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Letter: effects of dexamethasone combined with vitamin B12 on percutaneous endoscopic interlaminar discectomy early outcomes: a randomized controlled trial

Yinjie Zheng^{1,2}, Fei Gao^{2,3} and Xiaochun Zheng^{1,2,3*}

Abstract

Cheng He et al. evaluated the effect of dexamethasone combined with vitamin B12 on early outcomes following percutaneous endoscopic interlaminar discectomy (PEID). While the study offers valuable insights, we have several constructive suggestions. The lack of a standardized anesthesia protocol (local vs. general anesthesia) may have influenced the results, as patients under local anesthesia were awake during the procedure. Previous studies suggest intraoperative communication and patient awareness can impact pain levels and recovery. To clarify the effect of anesthesia type on recovery, we recommend conducting a subgroup analysis based on the anesthesia method. Although the CT group(combined treatment) showed satisfactory pain control (VAS < 3.3), the observed VAS score between days 1 and 3 may not reflect the actual patient experience. Except for the VAS score for leg pain on the third day after surgery, the net intergroup differences at other time points were less than the minimal clinically important differences recommended in the literature(a change of 10 for the 100 mm pain VAS). Furthermore, the study does not assess patient satisfaction with pain management, making it difficult to determine the clinical importance of the treatment effect.

To the Editor:

We read this crafted article by Cheng He et al. in which the authors evaluated the effect of dexamethasone combined with vitamin B12 on early outcomes of percutaneous endoscopic interlaminar discectomy(PEID). We appreciate this interesting study and would like to make some constructive suggestions [1].

The researchers did not use a uniform anesthesia method in the study and only stated in the article that the surgery used local or general anesthesia. In other words, patients under local anesthesia were awake during the operation. This may have affected the main outcome of the experiment. The researchers assessed the severity of postoperative pain using a visual analog scale (VAS) but did not provide the reader with information about the

*Correspondence:

Xiaochun Zheng
fjslymzk@126.com

¹Department of Surgery, College of Integrative Medicine, Academy of Integrative Medicine, Fujian University of Traditional Chinese Medicine, Fuzhou, China

²Department of Anesthesiology, Fuzhou University Affiliated Provincial Hospital, Fuzhou, China

³Department of Anesthesiology, Shengli Clinical Medical College of Fujian Medical University, Fuzhou University Affiliated Provincial Hospital, No. 134 Dongjie, Fuzhou 350001, China



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patient's state during the operation. Studies have shown that for patients undergoing PEID, watching a video of the surgery before the operation and intraoperative communication can reduce pain, accelerate functional recovery, and improve postoperative VAS and JOA (Japanese Orthopaedic Association) scores [2]. In addition, compared with general anesthesia, patients undergoing this surgery using local anesthesia can have earlier ambulation after surgery and a shorter hospital stay, suggesting a potential benefit for patient recovery quality [3]. It is recommended that the author use subgroup analysis in the study and group patients according to the anesthesia method to clarify the impact of different anesthesia methods on the quality of postoperative recovery.

A 1-point change in the 10-cm VAS represents a clinically important improvement or deterioration for patients with acute pain after surgery, and a VAS of 3.3 or lower indicates acceptable pain control [4]. We noted that the mean VAS scores of the CT group (combined treatment) on the first and third days after surgery were lower than 3.3, indicating that most patients had satisfactory postoperative pain control. The investigators noted a rebound trend in pain on the first to third days after surgery, with VAS scores peaking on the third day. However, except for the VAS score for leg pain on the third day after surgery, the net intergroup differences at other time points were less than the minimal clinically important differences recommended in the literature (a change of 10 for the 100 mm pain VAS) [4]. This indicates that although the VAS score fluctuates in pain intensity, it is insufficient to reflect the patient's actual perception of pain relief. Most importantly, this study did not compare patient satisfaction with postoperative pain control. In this case, we cannot determine whether the postoperative pain control with dexamethasone combined with vitamin B12 in this study to improve early outcomes of PEID is clinically important.

While the study provides valuable insights, it is important to acknowledge certain limitations.

Abbreviations

PEID	Percutaneous endoscopic interlaminar discectomy
VAS	Visual analog scale
JOA	Japanese Orthopaedic Association
CT	The combined treatment

Author contributions

YJ.Z: Conceptualization; formal analysis; methodology; writing—original draft. F.G: Conceptualization; methodology; validation; writing—review and editing. XC.Z: Conceptualization; formal analysis; methodology; validation; writing—review and editing. All authors reviewed the manuscript.

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Data availability

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Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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