



Potential Complications and Avoidance: Part 3

Percutaneous Transforaminal Endoscopic Spine Surgery



[Anthony T. Yeung, M.D.](#)
Orthopaedic Spine Surgeon
Arizona Institute for Minimally Invasive Spine Care
Phoenix, AZ



[Christopher A. Yeung, M.D.](#)
Orthopaedic Spine Surgeon
Arizona Institute for Minimally Invasive Spine Care
Phoenix, AZ

Potential Complications and Avoidance

As with arthroscopic knee surgery, the risks of serious complications or injury are low; approximately 1% or less in the author's experience. The usual risks of infection, nerve injury, dural tears, bleeding, and scar tissue formation are always present as with any surgery. Transient dysesthesia, the most common postoperative complaint, occurs approximately 5%-15% of the time, and is almost always transient. Its cause remains incompletely understood and may be related to nerve recovery, operating adjacent to the dorsal root ganglion of the exiting nerve, or a small hematoma adjacent to the ganglion of the exiting nerve, as it can occur days or even weeks after surgery. It cannot be avoided completely, and has occurred even when there were no adverse intraoperative events and the continuous electromyography (EMG) and somatosensory evoked potentials (SEP) did not show any nerve irritation. (13,14) The symptoms are sometimes so minimal that most endoscopic surgeons do not report it as a "complication." The more severe dysesthetic symptoms are similar to a variant of complex regional pain syndrome, but usually less severe, and without the skin changes. Post-operative dysesthesia is treated with transforaminal epidurals, sympathetic blocks, and the off-label use of Neurontin® (Pfizer, Inc., New York, NY, USA) titrated to as much as 1800-3200 mg/day. Gabapentin (Neurontin®) is FDA-approved for post-herpetic neuralgia, but effective in treatment of neuropathic pain.

Avoidance of complications is enhanced by the ability to visualize normal and patho-anatomy clearly, and use of local anesthesia and conscious sedation rather than general or spinal anesthesia. The entire procedure is usually accomplished with the patient remaining comfortable during the entire procedure, and should be done without the patient feeling severe pain except when expected, such as during Evocative Chromo-Discography™, annular fenestration, or when instruments are manipulated past the exiting nerve. Local anesthesia using .50% lidocaine permits generous use of this dilute anesthetic for pain control and allows the patient to feel pain when the nerve root is manipulated.

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