

ENDOSCOPY IN SPINAL SURGERY

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INTRODUCTION

Endoscopy has been applied in spinal surgery in an attempt to make it less invasive than the conventional surgery.

METHODS

Endoscopy has been used in approximately 200 patients with various spinal disorders at the University of Pittsburgh between January 1999 and August 2001. Rod-lens endoscopes, which are 4-mm in diameter and 18-cm in length with an attached video-camera system, were used. Chiari decompression and posterior cervical decompression were performed through a 1.1 or 1.5 cm trocar. Anterior cervical microforaminotomy was performed for radiculopathy. Transpedicular thoracic discectomy and decompression for lumbar stenosis were performed via a 1.5 cm trocar. Endoscopic lumbar discectomy was performed via 1.1 or 1.5 cm trocar. Spinal tumor removal as well as bone fusion with metal instrumentation were performed with endoscopy in a small group of patients.

RESULTS

Surgical results have been similar to those of conventional surgery. However, minimal postoperative discomfort, short hospital stay and quick recovery have been observed in our group of patients due to the minimally invasive nature of this endoscopic surgery. Two-dimensional optical views are trade-offs for minimally invasiveness. Technical difficulties have to be overcome and instrumental improvement has to be made.

CONCLUSION

Although it is still in a developmental stage, the use of endoscopy in spinal surgery has been promising due to the minimally invasive nature of the surgical procedures. Surgical outcomes have been comparable with conventional surgery.

