

Editorial

Lumbar stenosis surgery: Spine surgeons not insurance companies should decide when enough is better than too much

Nancy E. Epstein

Professor of Clinical Neurosurgery, School of Medicine, State University of New York at Stony Brook, and Chief of Neurosurgical Spine and Education, NYU Winthrop Hospital, Mineola, New York, USA

E-mail: *Nancy E. Epstein - nancy.epsteinmd@gmail.com

*Corresponding author

Received: 11 August 17 Accepted: 11 August 17 Published: 10 October 17

Abstract

Background: Lumbar surgery for spinal stenosis is the most common spine operation being performed in older patients. Nevertheless, every time we want to schedule surgery, we confront the insurance industry. More often than not they demand patients first undergo epidural steroid injections (ESI); clearly they are not aware of ESI's lack of long-term efficacy. Who put these insurance companies in charge anyway? We did. How? Through performing too many unnecessary or overly extensive spinal operations (e.g., interbody fusions and instrumented fusions) without sufficient clinical and/or radiographic indications.

Methods: Patients with lumbar spinal stenosis with/without degenerative spondylolisthesis (DS) are being offered decompressions alone and/or unnecessarily extensive interbody and/or instrumented fusions. Furthermore, a cursory review of the literature largely demonstrates comparable outcomes for decompressions alone vs. decompressions/in situ fusions vs. interbody/instrumented fusions.

Results: Too many older patients are being subjected to unnecessary lumbar spine surgery, some with additional interbody/non instrumented or instrumented fusions, without adequate clinical/neurodiagnostic indications.

Conclusions: The decision to perform spine surgery for lumbar stenosis/DS, including decompression alone, decompression with non instrumented or instrumented fusion should be in the hands of competent spinal surgeons with their patients' best outcomes in mind. Presently, insurance companies have stepped into the "void" left by spinal surgeons' failing to regulate when, what type, and why spinal surgery is being offered to patients with spinal stenosis. Clearly, spine surgeons need to establish guidelines to maximize patient safety and outcomes for lumbar stenosis surgery. We need to remove insurance companies from their present roles as the "spinal police."

Key Words: Decision makers, decompression, insurance companies, laminectomy, spinal stenosis, surgery, unnecessary fusion

Access this article online

Website:

www.surgicalneurologyint.com

DOI:

10.4103/sni.sni_300_17

Quick Response Code:

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Epstein NE. Lumbar stenosis surgery: Spine surgeons not insurance companies should decide when enough is better than too much. Surg Neurol Int 2017;8:247.

<http://surgicalneurologyint.com/Lumbar-stenosis-surgery:-Spine-surgeons-not-insurance-companies-should-decide-when-enough-is-better-than-too-much/>

INTRODUCTION

Lumbar surgery for spinal stenosis with/without degenerative spondylolisthesis (DS) is one of the most common spine operations presently performed in older patients. Nevertheless, every time we want to schedule surgery, we confront the insurance industry. More often than not, misinformed about the disease, the insurance companies demand patients first undergo epidural steroid injections (ESI) despite their lack of long-term efficacy, and significant risks/complications. But who put the insurance companies in charge anyway? We did. How? By performing unnecessary or overly extensive surgery for lumbar stenosis with/without DS. This includes allowing too many lumbar decompressions to include interbody, and/or instrumented fusions without sufficient clinical and/or radiographic indications. Our main question now is how can we right this wrong?

LITERATURE REVIEW

The death of spine surgery

In 2003, Ausman wrote about “the death of spine surgery.”^[1,2] In the first article he quoted that the cost of spine surgery had increased 2–3 fold over a 10-year period (prior to 2003).^[1] Costs were largely driven by the addition of instrumentation, yet no “scientific studies” documented the “value added” for such devices utilized most typically to treat cervical or lumbar disc disease. Additionally, medical suppliers were pushing their wares and supporting “studies” with clear biases favoring outcomes utilizing their instrumentation for fusions. Meanwhile, the media is picking up on unnecessary and overly extensive surgery, and calling on Congress to increase regulation of the “spine industry”. Ausman wrote a sequel to the death of spine surgery in 2014.^[2] He quoted Clark Watts, both a neurosurgeon and lawyer, noting that the American Association of Neurological Surgeons (AANS) shifted from “an education association to a trade association in 2003”. This meant that the aims of the organization were not to help the patient but rather to “benefit” the neurosurgeons. Ausman quotes Watts noting that 70–100% of neurosurgery is now dedicated to spine procedures, and that the incidence of fusion increased 15 fold from 2002–2007. As the “surgical indications/pathology” remained the same over this interval, declines in reimbursement rates appeared to drive the increase in numbers and complexity of these procedures.

Notation of unnecessary spine surgery: The value of second opinions

In 2013, Epstein prospectively evaluated 183 patients who came in for second opinions where first opinion spine surgeons offered spinal surgery.^[3] In Epstein’s opinion, 60.7% (111) of the patients seen required no surgery at

all, 33.3% (61 patients) were being offered the “wrong” or overly extensive operations, while just 6% (11 patients) were being told they needed the “right” operations.

Similar outcomes for lumbar stenosis/DS with laminectomy alone vs. laminectomy with *in situ* or instrumented fusion

Insurance companies should grant permission for lumbar stenosis/DS surgery where adequate clinical/neurodiagnostic criteria are met. We assume our spinal surgical colleagues would not be asking for such permission unless certain “surgical” inclusion criteria were satisfied. Nevertheless, this is not always the case and there is an increasing lack of spinal surgeons “policing themselves.” Furthermore, if the permission requested is for unwarranted surgery, and/or for surgery that is unnecessarily extensive, then the insurance companies may actually be doing patients a favor. Certainly, some of the best literature shows laminectomy vs. laminectomy/fusion for lumbar spinal stenosis/DS have similar outcomes. Furthermore, those not undergoing fusions have reduced operative time, blood loss, length of stay (LOS), a reduced need for postoperative acute rehabilitation, and less cost.

In 2016, Epstein reviewed Weinstein’s randomized controlled SPORT trial data from 13 sites involving 2,500 patients with disc disease, DS, and stenosis.^[4] Those with DS undergoing decompression alone vs. non-instrumented vs. instrumented fusion had comparable results. Surgical results with spinal stenosis were somewhat better at 4-postoperative years, but converged with those undergoing no surgery at 8 postoperative years.

In 2016, Forsth *et al.* presented convincing data that patients with lumbar stenosis (with/without DS) demonstrated comparable outcomes with/without attendant fusion.^[5,6] They randomly assigned 247 patients undergoing lumbar spinal stenosis surgery at 1–2 adjacent vertebral levels (e.g. plus 135 with DS) to decompression alone vs., decompression fusion groups. Outcomes, including the Oswestry Disability Index, the 6-minute walking test, and reoperation rates (21% no fusion/22% fusion) were comparable at 2–5 postoperative years in both groups. However, patients undergoing fusions had longer length of stay (LOS) (7.4 days fusion vs. 4.1 days no fusion), longer operative times, greater intraoperative blood loss, and higher surgical costs.

Higher Medicare costs for fusions

In 2014, Schoenfeld *et al.* looked at 185,954 Medicare patients (2005–2007) having spine operations for disc disease, stenosis, and spondylolisthesis.^[8] They noted higher Medicare payments for patients undergoing fusions (highest \$34,171) vs. the lowest quintile without fusions (\$15,997). The fusions not only increased costs, but also the need/costs for postoperative care facilities.

Different rates of spinal fusion linked to reimbursement strategies

Two recent studies indicate that the decisions to perform fusions for lumbar stenosis may be determined by multiple “social” rather than “surgical factors”. In 2016, Jancuska *et al.* utilized the New York Statewide Planning and Research Cooperative System (SPARCS) database to evaluate 228,882 patients undergoing lumbar spine operations.^[7] The incidence of fusions/year “increased 55% from 2005 to 2014;” in some high volume centers, this increase approached 66.4%. High volume hospitals treated more Caucasians or those with private insurance with higher fusion rates vs. low-volume centers treating more minorities and/or those on Medicaid with lower fusion rates. They concluded: “Individual surgeon opinion, patient disease characteristics, and socioeconomic factors may affect surgical decision making.” Ironically, here the “underserved” at low volume centers likely received safer operations, consisting of decompressions alone without fusions, for their lumbar spinal stenosis.

In another study in 2017, Schoenfeld *et al.* evaluated whether spine surgeons opted for more expensive/extensive/invasive spine surgery/treatment options for treating lumbar discs, stenosis, and DS in those with private vs. public insurance.^[9] They tracked 21,290 privately insured patients (fee-for-service TRICARE) vs. 7054 insured by the Department of Defense; 34% of fee for service TRICARE (private) patients underwent interbody fusions vs. 22% insured by the Department of Defense (public insurance). They concluded provider inducements rather than simply clinical judgment played and plays an ongoing role in the field of spine surgery.

How to take surgical decision-making away from insurance companies: Utilize pain centers

Will we as spinal surgeons ever monitor ourselves? If the likely answer is “no”, how else can we take the surgical decision-making power out of the hands of insurance companies? Some have suggested utilizing pain centers, with their different specialists, including neurologists,

physiatrists, and psychologists along with spinal surgeons to offer a “team evaluation”. Thus, we would maximally utilize conservative measures, and limit unnecessary and/or overly extensive surgical alternatives.

CONCLUSION

As long as spine surgeons offer unnecessary and/or overly extensive operations for lumbar stenosis/DS without insufficient indications, we will continue to be policed by insurance companies. To reverse this, we must better regulate ourselves and work to maximize patient safety and outcomes. The decision to perform laminectomy alone vs. laminectomy/fusion should be solely based upon clinical criteria. Being swayed by other factors is a very “slippery slope”, and unfortunately offers insurance companies the opportunity to intervene.

REFERENCES

1. Ausman JI. The death of spine surgery as we know it. *Surg Neurol* 2003;60:469.
2. Ausman JI. The death of spine surgery, sequel - 2014. *Surg Neurol Int* 2014;5:169.
3. Epstein NE. Are recommended spine operations either unnecessary or too complex? Evidence from second opinions. *Surg Neurol Int* 2013;4 (Suppl 5):S353-8.
4. Epstein NE. Commentary on: The role of surgery for treatment of low back pain: Insights from the randomized controlled SPORT trials. *Surg Neurol Int*, 2016;7(Suppl 25):S648-51.
5. Epstein NE. Commentary on: A randomized controlled trial of fusion surgery for lumbar spinal stenosis (Forsth P, Ólafsson G, Carlsson T, Frost A, Borgström F, Fritzell P, *et al.* *N Engl J Med* 2016;374:1414-23). *Surg Neurol Int* 2016;7(Suppl 25):S641-3.
6. Försth P, Ólafsson G, Carlsson T, Frost A, Borgström F, Fritzell P, *et al.* A Randomized, Controlled Trial of Fusion Surgery for Lumbar Spinal Stenosis. *N Engl J Med* 2016;374:1413-23.
7. Jancuska JM, Hutzler L, Protopsaltis TS, Bendo JA, Bosco J. Utilization of Lumbar Spinal Fusion in New York State: Trends and Disparities. *Spine (Phila Pa 1976)* 2016;41:1508-14.
8. Schoenfeld AJ, Harris MB, Liu H3, Birkmeyer JD. Variations in Medicare payments for episodes of spine surgery. *Spine J* 2014;14:2793-8.
9. Schoenfeld AJ, Mankanji H, Jiang W, Koehlmoos T, Bono CM, Haider AH. Is There Variation in Procedural Utilization for Lumbar Spine Disorders Between a Fee-for-Service and Salaried Healthcare System? *Clin Orthop Relat Res* 2017. [Epub ahead of print].

Comments

Emeritus Editor in Chief: Surgical Neurology International

I think the editorial is fine. One of the reasons I suggested a team evaluation is that by its design, it regulates excess surgery, and also encompasses all the patients with back pain who would be evaluated. Thus, neurosurgeons, if smart, would capture all the market and yet blunt the criticism of the insurers as their system would ensure a

comprehensive evaluation of the patients. So, I still favor that approach although I think it is not highly likely that neurosurgeons would do this. It is done in epilepsy and Parkinsonism. There is no reason why it cannot be done in spine surgery. So, I agree with what Dr Epstein wrote, but self-policing is not going to happen. Only when further restrictions on spine surgery are instituted will neurosurgeons have to change their approach. They must be driven into back pain clinics.

James I. Ausman, M.D.