

Changhua Christian Hospital

Changhua Christian Hospital ([Changhua, Taiwan](#)).

Full [endoscopic lumbar discectomy](#) (FELD) for [lumbar disc herniation](#) (LDH) has become popular in recent years. Previous studies have proven the [efficacy](#), but few have discussed the possible [risk factors](#) of poor [outcome](#). Chen et al. [reviewed](#) patients who underwent FELD at [Changhua Christian Hospital](#) in the past 10 years and sought to identify factors associated with poor surgical outcomes and re-operations.

They retrospectively reviewed records from mid-2009 to mid-2018. Patients had undergone FELD and follow-up for ≥ 1 year were included. Factors included in the outcome evaluations were age, sex, surgical time, body mass index, surgical methods, disc herniation type, extension of herniation, degree of canal compromised, disc degenerative grade, smoking and alcohol use, surgical lumbar level, symptom duration, Oswestry low back disability index, and visual analog scale score. We had evolved from inside-out methods to outside-in methods after 2016, thus, we included this factor in the analysis. The primary outcomes of interest were poor/fair MacNab score and re-operation.

From mid-2009 to mid-2018, 521 patients met our criteria and were analyzed. The median follow-up was 1685 days (range, 523-3923 days). Thirty-one (6.0%) patients had poor surgical outcomes (fair/poor MacNab score) and 45 (8.6%) patients required re-operation. Prolapsed herniated disc ($P < 0.001$), higher disc degenerative grade ($P = 0.047$), higher lumbar level ($P = 0.026$), longer preoperative symptoms ($P < 0.001$), and surgery before 2017 (outside-in technique, $P = 0.020$) were significant factors associated with poor outcomes in univariate analyses. In multivariate analyses, prolapsed herniated disc ($P < 0.001$), higher disc degenerative grade ($P = 0.030$), and higher lumbar level ($P = 0.046$) were statistically significant. The most common adverse symptom was numbness. Factors possibly associated with higher re-operation rate were older age ($P = 0.045$), alcohol use ($P = 0.073$) and higher lumbar level ($P = 0.069$). Only alcohol use showed statistically significant re-operation rates in multivariate analyses ($P = 0.035$).

For treating LDH by FELD, they concluded that prolapsed disc, higher disc degenerative grade, higher lumbar level, and longer preoperative symptom duration were possibly associated with unsatisfactory surgical outcomes (poor/fair MacNab score). The outside-in technique might be superior to the inside-out technique. Older age and alcohol use might be associated with a higher re-operation rate ¹⁾.

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Chen CM, Sun LW, Tseng C, Chen YC, Wang GC. Surgical outcomes of full endoscopic spinal surgery for lumbar disc herniation over a 10-year period: A retrospective study. PLoS One. 2020 Nov 5;15(11):e0241494. doi: 10.1371/journal.pone.0241494. PMID: 33152001.

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