Thoracoscopic Management of Pleural Effusions

To the Editor:

I read with interest the recent report by Harris et al (CHEST 1995; 107:845-52) on the thoracoscopic management of pleural disease. Thoracoscopy has gone through a series of major evolutions since the first description by Jacobaeus over 80 years ago. In fact, there are few other procedures that have been practiced for so long using so many different techniques by so many different medical specialists. It is important to point out that thoracoscopy can be performed using flexible1 or rigid scopes,2 with3 without video assistance4 under local,4 regional or general anesthesia with5 without selective one lung ventilation. The operators range from pulmonologists, general surgeons, pediatric surgeons to thoracic surgeons. In the article by Harris et al, unfortunately rigid pleuroscopy and video-assisted thoracoscopy were grouped together for reporting. I believe the two techniques, in essence, represent two different approaches altogether. Video-assisted thoracoscopy provides a magnified, panoramic view of the hemithorax with high resolution for details. The assistant can also take a more active role. Complicated therapeutic procedures can be performed with video-assisted thoroscopic surgery, which would be at best, difficult, and at worst, dangerous with rigid pleuroscopy. The reported overall complication rate of 20% including one death (from lung laceration) and at least 22 complications (bleeding, prolonged airleak, empyema, wound infection, entry to peritoneum, and biopsy pneumothorax) directly related to the procedure appear high compared with other series including ours.5 It would be helpful to stratify the two techniques when it comes to reporting of complications.

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REFERENCES

To the Editor:

We appreciated the comments by Dr. Yim. There are many different approaches and controversial issues regarding thoracoscopy. At our institution, as summarized in our report (CHEST 1995; 107:424-29), we used simple rigid thoracoscopy in 95% of the cases for pleural disease. Simple rigid thoracoscopy (without video assistance) must be differentiated from video-assisted thoracoscopic surgery (VATS). Simple rigid thoracoscopy is the use of a metal, illuminated scope placed into the pleural space for the purpose of diagnosing pleural disease or performing minor therapeutic maneuvers such as pleurodesis. Video equipment is not used. Operators can use a lighted mediastinoscope, thoracoscope, or laparoscope. The mediastinoscope offers a large working channel and provides for excellent visualization of the pleural space. It is true that video equipment may provide additional resolution and magnification. Its use is operator-dependent. It also, however, can add procedure time and cost. We do not believe video assistance is routinely necessary for the diagnosis and management of pleural disease. Other reports support this opinion.1 7 To our knowledge, there has not been an investigation to compare directly the two approaches.

Simple rigid thoracoscopy can be performed with the patient under local anesthesia in an endoscopy suite or under general anesthesia in an operating room. When performed under general anesthesia, a double-lumen endotracheal tube or bronchial blocker can be used for one-lung ventilation. This technique provides excellent exposure of the affected pleural cavity. It is unclear which anesthesia technique is best for "diagnostic" thoracoscopy. Several large series confirm its efficacy and safety under local anesthesia.1 2 5 Nevertheless, performing thoracoscopy in an operating room with assistance from the anesthesiologist, using single-lung ventilation, and the ability to move quickly to open thoracotomy has distinct advantages. But, the operating room approach is more time-consuming and expensive.

VATS, primarily used by thoracic surgeons, is a surgical technique used to potentially minimize the morbidity of an open procedure. We believe video assistance is primarily indicated for the more complex therapeutic and operative procedures in the chest. These procedures often require multiple thoracops, improved visualization, and precise instruments. The development of an endoscopic stapler that simultaneously cuts, staples, and limits air leaks was a major advancement for the VATS technique.

In our study of patients with pleural disease, 37 (20%) patients experienced at least one complication (15% patients with major complications). Given the small number of video-assisted procedures (5%) in our report, we cannot comment on the direct comparison between the two approaches. Neither age nor final diagnostic group (benign, malignant, idiopathic) were related to an increased risk for complications. There was no reduction in complications in year 1992 compared with the years 1987 to 1991. This suggests that the complication rate is probably not simply a manifestation of technical experience. Our complication rate was higher than those in previous studies, but this difference can be accounted for in several ways. First, our series reported on the use