Anterior Endoscopic Microdecompressive Cervical Discectomy (AECD) with GPS

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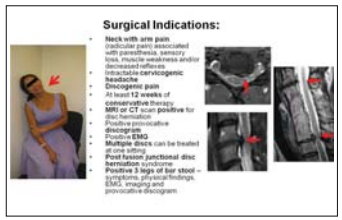
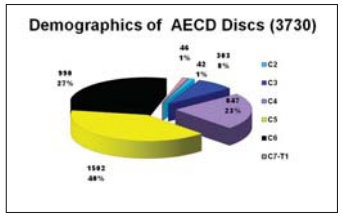
Introduction

To demonstrate outpatient anterior endoscopic microdecompressive cervical discectomy and foraminal decompression (foraminoplasty), by utilizing GPS (grid positional system), can treat herniated cervical discs and cervical foraminal stenosis efficaciously and successfully, by mechanical decompression and application of lower level non-ablative Holmium laser for laser thermodiskoplasty (disc shrinking and tightening effect).

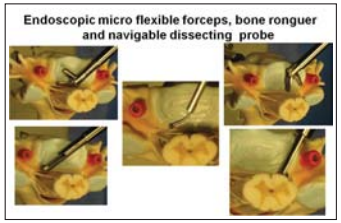


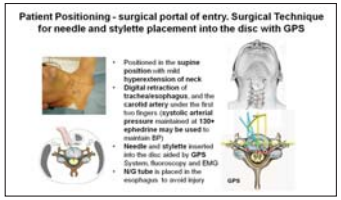
Methods

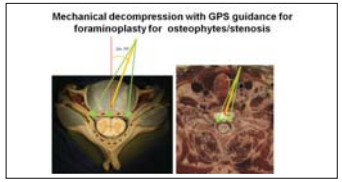
Since 1995, 2066 patients (3730 Discs), who failed at least 12 weeks of conservative care were treated. Levels were C2 to C7, inclusive. All patients demonstrated unilateral radicular pain of a specific dermatome, single level or multiple levels, confirmed with EMG/NCV. MRI or CT scans demonstrated the herniated cervical disc.

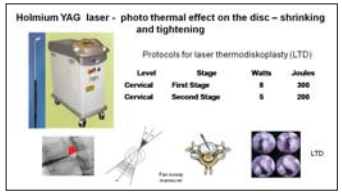


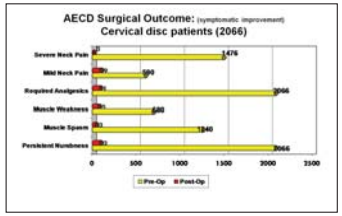
The surgical technique of anterior endoscopic microdecompressive cervical discectomy foraminal decompression (foraminoplasty) and laser thermodiskoplasty (non-ablative lower Holmium laser energy for disc shrinkage) are described. The surgical approach guided and facilitated with GPS (grid positional system), is explained.









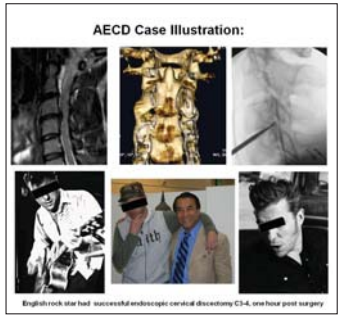


Results

For single level, 94% had good to excellent symptomatic relief and spinal motion preservation. 6% of patients had some persistent neck and upper extremity residual but diminished pain associated with parasthesia, after surgery. Average time to return to work was ten to fourteen days. At an average follow-up of 48 months. There were no intraoperative complications. Postoperatively, one patient with transient Horner's syndrome and one transient hoarseness voice were noted.

Conclusions

The surgery of anterior endoscopic microdecompressive cervical discectomy and foraminal decompression with mechanical decompression and lower level non-ablative Holmium laser for disc shrinking and tightening effect (laser thermodiskoplasty) with GPS has proven to be safe, less traumatic, easier, and efficacious with significant economic savings. It preserves spinal motion. It is an effective alternative or replacement for conventional open cervical spinal surgery for discectomy, and can decompress foraminal stenosis, in degenerative spine disease.



Learning Objectives

1. By the conclusion of this session, participants should be able to describe outpatient anterior endoscopic microdecompressive discectomy and foraminal decompression 2. To discuss the surgical technique and approach with GPS system (Grid positional system) 3. To identify the effective technique of anterior endoscopic cervical spinal surgery facilitated with GPS System

References

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