

Certificate of English Language Editing



Manuscript Title:

Learning curves of robot-assisted pedicle screw fixations based on the cumulative sum test

Date of Revision:

August 26, 2021

Abstract:

Background:

This study aimed to analyze the learning curve of robot-assisted (RA) pedicle screw fixation (PSF) through fitting the operation time curve based on the cumulative summation method.

Methods:

RA PSFs that were initially completed by two surgeons at the Beijing Jishuitan Hospital from July 2016 to March 2019 were analyzed retrospectively. Based on the cumulative sum of the operation time, the learning curves of the two surgeons were drawn and fit to polynomial curves. The learning curve was divided into the early and late stages according to the shape of the fitted curve. The operation time and screw accuracy were compared between the stages.

Results:

The turning point of the learning curves from Surgeons A and B appeared in the 18th and 17th cases, respectively. The operation time [150 (128, 188) minutes vs. 120 (105, 150) minutes, $P=0.002$] and the screw accuracy...

This document certifies that the manuscript listed above was copy edited for English language by LetPub, with regard to grammar, punctuation, spelling, and clarity. All of our language editors are native English speakers with long-term experience in editing scientific and technical manuscripts. We are committed to leveling the playing field for researchers whose native language is not English.

- Documents receiving this certification should be regarded as having undergone professional editorial revision for English language before submission. However, the authors may accept or reject LetPub's suggestions and changes at their own discretion and LetPub does not have editorial control over the submitted documents.
- The language quality of the submitted document is the sole responsibility of the submitting authors subject to those authors' adherence to LetPub's revisions and instruction. LetPub's provision of service does not constitute a guarantee or endorsement of the authors' work herein.
- Neither the research content nor the authors' intended meaning were altered in any way during the editing process.
- If you have any questions or concerns about this edited document, please contact us at support@letpub.com



LetPub is an author service brand owned and operated by Accdon LLC. Headquartered in the Boston area, we are a full-spectrum author services company with a large team of US-based certified language and scientific editors, ISO 17001 accredited translators, and professional scientific illustrators and animators. We advocate ethical publication practices and are an official member of the Committee on Publication Ethics (COPE).

For more information about our company, services, and partnership programs, please visit www.letpub.com.

© 2021 Accdon, LLC. All Rights Reserved. Tel: 1-781-202-9968 Email: info@accdon.com Address: 400 Fifth Ave, Suite 530, Waltham, MA 02451, United States