The First Five Things Your Central Lumbar Stenosis Patients Should Know

By Ronald Fudala, DC, DACAN

Lumbar canal stenosis is becoming more prevalent as the population ages and a common reason patients undergo spine surgery.\(^1\)\(^-\)\(^2\) An estimated 65 million people will be afflicted over the next decade.\(^3\)\(^-\)\(^4\) The disorder is a common presentation in chiropractic practice, as shown in the SPORT trial, in which 33 percent of 368 stenosis patients studied had received previous chiropractic care.\(^5\)

Let’s explore five basic items worthy of discussion in order to build a solid foundation for shared decision-making between clinicians and their lumbar central canal stenosis patients. Shared decision-making is a process mentioned more frequently as a model for clinical practice\(^6\) and has been defined as "an approach where clinicians and patients share the best available evidence when faced with the task of making decisions, and where patients are supported to consider options, to achieve informed preferences."\(^7\)

1. Back Pain Is Not Enough

*Patients must first know that back pain alone is not symptomatic central canal stenosis.* Asymptomatic lumbar canal stenosis can be seen in up to 47 percent of patients presenting with isolated back pain.\(^8\) The high rate of MRI abnormalities in completely asymptomatic patients has long been known, as has the fact that many are performed discordant with published guidelines.\(^9\)\(^-\)\(^11\)

Problems arise from the start when imaging findings are overemphasized. Doing so leads to patients with a decreased perception of health, fear-avoidance and catastrophizing behavior, increased risk of chronicity, and a two- to three-fold rate of undergoing unnecessary surgery.\(^12\)

Symptomatic lumbar central stenosis must involve the legs, usually to a much greater degree than the low back, and be clearly related to posture or activity. The North American Spine Society’s (NASS) 2011 guidelines define it as a variable clinical syndrome of gluteal and/or low-extremity pain and fatigue, which may occur with or without back pain. Provocative features should include exercise in upright postures, with relief occurring during forward flexion, sitting or when recumbent.\(^13\)
A recent study reinforced this, further noting an 80 percent diagnostic certainty when pain / tingling with walking, relief with sitting, bending or leaning on a shopping cart, and normal low-extremity pulses occurred in combination.\textsuperscript{14} It is not uncommon for nonspecific urinary disturbances and nocturnal leg cramps to be a part of the symptom complex.\textsuperscript{15-16}

2. Symptom Severity and MRI Findings Don’t Correlate

\textit{Symptomatic patients should understand that the severity of their symptoms, or outcome with any form of treatment, bears little, if any, relationship to what is seen on their MRI.} Servanci, et al., found no correlation between the Oswestry Index and degree of stenosis on MRI, further noting a large number of individuals with spinal canal narrowing, yet without symptoms.\textsuperscript{17} Moojen and Schenk’s study of 115 patients with intermittent lumbar claudication showed that the degree of stenosis on MRI neither correlated with the severity of symptoms nor had the ability to predict success with lumbar surgery.\textsuperscript{18}

Results are similar when larger groups are observed. Of 938 patients with MRI-confirmed lumbar stenosis, only 5.3 percent of mild, 9.9 percent of moderate and 17.5 percent of severely stenotic patients were symptomatic.\textsuperscript{19}

Additional substantiation is found in a recent paper in which the authors concluded, "The radiologic severity of stenosis was not associated with preoperative disability and pain, or clinical outcomes, and should not be overemphasized in clinical decision making."\textsuperscript{20}

The relationship between symptoms and imaging becomes more obscure when studies report paradoxical findings, such as higher levels of pain and disability in individuals with moderate and single-level stenosis, as compared to those with severe and/or multi-level stenosis.\textsuperscript{21-22}

For balance, it’s important to note that a few papers have described a correlation between imaging and symptoms. However, these found the correlation related more to walking tolerance than pain.\textsuperscript{23-24}

3. There’s Usually Good News

The natural history of lumbar stenosis is generally favorable. Patients can be confidently informed that there is no urgent need to consider surgery. The NASS guidelines mentioned above state, "[T]he natural history of patients with clinically mild to moderately symptomatic degenerative lumbar stenosis can be favorable in about one-third to one half of patients," and "rapid or catastrophic neurologic decline is rare."
NASS felt the present literature was insufficient to determine the natural history of severe lumbar stenosis.

In the absence of clarity regarding the natural history of severe stenosis, it is interesting to note a study by Pearson, et al., which found individuals with severe symptomatic stenosis (> than 56 on the Oswestry Index) fared far better with conservative care as compared to surgery.25

Other research has found that over a five-year period, 70 percent of patients remain stable, 15 percent improve and only 15 percent deteriorate.26-27 In a smaller cohort of 39 patients with asymptomatic lumbar stenosis, 35 remained asymptomatic over a mean follow-up period of 6.5 years.28

4. Patients Have Care Options

The best type of treatment for lumbar stenosis has not been clearly established. Patients have options and should be informed about them. Most authorities recommend conservative care before considering surgery. A recent review found no clear benefits for surgery compared to nonsurgical treatment, a 10-24 percent complication rate with surgery, and no complications with conservative care.31 The authors concluded, "These findings suggest that clinicians should be very careful in informing patients about possible treatment options, especially given that conservative treatment options have resulted in no reported side effects."

Other studies have shown surgery as a more beneficial option, at least over a four-year observation period.32

Most of the commonly utilized nonsurgical treatments have literature both supporting and refuting the various approaches. To date, systematic reviews have failed to define one form of conservative care as being superior to another.33-34

Studies have shown how commonly patients choose inappropriate clinical pathways.35 The first provider seen is often a determinant of this, especially when personal bias, rather than clinical evidence, is used in decision-making.36 With such potential for bias, patients need clinicians who are not only knowledgeable about the outcomes of a wide variety of conservative measures, but also willing to use these as a guide in treatment recommendations.

(The outcomes and expectations for conservative care of lumbar stenosis, and how to use them, will be discussed in a future article.)
5. A Dose of Reality Is Critical

A patient needs to have realistic expectations about their care. Success rarely implies a complete resolution of symptoms, regardless of what treatment is chosen. This "expectation-actuality" discrepancy was recently explored by Witiw, et al., who found patient expectations frequently exceed outcomes and treatment satisfaction declines as the "expectation-actuality gap" grows. 37

A recent study reported that a pain reduction of three or greater on a 10-point scale served as the point at which patients judged their surgery as a success. With this definition, 53 percent of 1,782 lumbar stenosis patients considered their surgery successful. 38 A paper reporting on 49 patients undergoing multimodal conservative care, inclusive of flexion-distraction treatment, noted average changes in the ODI from 50.8 to 35.6, VAS back pain from 7-4 and leg pain from 7-5, considering all of these clinically significant improvements. 39

A meta-analysis of epidural steroids for lumbar stenosis considered success as a 50 percent or greater reduction in pain, with researchers noting success was obtained in 53 percent of the 1,465 subjects in their analysis. ODI improved by an average of 14.5 percent, and VAS pain scale by 3.8. 40

From the above, it is clear that success is rarely complete, and often in the eye of the beholder. Minimally clinically important difference is a term used to describe the lowest threshold of relevant benefit from a given form of treatment. For patients under surgical consideration, it has been reported to be 12.8 percent on the Oswestry Index, and 1.2-1.8, on a 0-10 VAS scale for back-leg pain. 41 This also would appear to serve as a reasonable initial target for those patients choosing to undergo chiropractic care.

References


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