

經皮內視鏡手術在胸腰椎感染性脊椎炎的應用治療策略

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**The Strategy of Percutaneous Endoscopic Managements for Infectious Spondylodiscitis in the Thoracic and Lumbar Spine**

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**Introduction:** Percutaneous endoscopic debridement and drainage (PEDD) has been reported to be an effective procedure in treating infectious spondylodiscitis in the lumbar spine. There have been no reports, however, regarding the clinical outcome of percutaneous endoscopic managements for infectious spondylodiscitis in the thoracic spine. In this article, we will present the clinical results of percutaneous endoscopic managements applied to infectious spondylodiscitis in the thoracic or lumbar spine at our facility and propose a treatment strategy.

**Materials and Methods:** From October 2006 to December 2011, 24 patients with infectious spondylodiscitis in the thoracic or lumbar spine were enrolled. All patients received percutaneous endoscopic surgery. The procedure consisted of endoscopic debridement, irrigation and drainage under local anesthesia and mild intravenous sedation. For lesion in the thoracic and upper lumbar spine, pre-operative CT-guided biopsy and drainage tube placement were performed before the endoscopic procedure. The tube acted as a guide for percutaneous endoscope insertion to avoid injury of visceral organ and spinal cord. Two patients with prominent vertebral destruction and segmental instability received additional autograft interbody fusion through endoscopic portal and posterior instrumentation with pedicle screws at 14 days after PEDD. Pain response using visual analog scale (VAS, 0–10), inflammation parameters, and duration of antibiotic therapy were investigated. Radiologic evaluation focused on bony fusion and local kyphosis.

**Results:** 21 patients had immediate pain relief after PEDD, and follow up radiographs showed no significant kyphotic deformity. Two patients with obvious vertebral destruction and segmental instability had pain relief after additional endoscopic interbody fusion and posterior instrumentation, and spinal fusion was obtained in the last follow-up. One uremic patient presented with deterioration of back pain with high inflammatory parameters, and he received posterior instrumentation and intravenous antibiotics therapy at 6 months after PEDD. No surgery related complications were observed. There was no relapse of spinal infection during the follow-up period.

**Discussion:** Percutaneous endoscopic surgery is an effective and safe procedure for infectious thoraco-lumbar spondylodiscitis. We recommended pre-operative CT-guided biopsy and drainage tube placement when the lesion is in the thoracic and upper lumbar spine. Additional autograft interbody fusion through the endoscopic portal and posterior instrumentation were also suggested for lesion with obvious vertebral destruction and segmental instability.