



**Service Priorities and Programmes  
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**Day surgery: Future trend in surgical treatment of lumbar intervertebral disc prolapse**

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**Introduction**

Surgical decompression is indicated for refractory symptomatic lumbar prolapse intervertebral disc (PID). Traditional open discectomy or microdiscectomy is safe and effective. However, post-operative peri-neural scarring and the necessary resection of osseous, ligamentous and muscular structure by open surgery might cause future problems. Patients also need to undergo general anaesthesia and stay in hospital for 2-3 days. Percutaneous endoscopic lumbar discectomy (PELD) is an advance surgical technique and employed direct approach to remove extruded disc. Using small diameter rigid endoscope inserted percutaneously and through intervertebral foramen, prolapse disc can be directly removed through small skin incision. Patients do not need to undergo general anaesthesia. Surgical access trauma, bleeding and post-operative pain are minimal. Patients recover early. Innocent tissue and structures are not damaged. However, surgical skill is demanding with steep learning curve. Close collaboration with anaesthetist and operation theatre staff is also required.

**Objectives**

To study prospectively the efficacy of PELD as day surgical procedure on the treatment of lumbar disc prolapse.

**Methodology**

From 2007-2013, 126 patients with lumbar PID (135 procedures; L3/4 [12], L4/5 [65], L5S1 [58]) were operated on with PELD and prospectively studied on the amount of blood loss, operation duration, hospital stay and the surgical outcome.

**Result**

Results: All PELD were done under local anaesthesia with anaesthetic monitoring. The wound size was 8mm. The mean operation time was 105 min per level. There was negligible blood loss. 113 patients were discharged home <1 day post-op (same

operation-day discharge [49 patients], next morning discharge [64 patients]). 13 patients were discharged >1 day after surgery for various reasons. 116 patients improved after PELD. 3 patients required second PELD for recurrent disc herniation. 2 patients required conversion to open surgery. 8 patients required spinal fusion for disc degeneration disease. One patient had neurological deficit after surgery. Conclusions: PELD was a safe and effective surgical treatment of lumbar PID. 90% patients can be discharged home within one day after surgery. With further collaboration with anaesthetists, modification of work flow logistic and careful selection of patients, the operation can be performed as day surgery effectively.