

Why we fail: the long-term outcome of lumbar fusion in the Swedish Lumbar SpineStudy

To The Editor

The long-term results of the Swedish Lumbar Spine Group's 2001 paper on lumbar fusion versus non-surgical treatment [1] are finally available in Hedlund et al.'s follow-up study [2]. Whereas the 2001 study reported significant decreases in chronic low back pain (CLBP) with spinal fusion surgery [1], the secondary outcomes measured at a mean of 12.8 years show that substantial disability remains within the surgery group when compared with non-surgical management [2].

These results suggest that the pain generator or nociceptor in CLBP is not merely an anatomical hardware defect correctable with surgery or conventional physical therapy alone.

Further, failure of exercise therapies to show significant impact on CLBP outcomes [3] suggests against deficits in core stability or motor control training as major contributors.

The failure of conventional methods to treat CLBP advocates an alternate underlying mechanism for the generation of CLBP that these authors post to be a central nervous system upstream movement dysfunction, which is the foundational requirement for a healthy spine. These authors hypothesize that conventional therapies neglect or at best address movement dysfunction with poor efficacy, resulting in persistence or recurrence of CLBP after treatment with both surgical and non-surgical paradigms exemplified in the Swedish Lumbar Spine Study, and in fact all studies on CLBP treatment.

Our hypothesis is that the root cause of chronic non-specific low back pain is movement deficiency in the form of corrupted motor patterns resulting in movement deficiency.

Surgery, other pain interventions, and the most commonly practised physical therapies target only the "hardware" elements of the spine and neglect the "software" elements of spinopelvic functional movement.

Without addressing causation and repeated targeting of the "hardware" and related symptoms, the long-term success in controlling low back pain will be elusive, and its prevalence and huge economic burden will continue to escalate as the modern industrialized lifestyle actively suppresses proficiency in functional movement, which is the root cause of CLBP.

References

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