

The bronchoscopy model LM-092 has educational benefits

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To the Editor:

Recent advances in pulmonary segmentectomy have created the need for identification of the correct bronchial segment by bronchoscopy, because a surgeon must confirm the pulmonary segment by inflating it under bronchoscopic visualization before its resection [1]. Therefore, accurate knowledge of bronchial anatomy and the technique to advance the bronchoscope to the correct bronchial segment are necessary for anesthesiologists. The purpose of our study was to evaluate whether the use of a bronchoscopy training simulator improved their skills in bronchoscopy, especially identification of the correct bronchial segment.

Nineteen volunteers, including residents and young anesthesiologists, were enrolled in this study. We used the bronchoscopy training simulator LM-092 (Koken Co., Ltd, Tokyo, Japan) (Online Resource 1, Fig. 1), which is made of special siliconized rubber. The trainee attempted to identify five bronchial segments. Five segments were used so that the trainees could not memorize a course of bronchial segments of the simulator. These segments were randomly decided by the sealed envelope method, and the investigator told the trainee to detect the selected bronchial

segment by this statement: “Please insert the tip of the bronchoscope to B6 in the left lung.” After the trainee had completed insertion of the bronchoscope, the investigator told the trainee which bronchial segment the tip of the inserted bronchoscope had reached. All trainees repeated the same examination 1 week and 2 weeks later. The primary outcome was the number of bronchial segments correctly identified. Statistical significance was assessed using Friedman’s test with Dunn’s method to compare with each trial. $P < 0.05$ was considered statistically significant.

The number of correctly identified bronchial segments was significantly higher in the third examination than in the first one [median (25–75th percentile), 4 (2–5) versus 2 (1–2); $P < 0.01$] (Online Resource 1, Fig. 2).

In conclusion, training based on use of the bronchoscopy simulator LM-092 has benefit for anesthesiologists.

References

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