positive end-expiratory pressure in the ipsilateral lung. A broader use of this technique might answer most of our questions.

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REFERENCES

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Reply to Drs Courtois and Rubulotta

To the Editor:

We thank the doctors from St Mary’s Hospital for their letter. We believe that selective oxygenation of 1 segment would have been as effective if the patient were in the lateral position because the technique improves hypoxemia by apneic oxygenation. The technique is suitable for the treatment of hypoxemia in most VATS procedures and not just for those limited to upper-lobe surgery requiring lower-segment selective oxygenation. It must be emphasized, however, that segmental lung insufflation should be performed under direct vision of the thoracoscope to ensure that the field of the surgery is not impeded. There is certainly a small risk of insufflating a segment that is too close to the site of surgery, especially if the tracheobronchial anatomy is mistakenly identified by the anesthesiologist during insufflation or if there is aberrant anatomy. Hence, communication between the anesthesiologist and the surgeon is vital. The size of the double-lumen tube may limit the ease of mobility of the fiberoptic bronchoscope, but it should not be a problem if the same bronchoscope had been used to check the position of the double-lumen tube earlier and if it is well lubricated. A smaller bronchoscope that is suitable for checking the position of the smaller double-lumen tube should have been used in the first instance.

The selective insufflation was not maintained because there was almost immediate improvement in the patient’s saturation after the first insufflation, and it was not anticipated that the patient would desaturate again. However, the insufflation procedure was only repeated once when the need arose, and it was not required subsequently. The effects of improved oxygenation persist because hypoxic pulmonary vasoconstriction is potentiated after repeated lung collapse and hypoxic pulmonary vasoconstriction improves over time.

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Transesophageal Echocardiography in the Diagnosis of Hypoxia in the Intensive Care Unit

To the Editor:

We present an extremely rare case in which transesophageal echocardiography (TEE) provided immediate diagnostic information in a patient with hypoxia in the intensive care unit. It is noteworthy that a major problem of hypertrophic cardiomyopathy is dynamic left ventricular outflow tract (LVOT) obstruction. In dynamic LVOT obstruction, systolic anterior motion of the mitral valve occurs. Obstruction mainly appears in mid-to-late systole, resulting in marked turbulence in the outflow tract, which can be detected with echocardiography and color-flow Doppler.1

In addition, the evaluation of hypoxia or inability to wean from mechanical ventilation is an additional reason for the use of echocardiography in the intensive care unit. A cause of hypoxia in the setting of critical care is the opening of a patent foramen ovale with subsequent right-to-left shunting and arterial desaturation.2

In our case, volume depletion to a patient with a hypertrophied ventricular septum led to tachycardia, and the overall hemodynamic result was progressive hypotension because of dynamic LVOT obstruction (Fig 1A). Also, a ventricular septal defect was diagnosed during echocardiographic examination. More interestingly, “to-and-fro” flow through the septal defect was observed. During mid-to-end systole, the flow was between the LVOT and the right ventricle (Fig 1A), whereas at the end systolic period flow direction was reversed, thus resulting in arterial desaturation (Fig 1B and Video 1 [supplementary video is available online]).

The patient underwent cardiac catheterization, and pressures in the LVOT were measured. A gradual decrease in pressure in the LVOT because of dynamic obstruction was recorded. Additionally, the pressure drop was maximized at the end of systole.

It was considered that the significant decrease in pressure at the end of systole, which was induced by dynamic outflow obstruction, reversed the pressure gradient between the right and left ventricle. In other words, we showed “to-and-fro” or bidirectional flow through the ventricular septal defect with