single-access (uniportal) video-assisted thoracoscopic surgery for peripheral pulmonary nodules in a complete ambulatory setting. *Ann Thorac Surg*. 2010;89:1625-7.

3. Chen KC, Cheng YJ, Hung MH, Tseng YD, Chen JS. Nonintubated thoracoscopic surgery using regional anesthesia and vagal block and targeted sedation. *J Thorac Dis*. 2014;6:31-6.
4. Kotemane NC, Gopinath N, Vaja R. Analgesic techniques following thoracic surgery: a survey of United Kingdom practice. *Eur J Anaesthesiol*. 2010;27:897-9.

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Reply to the Editor:

We thank Hung and colleagues for their letter concerning our paper of awake uniportal VATS. We are gratified to discover that they agree with us, especially coming from a group with such a large experience in awake procedures.¹

The first issue that Hung and colleagues point out is a safety issue related to a recognized difficult airway. The airway management is a big challenge for the anesthesiologist. Our patient had a history of previously treated nasopharyngeal cancer, which certainly made the nonintubated procedure appealing, but all the difficult airway predictors were negative (Mallampati score of 1, correct neck extension, thyromental space more than 4 finger breadths). As we systematically do, we had the emergency protocol ready with different sizes of double-lumen tubes. In this case, we administered a dose of an anticholinergic drug before the surgery to prevent secretions, administered nebulized 4% lidocaine, and also had prepared an adult bronchoscope to do an awake intubation. The surgery was undertaken on the left side, making it much easier to isolate because a

normal tube could be introduced in the right main bronchus and then afterward put it correctly with the endobronchial blocker from Cook (Cook Medical Inc, Bloomington, Ind) prepared with the bronchoscope. In our protocol we also are prepared, if emergency lateral decubitus intubation is very challenging, to introduce a chest tube through the incision and seal it with a transparent, sterile film connecting the tube to a water seal, so that we can quickly reexpand the lung to put the patient in the horizontal position to develop the emergency orotracheal intubation in less adverse conditions.

Referring to the second issue raised by Hung and colleagues, it is true that the thoracic epidural catheterization is technically demanding; however, in our hospital we have three full-time thoracic anesthesiologists with great experience. The use of different techniques, such as the paravertebral blockade, is not an option in this type of awake procedure because in our experience we have had incomplete sensory block. We have also read with great interest articles about nonintubated patients with local anesthesia²; in our short experience, however, it is difficult to achieve such a high level of sensory block with intercostal injections of local anesthesia, especially depending on patient morphotype, such as obesity. We agree with Hung and colleagues that the volume administered was too high, and it is important to highlight their comment that achieving a T4 to T6 block is usually enough for a single incision. We have therefore nowadays reduced the volume; because this was our first patient, however, we were very concerned about the pain and

may have needed additional thoracoscopic ports. The patient did not have any hemodynamic disturbances, because the volume was administered throughout the entire surgery rather in a single bolus. The pioneering way we are venturing is combining the awake nonintubated anesthetic approach with the minimally invasive approach we have nowadays, uniportal video-assisted thoracoscopic surgery. We have already performed several procedures (metastasectomies, pulmonary biopsies, lung cancer relapse surgery), and we have noticed that this approach is safe, minimizing airway and lung injuries. The uniportal incision has 2 advantages that stand out in our uniportal video-assisted thoracoscopic surgical lobectomy series of 40 cases and many other articles attest³: the bigger size relative to usual thoracoscopic ports allows a better and quicker lung collapse in the nonintubated patient, and the surgeon's view is improved and the instrumentation completely feasible.

Carlos Galvez, MD

Jose Navarro-Martinez, MD, DEAA

Sergio Bolufer, MD

University General Hospital of

Alicante

Alicante, Spain

References

1. Yang JT, Hung MH, Chen JS, Cheng YJ. Anesthetic consideration for nonintubated VATS. *J Thorac Dis*. 2014;6:10-3.
2. Katlic MR, Facktor MA. Video-assisted thoracic surgery utilizing local anesthesia and sedation: 384 consecutive cases. *Ann Thorac Surg*. 2010;90:240-5.
3. Rocco G. One-port (uniportal) video-assisted thoracic surgical resections—a clear advance. *J Thorac Cardiovasc Surg*. 2012;144:S27-31.

<http://dx.doi.org/10.1016/j.jtcvs.2014.04.042>