

Association between Concomitant Mediastinoscopy and Postoperative Pneumonia After Pulmonary Lobectomy

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TO THE EDITORS:

We read with great interest the article by Yendamuri et al.¹ This retrospective study identified that mediastinoscopy may be associated with an increased risk of postoperative pneumonia after pulmonary lobectomy for patients with lung cancer. Herein, we would like to raise the following comments.

As shown in Tables 1 and 4 of the study by Yendamuri et al.,¹ significant differences exist between patients with and without mediastinoscopy in some aspects of patient demographics and characteristics, both in the Roswell Cancer Institute (RPCI) cohort and the National Surgical Quality Improvement Program (NSQIP) cohort, including age, sex, American Society of Anesthesiologists class, history of chronic obstructive pulmonary disease, smoking status, forced expiratory volume in 1 s, and operating room time (all $p < 0.05$), suggesting an imbalanced enrollment between the two groups due to these confounding variables. As a matter of fact, propensity score matching (PSM) analysis has generally been used in retrospective observational studies, which enables better balance between groups across all putative risk factors, and evaluates the extent of a balanced match in a measurable approach.^{2,3} Therefore, we suggest that PSM analysis be used here. In fact, a study published by Agostini et al. in 2017⁴ investigated a similar topic on postoperative pulmonary complications using this

method, with an opposite conclusion being drawn. We prefer the study using PSM analysis as it is more statistically convictive.

In addition, the number of variables on patient demographics and characteristics investigated in the NSQIP cohort seemed far from enough. For instance, lung function, smoking status, etc., were not provided, which are in fact very likely to influence the incidence of postoperative pneumonia after pulmonary lobectomy for patients with lung cancer.

In short, we suggest that PSM analysis be used in the present study for further confirmation of the real relationship between mediastinoscopy and postoperative pneumonia after pulmonary lobectomy for patients with lung cancer. Meanwhile, more details of variables on patient demographics and characteristics should be included in this study. Clarification regarding the abovementioned omissions would greatly solidify the conclusions of the study by Yendamuri et al.¹

DISCLOSURE Jiong-Jie Yu, Ju-Dong Li, and Tian Yang have no conflicts of interest to declare.

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