

# CASE IN POINT

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## CHRONIC PAIN

### Aching Back? Why Surgery Is Not Indicated for Lower Back Pain

#### Navigating Nonoperative Treatment Options

BY DAVID HANSCOM, MD

Here is a short premise of this article: Surgery for lower back pain (LBP) does not work. It is puzzling that it has become such a common procedure in spite of the lack of success and good data.

The most common reason to perform a fusion or insert an artificial disc for LBP is “degenerative disc disease” after “failure of conservative care.” There are some basic problems with this philosophy. First, there is not a defined standard of conservative care to “fail.” Secondly, degenerative disc disease is not a disease. It is simply part of the aging process.

#### FAILURE OF CONSERVATIVE CARE

A rough overview of nonoperative care might look like this:

- Persistent low back pain for more than three to six months.
- Six to 12 physical therapy visits.
- One to three cortisone injections.
- Evaluation with a pain psychologist.
  - o An elevated stress profile is a better predictor of surgical outcome than the actual anatomy.
  - o This is usually not done in the surgical decision-making process.

If a patient still has pain then a spine fusion is considered. However this approach assumes that the disc must be the source of the pain. That is a problem.

#### DISCS NORMALLY DEGENERATE WITH AGE

Prior to the advent of MRI scans in the 1980s the only tests that were available to surmise disc degeneration were X-rays and CT scans. MRI scans greatly increased this diagnosis in that the basis for MRI scans is the hydrogen ion being altered by a strong magnetic field. Now we are able to see the slightest amount of decreased water content of a given disc and it is now called “degenerative disc disease.”

There are many things that we do not know about the source of LBP but the one fact we do know is that there is little correlation of a degenerated disc with back pain. It has been shown with research studies of cervical, thoracic, and lumbar spine that asymptomatic patients usually have disc degeneration, bulges, herniations, etc. By the time a person reaches 60 years old it approaches over 90 percent.

I routinely see patients who have severe sciatica from a bone spur or herniated disc. Their MRI scans are always abnormal. Yet most of them do not have back pain. I have undergone two back surgeries at L5-S1 with one of them being for a post-operative infection. The discs in my back are completely gone. I do not have LBP.

My 28-year-old son is a world-class mogul skier. He blew a disc in his back. His MRI scan showed that every disc in his back was completely collapsed. Yet

he does not have back pain.

A disc can cause episodic LBP before it ruptures. I have also observed and experienced that sequence. It is also documented in the medical literature. But discs do not cause unrelenting LBP that lasts for months and years.

#### SURGERY IS EFFECTIVE FOR STRUCTURAL PROBLEMS

There are three different potential sources of pain:

- Structural.
- Soft tissues supporting the spine.
- Mind body syndrome (MBS).

I am defining a structural problem as an identifiable lesion with matching symptoms. An example would be a ruptured L4-5 disc with pain in the L5 distribution down the side of the leg. When the pressure is removed from the nerve the chance of alleviating the leg pain is well over 90 percent. If there is an L4-5 disc bulge or rupture without the matching pain pattern it is not a structural problem and surgery is not helpful.

Most LBP is nonstructural. Back pain is nonspecific and as disc degeneration is normal as you age there is no chance of a match. This is the situation where spine surgery has earned its poor reputation. A fusion is being used as a structural solution for a nonspecific pain, which is probably originating from the supporting soft tissues around the spine.

Then there is the mind-body syndrome described by Dr. Schubiner in this journal. We have been inadvertently using a mind-body model for about 10 years. Dr. Shubiner was the keynote speaker in March of 2011 at a seminar, "A Course in Compassion-Empathy in the Presence of Chronic Pain." He taught us that what we were treating was mind-body syndrome.

The brain can be and is frequently the origin of pain. You do not need a physical source to experience pain. Your brain is connected to every cell in your body. It does not need much of an excuse to create any set of symptoms it wants. My treatment protocol has evolved and I have now watched dozens of patients go to a pain-free existence. Some require surgery for the structural part of their pain but most are just following MBS treatment principles.

A major problem in spine surgery is that we have "medicalized" a neurological diagnosis. If you think surgery is ineffective for soft tissue pain think how even less effective it would be for mind-body syndrome.

## THE RESULTS OF SURGERY FOR LBP

Surgery for LBP is based on minimal data. One of the biggest studies published in 2001 bases the decision for surgery on "arthritis on X-ray" and a "spring test."<sup>1</sup> The spring test is where the surgeon just pushed on the spine with the patient lying on his or her stomach. Surgeons are generally not skilled in manual therapy and would have a difficult time accurately identifying the exact level. Although the level of surgery is always carefully identified by X-ray during the procedures the spring test to decide the level of surgery was not done under X-ray guidance. There was a slight improvement in pain vs. the nonoperative group. However, the nonoperative group had essentially no care and one would not expect improvement. Knowing the progressive nature of chronic pain I am surprised that there was any improvement at all.

The final improvement in pain in the surgical group at two-year follow up was about 30 percent. The improvement in function was 25 percent. Depression

decreased about 20 percent. It is my guess that very few of you would undergo a major spine fusion or artificial disc for that outcome. It is beyond the scope of this paper to discuss the downside of a fusion, which includes breakdown of the spine and almost a 20 percent re-operation rate.

## AN UPDATED DEFINITION OF CONSERVATIVE CARE

I have put together a step-wise approach to managing chronic pain called the DOCC project. It stands for "Defined Organized Comprehensive Care." It is not a formula. It is a framework to organize the thinking of all parties involved. Once a patient understands the variables that affect the perception of pain they can take the responsibility for their own care. You cannot stop them from coming out of the hole. The key is engagement and it is then usually a matter of time.

Based on the principles I have learned through the DOCC project, I would propose the following definition of "failure of conservative care."

"Failure of conservative care" is defined as ongoing pain after successfully treating the central nervous system and the soft tissue components of the situation. In the case of an identifiable structural lesion, surgery would be a reasonable option. Surgery is not ever indicated in the absence of a structural lesion.

I am going to outline what I feel is my personal standard of nonoperative care prior to consideration for surgery:

- Experiencing full restful night's sleep for three months.
- Effective stress management tools should be in place and functional.
- Physical therapy should be combined with an aggressive self-directed conditioning program for at least six months.
  - o If there is a structural problem, the soft tissue component should still be maximally treated.
- Some structural lesions are compelling enough to require surgery first.
- Medications should be used to effectively treat the symptoms of insomnia, pain, and sometimes anxiety. They should be used on a short-term basis to allow func-

tion to be maximized.

- Have specific goals in place from the very beginning of treatment.
  - Not just "I want to get rid of my pain" or "I want my life back."
- Have a clear understanding of the mind-body syndrome.
- Education – must become very educated on the issues regarding chronic pain, rehabilitation, and outcomes of surgery.
  - The final decision regarding surgery should truly be a shared process with your surgeon and primary care physician.
  - Failed spine surgery has a particularly high downside risk. I call it the "catastrophe index" and it is not that uncommon.

The tragedy of unnecessary surgery has many faces. The first being that chronic pain is incredibly treatable. It has become the most rewarding and enjoyable part of my practice. Surgery not only keeps a patient in the whirlpool of chronic pain it usually creates major structural alterations of an otherwise normal spine. Trying to salvage these spines is a significant part of my practice. Trying to prevent unnecessary surgery from occurring in the first place is the major focus of the rest of my career. CIP

## REFERENCES

1. Fritzell P, Hagg O, Jonsson D, et al. Cost-effectiveness of lumbar fusion and nonsurgical treatment for chronic low back pain in the Swedish Lumbar Spine Study: a multicenter, randomized, controlled trial from the Swedish Lumbar Spine Study Group. *Spine* (2001) 26, 2521-2534.



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