

Patient Name:
Date of Birth:

Date:

SONORAN SPINE - REFERENCE

NEW HOPE FOR FAILED BACK SYNDROME

Patients who had undergone prior back surgery with persisting back or leg pain finally got a name for their condition in 1951. It was called failed back syndrome. Currently we define this condition as persisting or recurring low back pain with or without radiating leg pain following one or more back surgeries. This condition is recognized as a spectrum of organic disease which can be complicated by learned chronic behaviors and secondary gain.

The incidence of failure following spine surgery depends on the procedure performed, the pathology for which it is performed, the patient's overall mental and physical condition at the time of surgery, the patient's motivation to recover, underlying disease processes or health problems, and many other factors. In general, failure following lumbar discectomy is between 5 and 10%. Failure following spinal fusion can be as low as 5% or as high as 50%, depending on the series, disease process, and patient population that is evaluated. Treatment for these patients remains difficult because the precise sources of pain are sometimes difficult to define.

Factors That Affect Failure

The reasons why some people do not get better following spine surgery can be grouped into preoperative factors, operative factors, and postoperative factors. Preoperative factors affecting outcomes after spine surgery include selecting patients likely to do well and making the correct diagnosis. Factors during surgery which impact long term outcomes include failure to fully decompress pinched or compressed nerves, inadequate fixation of bone in spine fusion, and using bone graft techniques that have not been shown to be successful. Postoperative factors include failure of the spine to fuse, infections, recurrent disc herniations, formation of scar tissue, and arthritis that can develop at the segments adjacent to those which are operated on.

Determining the Pain Source

The broad diagnosis of failed back syndrome is not useful to spine care providers, since it does not define where the pain is coming from. We know from studies done operating on patients under local anesthesia, that there are specific structures within the spine that cause pain and other structures which do not cause pain. Current imaging techniques include MRI scan, CT scans with contrast, facet blocks, discography, and other injection studies. These techniques can be helpful at pinning down a precise source of pain in someone who has failed to improve after surgery. Sometimes psychological testing is helpful at learning whether a patient is too psychologically fragile to benefit from surgical intervention.

With a precise diagnosis of the pain generator, an algorithm can be followed to treat patients with predominantly back pain, or predominantly leg pain.

Who Should Be Considered for Surgery?

For patients with disc herniation not responding to conservative care, our results from 1995 through 2005 suggest a 95% rate of improvement, and 4% rate of recurrent disc herniation. These patients are typically back to work between two and four weeks and are stationary six to eight weeks after surgery. Two years after their surgery, 86% of these patients are still working.

Patients who fail discectomy and continue to have pain require evaluation according to the back pain algorithm.

For patients who have spinal instability, pain from facet joints (the smaller joints in the back of the spine) or from the disc itself, or failed prior fusion may be candidates for spinal fusion. Using current techniques including Bone Morphogenetic Protein (BMP) for fusion (no bone grafting from the hip), surgery is 95%

successful at achieving a solid fusion. The surgery is typically done in two to four hours and the patient is in the hospital for one to four days, depending on their overall level of fitness.

Certain patients should not be offered further surgical intervention for their failed back syndrome. These include patients who have significant functional overlay as demonstrated on the history, physical examination, or specific testing. Patients who have pain in areas that don't match findings on imaging studies such as MRI or x-ray also should not be offered repeat surgery. Patients with fibromyalgia, patients who are non-compliant and patients who have been off of work for greater than six months deserve extra consideration and caution before proceeding to surgery. And finally, it is our belief that a patient having pain despite conservative care is not necessarily a reason to proceed with surgery. If a patient is not a surgical candidate, surgery should not be performed, regardless of the level of pain.

Before the use of bone morphogenic protein (1994 through 2003), our success rate with spinal fusion as tracked by our research was 95% for one level fusions, 90% for two level fusions, 87% for three level fusions. Since the advent of bone morphogenic protein, our success rate for one and two level fusions has been 100% and for three level fusions, 97%. Following these patients for two years, 75% are working. Returning patients to work and full function remains our main goal.

We Track Surgical Outcomes

How do we know the results of our treatments? We track all of our surgical outcomes through our research foundation. The Sonoran Spine Research and Education Foundation was founded several years ago specifically to follow the progress of our patients and educate our colleagues and the public as to matters affecting the spine. We have the interest and ability to give many spine seminars in the Phoenix metropolitan area every year in addition to our national and international research presentations.

Failed back syndrome is a broad term that includes all patients who continue to have pain after spine surgery. For most of these patients, we can clearly identify a reason for the pain. For many of these patients, we can offer a treatment program to decrease or eliminate the pain and get them back to work and excellent level of function. We are committed to continuing our research in this area and improve our results and the lives of our patients.

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