Mini-open removal of intradural spinal tumor

JASON S. CHENG, M.D.,¹ CHEERAG UPADHYAYA, M.D., M.Sc.,^{1,2} JAU-CHING WU, M.D.,¹
TSUNG-HSI TU, M.D.,¹ AND PRAVEEN V. MUMMANENI, M.D.¹

¹Department of Neurological Surgery, University of California, San Francisco, California;

²Kadlec Neuroscience Center, Richland, Washington.

Minimally invasive surgical (MIS) approaches have gained popularity in many surgical fields. Potential advantages to a minimally invasive, spinal intradural approach include decreased operative blood loss, shorter hospitalization, and less post-operative pain. Potential disadvantages include longer operative times, decreased exposure, and difficulty closing the dura. Prior case series from our group and others have demonstrated successful tumor resections using MIS techniques without increased complications. In this 3D video, we demonstrate the key steps in our mini-open, transpinous approach for the resection of an intradural, extramedullary lumbar schwannoma. This operation is performed through a midline incision confined to one or two levels. The spinous process is removed. The paraspinal muscles are spread using a series of sequentially larger tubular dilators, and the first dilator is placed in the space previously occupied by the target level spinous process. The expandable tube retractor is then placed over the largest dilator and docked into place over the target laminae. The expandable tubular retractor is 6 centimeters in depth and 2.5 centimeters in width before expansion and is adjustable to 9 centimeters in depth and 4-5 centimeters in diameter which allows removal of intradural lesions confined to one or two spinal segments.

The video can be found here: http://youtu.be/l_C4VruKYng.
(<http://thejns.org/doi/abs/10.3171/2012.V2.FOCUS12152>)

KEY WORDS • minimally invasive surgery • lumbar intradural spinal tumor •
schwannoma • mini-open approach • video

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Address correspondence to: Jason S. Cheng, M.D., UCSF Moffitt/
Long Hospital, 505 Parnassus Ave, Room M779, San Francisco, CA
94143. email: chengja@neurosurg.ucsf.edu.