoracic region (Yang 6)
- The functional outcome (mobility) after the surgery was better off than it was first believed before the studies. The conclusion of the systematic review stated that “In general, surgical treatment of traumatic spine fracture is safe and effective. (Verlaan 4)

Review of Physical Therapy and Surgery on Lumbar Spine Injuries:

- Core strength training is easier for CLBP patients to learn, although it is more challenging. Each study found that the exercise that the experimental group had done benefited the patient whether it be an increase in muscle size and range of motion or a decrease in the visual analogue scale, Oswestry disability questionnaire, and back performance scale of the patient (Chang 6).
- Roughly 16% of those who go through with lumbar surgeries end up with one or more complications. A systematic preoperative evaluation should always be performed in order to stratify risks and to guide decision-making.(Proietti 5)

Physical Therapy and Surgery and their Effects on Spinal Stenosis:

- A study found that those who completed physical therapy for 2 years had long term relief from pain (Minetama 9)
- A second study found that physical therapy significantly increased physical function, and Oswestry, but not bodily pain.
- A research article testing surgery effects on spinal stenosis found that those who had 5 years of follow-up and were eligible for inclusion in the 5-year analysis, there were no significant differences between the groups in clinical outcomes at 5 years (Försth 5).

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Conclusion/Analysis

I believe that it can be said to some degree of certainty that physical therapy is more appropriate and long lasting in terms of pain relief than surgery is.

- In the two studies mentioned above about physical therapy and lumbar spinal stenosis (Rheum et al. and Minetama et al) it was found that the pain level of the patients decreased when the patients went on a physical therapy program. Also, in Minetama et al, it is found that there is a long-term effect of the benefits of what physical therapy can provide for a patient with lumbar spinal stenosis.
- In the study that focused on surgery, it was found that even if a patient would receive benefits from a surgery, it would only be for a short period of time before they returned to their previous condition.

Bibliography