

## DAFTAR PUSTAKA

1. Ahn SS, Kim SH, Kim DW. Learning Curve of Percutaneous Endoscopic Lumbar Discectomy Based on the Period (Early vs. Late) and Technique (in-and-out vs. in-and-out-and-in): A Retrospective Comparative Study. *J Korean Neurosurg Soc.* 2015;58(6):539-546. doi:10.3340/jkns.2015.58.6.539
2. Ahn Y, Kim CH, Lee JH, Lee SH, Kim JS. Radiation exposure to the surgeon during percutaneous endoscopic lumbar discectomy: a prospective study. *Spine (Phila Pa 1976).* 2013;38(7):617-625. doi:10.1097/BRS.0b013e318275ca58.
3. Ao S, Wu J, Tang Y, et al. Percutaneous Endoscopic Lumbar Discectomy Assisted by O-Arm-Based Navigation Improves the Learning Curve. *Piccinni G, ed. Biomed Res Int.* 2019;2019:6509409. doi:10.1155/2019/6509409
4. Apostolides PJ, Jacobowitz R, Sonntag VK. Lumbar discectomy microdiscectomy: "the gold standard". *Clin Neurosurg.* 1996;43:228-238.
5. Aprile BC, Amato MCM, de Oliveira CA. Functional Evolution after Percutaneous Endoscopic Lumbar Discectomy, an Earlier Evaluation of 32 Cases. *Rev Bras Ortop (Sao Paulo).* 2020;55(4):415-418. doi:10.1055/s-0039-3402473
6. Bae J, Chachan S, Shin SH, Lee SH. The isthmic corridor- a novel anatomical approach for L5-S1 postero-lateral endoscopic lumbar discectomy (PELD). *Interdiscip Neurosurg.* 2020;20:100656. doi:<https://doi.org/10.1016/j.inat.2019.100656>
7. Bamrungthin N, Hosp JP, Med C. Learning Curve of Percutaneous Endoscopic Lumbar Discectomy. 2021;38(1):44-50.
8. Berwick DM. Continuous improvement as an ideal in health care. *N Engl J Med.* 1989;320(1):53-56. doi:10.1056/NEJM198901053200110
9. Brenner DJ, Doll R, Goodhead DT, et al. Cancer risks attributable to low doses of ionizing radiation: assessing what we really know. *Proc Natl Acad Sci USA* 2003;100:13761-6.
10. Carragee EJ, Spinnickie AO, Alamin TF, Paragioudakis S. A prospective controlled study of limited versus subtotal posterior discectomy: short-term outcomes in patients with herniated lumbar intervertebral discs and large posterior anular defect. *Spine (Phila Pa 1976).* 2006;31(6):653-657. doi:10.1097/01.brs.0000203714.76250.68
11. Chae KH, Ju CI, Lee SM, et al. Strategies for Noncontained Lumbar Disc Herniation by an Endoscopic Approach: Transforaminal Suprapedicular Approach, Semi-Rigid Flexible Curved Probe, and 3-

12. Chaichankul C, Poopitaya S, Tassanawipas W. The effect of learning curve on the results of percutaneous transforaminal endoscopic lumbar discectomy. J Med Assoc Thai. 2012;95 Suppl 10:S206-S212.
13. Chen J, Jing X, Li C, Jiang Y, Cheng S, Ma J. Percutaneous Endoscopic Lumbar Discectomy for L5S1 Lumbar Disc Herniation Using a Transforaminal Approach Versus an Interlaminar Approach: A Systematic Review and Meta-Analysis. World Neurosurg. 2018;116:412-420.e2. doi:10.1016/j.wneu.2018.05.075
14. Chen Z, He L, Huang L, et al. Risk Factors for Poor Outcomes Following Minimally Invasive Discectomy: A Post Hoc Subgroup Analysis of 2-Year Follow-up Prospective Data. Neurospine. 2022;19(1):224-235. doi:10.14245/ns.2143084.542
15. Cho JY, Lee SH, Lee HY. Prevention of development of postoperative dysesthesia in transforaminal percutaneous endoscopic lumbar discectomy for intracanalicular lumbar disc herniation: floating retraction technique. Minim Invasive Neurosurg. 2011;54(5-6):214-218. doi:10.1055/s-0031-1287774.
16. Cho, SM., Kim, SH., Ha, SK. et al. Paraspinal muscle changes after single-level posterior lumbar fusion: volumetric analyses and literature review. BMC Musculoskelet Disord 2020; 21:73.
17. Choi DJ, Choi CM, Jung JT, Lee SJ, Kim YS. Learning Curve Associated with Complications in Biportal Endoscopic Spinal Surgery: Challenges and Strategies. Asian Spine J. 2016;10(4):624-629. doi:10.4184/asj.2016.10.4.624
18. Choi G, Modi HN, Prada N, Ahn TJ, Myung SH, Gang MS, et al. Clinical results of XMR-assisted percutaneous transforaminal endoscopic lumbar discectomy. J Orthop Surg Res. 2013; 8:14
19. Choi I, Ahn JO, So WS, Lee SJ, Choi IJ, Kim H. Exiting root injury in transforaminal endoscopic discectomy: preoperative image considerations for safety. Eur Spine J. 2013;22(11):2481-2487. doi:10.1007/s00586-013-2849-7
20. Choi KC, Kim JS, Park CK. Percutaneous Endoscopic Lumbar Discectomy as an Alternative to Open Lumbar Microdiscectomy for Large Lumbar Disc Herniation. Pain Physician. 2016;19(2):E291-E300.
21. Choi KC, Kim JS, Ryu KS, Kang BU, Ahn Y, Lee SH. Percutaneous endoscopic lumbar discectomy for L5-S1 disc herniation: transforaminal versus interlaminar approach. Pain Physician. 2013;16(6):547-556.

22. Cook JA, Ramsaya CR, Fayers P. Statistical evaluation of learning curve effects in surgical trials. *Clinical Trials*. 2004;1(5):421-427. doi:10.1191/1740774504cn042oaDarzi A, Smith S, Taffinder N. Assessing operative skill. Needs to become more objective. *BMJ* 1999; 318: 887-88.
23. Do KH. The health effects of low-dose radiation exposure. / *Korean Med Assoc* 2011;54:1253-61.
24. Fritz JM, Irrgang JJ. A Comparison of a Modified Oswestry Low Back Pain Disability Questionnaire and the Quebec Back Pain Disability Scale. *Phys Ther*. 2001;81(2):776-788. doi:10.1093/ptj/81.2.776
25. G. Fan, X. Gu, Y. Liu, et al. Lower learning difficulty and fluoroscopy reduction of transforaminal percutaneous endoscopic lumbar discectomy with an accurate preoperative location method *Pain Physician*, 19 (2016), pp. E1123-E1134
26. Hijikata S (1989) Percutaneous nucleotomy: A new concept technique and 12 years' experience. *Clin Othop* 238: 9-23.
27. Hirano Y, Mizuno J, Takeda M, Itoh Y, Matsuoka H, Watanabe K. Percutaneous endoscopic lumbar discectomy - early clinical experience. *Neurol Med Chir (Tokyo)*. 2012;52(9):625-630. doi:10.2176/nmc.52.625
28. Hoogland T, Schubert M, Miklitz B, Ramirez A. Transforaminal posterolateral endoscopic discectomy with or without the combination of a low-dose chymopapain: a prospective randomized study in 280 consecutive cases. *Spine (Phila Pa 1976)*. 2006;31(24):E890-E897. doi:10.1097/01.brs.0000245955.22358.3a
29. Hsu HT, Chang SJ, Yang SS, Chai CL. Learning curve of full-endoscopic lumbar discectomy. *Eur Spine J*. 2013;22(4):727-733. doi:10.1007/s00586-012-2540-4
30. Kambin P, Zhou L. History and current status of percutaneous arthroscopic disc surgery. *Spine (Phila Pa 1976)*. 1996;21(24 Suppl):57S-61S. doi:10.1097/00007632-199612151-00006
31. Kim HS, Ju CI, Kim SW, Kim JG. Endoscopic transforaminal suprapedicular approach in high grade inferior migrated lumbar disc herniation. *J Korean Neurosurg Soc*. 2009;45(2):67-73. doi:10.3340/jkns.2009.45.2.67
32. Kim HS, You JD, Ju CI. Predictive Scoring and Risk Factors of Early Recurrence after Percutaneous Endoscopic Lumbar Discectomy. *Biomed Res Int*. 2019;2019:6492675. Published 2019 Nov 7. doi:10.1155/2019/6492675
33. Kotheeranurak V, Liawrungrueang W, Kuansongtham V, et al. Surgeons' Perspective, Learning Curve, Motivation, and Obstacles of Full-Endoscopic Spine Surgery in Thailand: Results From A Nationwide

34. Lee DY, Lee SH. Learning curve for percutaneous endoscopic lumbar discectomy. *Neurol Med Chir* (Tokyo). 2008;48(9):383-389. doi:10.2176/nmc.48.383
35. Lee SH, Kang BU, Ahn Y, Choi G, Choi YG, Ahn KU, Shin SW, Kang HY. Operative failure of percutaneous endoscopic lumbar discectomy: A radiologic analysis of 55 cases. *Spine (Phila Pa 1976)* 2006; 31:E285-E290
36. Lim TO, Soraya A, Ding LM, Morad Z. Assessing doctors' competence: application of CUSUM technique in monitoring doctors' performance. *Int J Qual Health Care*. 2002;14:251-258. doi:10.1093/oxfordjournals.intqhc.a002616
37. Mirkovic SR, Schwartz DG, Glazier KD. Anatomic considerations in lumbar posterolateral percutaneous procedures. *Spine (Phila Pa 1976)*. 1995;20(18):1965-1971. doi:10.1097/00007632-199509150-00001
38. Morgenstern R, Morgenstern C, Yeung AT. The learning curve in foraminal endoscopic discectomy: experience needed to achieve a 90% success rate. *SAS J*. 2007;1(3):100-107. Published 2007 Aug 1. doi:10.1016/SASJ-2007-0005-RR
39. Mygind Mieritz R, Ketharanathan B, von Bonsdorff T, et al. Percutaneous Endoscopic Lumbar Discectomy Vs Open Lumbar Microdiscectomy: A Comparison of Patient-Reported Outcomes in a Retrospective Cohort Follow-Up Design during the First Years of Implementation of Endoscopic Lumbar Discectomy. *J Spine Res Surg*. 2022;04(02):63-71. doi:10.26502/fjsrs0042
40. Pan M, Li Q, Li S, et al. Percutaneous Endoscopic Lumbar Discectomy: Indications and Complications. *Pain Physician*. 2020;23(1):49-56
41. Phedy P, Djaja YP, Tobing SDAL, et al. Cross-cultural adaptation and psychometric validation of the Indonesian version of the Oswestry Disability Index. *Eur Spine J*. 2021;30(4):1053-1062. doi:10.1007/s00586-020-06690-3
42. Reulen HJ, Müller A, Ebeling U. Microsurgical anatomy of the lateral approach to extraforaminal lumbar disc herniations. *Neurosurgery*. 1996;39(2):345-351. doi:10.1097/00006123-199608000-00022
43. Ruan W, Feng F, Liu Z, Xie J, Cai L, Ping A. Comparison of percutaneous endoscopic lumbar discectomy versus open lumbar microdiscectomy for lumbar disc herniation: A meta-analysis. *Int J Surg*. 2016;31:86-92. doi:10.1016/j.ijssu.2016.05.061

44. Ruetten S, Komp M, Godolias G. A New full-endoscopic technique for the interlaminar operation of lumbar disc herniations using 6-mm endoscopes: prospective 2-year results of 331 patients. *Minim Invasive Neurosurg.* 2006;49(2):80-87. doi:10.1055/s-2006-932172
45. Sairyo K, Egawa H, Matsuura T, et al. State of the art: Transforaminal approach for percutaneous endoscopic lumbar discectomy under local anesthesia. *J Med Invest.* 2014;61(3-4):217-225. doi:10.2152/jmi.61.217
46. Suk KS, Lee HM, Moon SH, Kim NH. Recurrent lumbar disc herniation: results of operative management. *Spine (Phila Pa 1976).* 2001;26(6):672-676. doi:10.1097/00007632-200103150-00024
47. Sun B, Shi C, Xu Z, et al. Learning Curve for Percutaneous Endoscopic Lumbar Discectomy in Bi-needle Technique Using Cumulative Summation Test for Learning Curve. *World Neurosurg.* 2019;129:e586-e593. doi:<https://doi.org/10.1016/j.wneu.2019.05.227>
48. Sun B, Wu H, Xu Z, Lu J, Wang Y, Zhang K, Gao X, Shen X, Wu XD, Zhang Y, Gu X, Shi C, Yuan W. Is selective nerve root block necessary for learning percutaneous endoscopic lumbar discectomy: a comparative study using a cumulative summation test for learning curve. *Int Orthop.* 2020 Jul;44(7):1367-1374. doi: 10.1007/s00264-020-04558-1. Epub 2020 May 4. PMID: 32367234.
49. Tenenbaum S, Arzi H, Herman A, et al. Percutaneous Posterolateral Transforaminal Endoscopic Discectomy: Clinical Outcome, Complications, and Learning Curve Evaluation. *Surg Technol Int.* 2011;21:278-283.
50. Toker A, Tanju S, Ziyade S, Kaya S, Dilege S. Learning curve in videothoracoscopic thymectomy: how many operations and in which situations?. *Eur J Cardiothorac Surg.* 2008;34(1):155-158. doi:10.1016/j.ejcts.2007.12.056
51. Wang H, Huang B, Li C, et al. Learning curve for percutaneous endoscopic lumbar discectomy depending on the surgeon's training level of minimally invasive spine surgery. *Clin Neurol Neurosurg.* 2013;115(10):1987-1991. doi:10.1016/j.clineuro.2013.06.008
52. Wang H, Zhou Y, Li C, Liu J, Xiang L. Risk factors for failure of single-level percutaneous endoscopic lumbar discectomy. *J Neurosurg Spine.* 2015;23(3):320-325. doi:10.3171/2014.10.SPINE1442
53. Williams SM, Parry BR, Schlup MM. Quality control: an application of the cusum. *BMJ.* 1992;304(6838):1359-1361. doi:10.1136/bmj.304.6838.1359
54. Wilson CA, Roffey DM, Chow D, Alkherayf F, Wai EK. A systematic review of preoperative predictors for postoperative clinical outcomes following lumbar discectomy. *Spine J.*

55. Wu R, Liao X, Xia H. Radiation Exposure to the Surgeon During Ultrasound-Assisted Transforaminal Percutaneous Endoscopic Lumbar Discectomy: A Prospective Study. *World Neurosurg.* 2017;101:658-665.e1. doi:<https://doi.org/10.1016/j.wneu.2017.03.050>
56. Wu X, Fan G, He S, Gu X, Yang Y. Comparison of Clinical Outcomes of Two-Level PELD and Foraminoplasty PELD for Highly Migrated Disc Herniations: A Comparative Study. De Bonis P, ed. *Biomed Res Int.* 2019;2019:9681424. doi:10.1155/2019/9681424
57. Wu XB, Fan GX, Gu X, et al. Learning curves of percutaneous endoscopic lumbar discectomy in transforaminal approach at the L4/5 and L5/S1 levels: a comparative study. *J Zhejiang Univ Sci B.* 2016;17(7):553-560. doi:10.1631/jzus.B1600002
58. Yeung AT, Tsou PM. Posterolateral endoscopic excision for lumbar disc herniation: Surgical technique, outcome, and complications in 307 consecutive cases. *Spine (Phila Pa 1976).* 2002;27(7):722-731. doi:10.1097/00007632-200204010-00009
59. Yin J, Jiang Y, Nong L. Transforaminal approach versus interlaminar approach: A meta-analysis of operative complication of percutaneous endoscopic lumbar discectomy. *Medicine (Baltimore).* 2020;99(25):e20709. doi:10.1097/MD.00000000000020709
60. Zhao Y, Fan Y, Yang L, et al. Percutaneous Endoscopic Lumbar Discectomy (PELD) via a Transforaminal and Interlaminar Combined Approach for Very Highly Migrated Lumbar Disc Herniation (LDH) Between L4/5 and L5/S1 Level. *Med Sci Monit.* 2020;26:e922777. Published 2020 Jun 7. doi:10.12659/MSM.922777
61. Zhu B, Jiang Y, Shang L, Yan M, Ma HJ, et al. (2017) Complications of Percutaneous Endoscopic Lumbar Discectomy: Experiences and Literature Review. *J Spine* 6: 402. doi:10.4172/2165-7939.1000402
62. Zhu H, Hussain Z, Zhang M, et al. Percutaneous Endoscopic Lumbar Discectomy for Lumbar Disc Herniation With Type II Modic Changes. *World Neurosurg.* 2022;164:e143-e149. doi:10.1016/j.wneu.2022.04.056