

## · 临床论著 ·

## 克氏针锚定内镜腰椎间融合治疗腰椎退行性疾病

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**摘要:** [目的] 探讨克氏针锚定定位在内镜腰椎间融合术 (endoscopic lumbar interbody fusion, Endo-LIF) 治疗腰椎退行性疾病 (lumbar degenerative disease, LDD) 中的意义。[方法] 回顾性分析 2021 年 1 月—2023 年 1 月于本院行 Endo-LIF 治疗 LDD 108 例患者的资料。依据术前医患沟通结果, 53 例患者接受传统可视化环锯辅助下的 Endo-LIF 治疗 (传统组), 55 例患者接受克氏针锚定技术结合可视化环锯辅助下的 Endo-LIF 治疗 (克氏针组)。比较两组围手术期、随访和影像学资料。[结果] 两组患者均顺利完成手术, 无严重并发症。克氏针组手术时间 [(108.1±5.5) min vs (122.4±6.5) min,  $P<0.001$ ]、术中失血量 [(56.3±6.7) ml vs (71.5±10.2) ml,  $P<0.001$ ]、术中透视时长 [(13.1±1.3) s vs (17.2±0.9) s,  $P<0.001$ ] 均显著优于传统组, 而两组在下地行走时间和住院时间方面的差异均无统计学意义 ( $P>0.05$ )。两组患者随访 (20.8±4.0) 个月, 两组恢复完全负重活动时间的差异无统计学意义 ( $P>0.05$ )。随时间推移, 两组患者腰痛 VAS、腿痛 VAS、ODI 评分均显著减少 ( $P<0.05$ ), 而 JOA 评分显著增加 ( $P<0.05$ )。相应时间点, 两组患者的腰痛 VAS、腿痛 VAS、ODI 评分的差异均无统计学意义 ( $P>0.05$ )。影像方面, 与术前相比, 末次随访时两组患者的腰椎前凸角均无显著变化 ( $P>0.05$ )。末次随访时, 两组椎间融合 Bridwell 评级的差异无统计学意义 ( $P>0.05$ )。[结论] 采用克氏针锚定定位 Endo-LIF 治疗 LDD 可取得良好的效果, 既可提高术中骨开窗效率, 减少术中出血, 又可降低医患辐射。

**关键词:** 腰椎退行性疾病, 内镜腰椎间融合, 克氏针锚定定位, 临床结果

**中图分类号:** R681.57 **文献标志码:** A **文章编号:** 1005-8478 (2024)

**Endoscopic lumbar interbody fusion following guide of anchored Kirschner wire for lumbar degenerative diseases // CHENG Guan-yu, LIU Huan, SUN Peng, GE Yun-ru, FEI Hao-dong, HUANG He, WANG Shou-guo. Department of Orthopedics, First People's Hospital of Huai'an City, Nanjing Medical University, Huai'an 223300, China**

**Abstract: [Objective]** To explore the significance of anchored Kirschner wire used as a guide in endoscopic lumbar interbody fusion (Endo-LIF) for lumbar degenerative diseases (LDD). **[Methods]** A retrospective study was done on 108 patients who received Endo-LIF for LDD in our hospital from January 2021 to January 2023. According to preoperative doctor-patient discussion, 53 patients had Endo-LIF performed in conventional manner with the visualizing trephine (the traditional group), while other 55 patients received Endo-LIF with the visualizing trephine following the guide by anchored Kirschner wire (the K-wire group). The perioperative, follow-up and imaging data of the two groups were compared. **[Results]** All patients in both groups successfully completed operation without serious complications. The K-wire group proved significantly superior to the traditional group in terms of operative time [(108.1±5.5) min vs (122.4±6.5) min,  $P<0.001$ ], intraoperative blood loss [(56.3±6.7) ml vs (71.5±10.2) ml,  $P<0.001$ ], intraoperative fluoroscopy duration [(13.1±1.3) s vs (17.2±0.9) s,  $P<0.001$ ], despite of the fact that no significant differences were noted in postoperative walking time and hospital stay between them ( $P>0.05$ ). All patients in the two groups were followed up for (20.8±4.0) months, and there was no significant difference in time to regain full weight-bearing activities between the two groups ( $P>0.05$ ). As time went on, lower back pain VAS, leg pain VAS and ODI scores significantly decreased ( $P<0.05$ ), while JOA scores significantly increased in both groups ( $P<0.05$ ), whereas which were not significantly different between the two cohorts at any time points accordingly. With respect of imaging, there were no significant changes in lumbar lordosis angle in both groups at the last follow-up compared with that preoperatively ( $P>0.05$ ). At the last follow-up, there was no a significant difference in the Bridwell grade of interbody fusion between the two groups ( $P>0.05$ ). **[Conclusion]** Endo-LIF following guide of anchored Kirschner wire does achieve good results in the treatment of LDD, which can not only improve the efficiency of intraoperative laminar fenestration, reduce intraoperative bleeding, but also reduce doctor and patient radiation.

**Key words:** lumbar degenerative diseases, endoscopic lumbar interbody fusion, anchored Kirschner wire, clinical outcome

DOI:10.3977/j.issn.1005-8478.2024

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