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Clinical Study

Patients' experience with non-surgical treatment for lumbar spinal stenosis: a qualitative study

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Abstract

BACKGROUND CONTEXT: Lumbar spinal stenosis (LSS) is a highly prevalent disease in older adults that causes significant limitations in walking and other daily activities. There is a lack of research into optimal non-surgical treatment approaches for LSS.

PURPOSE: The purpose of this qualitative study is to assess the opinions of participants in a randomized clinical trial of nonsurgical LSS treatments regarding the interventions they received, factors contributing to adherence to the interventions, and methods of outcomes assessment.

STUDY DESIGN/SETTING: This study used a qualitative focus group design conducted at an academic research center.

PATIENT SAMPLE: Individuals participating in a randomized clinical trial (RCT) for non-surgical LSS treatment were invited to discuss their study treatments and general experiences with LSS. The three treatment arms in the study were medical care, community-based group exercise, and clinic-based manual therapy and individual exercise.

OUTCOME MEASURES: Following coding of qualitative data, kappa statistic was used to calculate agreement between observers. Themes were identified and agreed upon by both coders.

METHODS: This study was funded by the Patient-Centered Outcomes Research Institute (PCORI). Fifty individuals (28 women, mean age 73±7.7 years) participated in a focus group. Two focus groups based on modified grounded theory were held for participants of each of the three treatment arms, for a total of six focus groups. Discussion topics included perceived effectiveness of the assigned treatment, suggestions for improvement, barriers and facilitators to completing treatment, and opinions of research outcome measures.

RESULTS: Several themes were evident across all treatment groups. First, patients prefer individualized treatment that is tailored to their specific impairments and functional limitations. They also want to learn self-management strategies to rely less upon formal health-care providers. Participants consistently stated that exercise improved their pain levels and physical function. However,

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The disclosure key can be found on the Table of Contents and at www.TheSpineJournalOnline.com.

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they noted that these effects are temporary, so commitment to exercising long-term is important. Common barriers to completing the assigned LSS treatment included transportation issues and other comorbid health conditions. All three treatment groups cited perceived treatment benefit as a strong facilitator to continuing treatment. In addition, the ability of the health-care provider to relate to the patient and listen to the patient's concerns was a common facilitator. Within the community-based group exercise treatment arm, most individuals continued group exercise after study completion, and social support was often mentioned as a facilitator to continuing treatment. Medical care was most often associated with minimal to no effect of treatment.

CONCLUSIONS: Many individuals with LSS report barriers to accessing non-surgical treatment, but may also be willing to commit to a long-term treatment strategy that includes exercise. Social support from others with LSS and from health-care providers with good communication skills may facilitate compliance with treatment recommendations.

Keywords: Exercise; Medical care; Patient preferences; Qualitative; Rehabilitation; Stenosis

Introduction

Lumbar spinal stenosis (LSS) is a common disorder, with an estimated prevalence of 30% in older adults [1]. Lumbar spinal stenosis typically causes significant limitations with walking and other functional mobility issues, and is the most common reason for spine surgery in the older population [2]. Recent research suggests that surgical intervention may be equivocal to non-surgical intervention in many patients with LSS [3]. There is a general lack of research into effective non-surgical treatments for LSS [4,5].

A recent randomized controlled trial funded by the Patient-Centered Outcomes Research Institute (PCORI) investigated the comparative effectiveness of three non-surgical treatment approaches for older adults with LSS. The study was conducted per the protocol published by Schneider et al. [4], and primary results have not yet been published. Participants were randomized to receive medical care with a study physician, community-based group exercise classes for general strength and flexibility, or clinic-based manual therapy plus individualized exercise provided by a physical therapist or chiropractor [4].

A fundamental goal of PCORI is to fund research that is truly patient-centered, as evidenced by their mission statement: "PCORI helps people make informed healthcare decisions, and improves healthcare delivery and outcomes, by producing and promoting high-integrity, evidence-based information that comes from research guided by patients, caregivers, and the broader healthcare community." [6] This includes the measurement of outcomes that are important to patients, and the inclusion of patients (and all stakeholder groups) in the design of the study. To more fully assess study participants' opinions of the trial methods and treatment approaches, qualitative methods may be used. Qualitative research allows the capture of data not included in standardized outcomes assessments, to assess patient satisfaction with treatments and outcome measures, and to drive dissemination and implementation efforts.

It has been recently argued that there is a "paucity of evidence that takes into account what clinical outcomes are important from the patient's perspective" [4]. Therefore, the purpose of this qualitative study is to assess the opinions of study participants regarding the interventions provided to them as part of a randomized trial of non-surgical treatments for LSS. A secondary purpose is to assess participants' opinions regarding various assessment methods used to measure outcomes in the study.

Materials and methods

Focus group participants

Focus group participants were recruited from a randomized controlled trial of non-surgical treatment approaches for LSS. The parent study included English-literate individuals aged 60 years and older with a clinical history of LSS and imaging confirmation of the diagnosis (bony narrowing of the central spinal canal, lateral recess, and/or intervertebral foramen) on computed tomography or magnetic resonance imaging) [4]. These individuals presented with limited walking tolerance (less than 30 minutes without stopping) due to neurogenic claudication but were able to walk 50 ft without an assistive device and were able to engage in mild exercise at a frequency of two sessions per week for 6 weeks. Potential participants were excluded from the parent study if they presented with any of the following: history of metastatic cancer, cauda equina, prior surgery for LSS, history of severe peripheral arterial disease or ankle brachial index below 0.8, history of neurologic disease affecting ability to walk, or inability to participate in a self-paced walking test due to symptoms unrelated to LSS (ie, cardiac) [4]. Participants whose physician did not clear them for exercise were also excluded from the parent study.

Trial participants were randomized to one of three non-surgical treatment approaches: (1) Medical care included an initial consultation and two follow-up visits with a physical medicine and rehabilitation physician (3 visits over 6 weeks). The parent randomized controlled trial used an adaptive allocation design, which balanced age, stenosis symptom score, and self-paced walk test distance at baseline. The physician could have prescribed oral medications, ordered epidural corticosteroid injections and/or made recommendations for