Commentary: Minimally invasive thoracic surgery lobectomy: Truth versus hype

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Minimally invasive thoracic surgery lobectomy (video-assisted thoracic surgery [VATS] or robot-assisted thoracoscopic surgery [RATS]) is believed to provide smaller incisions, less pain, and quicker recovery. Many published studies demonstrate a 1-day shorter length of stay, less pain medication required, and similar oncologic outcomes compared with thoracotomy. So why not use minimally invasive thoracic surgery?

The literature in favor of minimally invasive thoracic surgery is riddled with selection and publication biases. Studies highlighting favorable VATS outcomes are frequently published but miss the true outcomes because of surgeon bias, flawed data-gathering, and study methodology. For example, 2 large VATS studies from our own institution missed a dozen life-altering and life-ending intraoperative complications that were subsequently published in a later study. A multi-institutional European study identified 46 such complications never published in previous studies from the involved institutions. Even the Society of Thoracic Surgeons database misses these specific complications, thereby ineffectively warning surgeons of potential dangers while toutting its benefits.

Minimally invasive incisions are smaller but not that much smaller. Thoracotomies today are not as large as in the past due to staplers. Some thoracotomies are even the same size as VATS or RATS incisions used to retrieve the lobectomy specimens from the chest. Pain is less but not that much less. Post-thoracotomy pain syndrome still occurs in both VATS and RATS. A large study from Memorial Sloan Kettering Cancer Center showed no difference in quality of life, and an enhanced recovery after surgery study showed no difference in length of stay. Nodal retrieval is related to surgeon effort, not the technique used. The hidden dangers of VATS and RATS to the unsuspecting thoracic surgeon operating on a difficult body habitus can be life-threatening to the patient. These dangers are also present in open procedures, but the consequences are even greater with limited access. The big picture should consider the risk of an unplanned pneumonectomy for 1 patient versus a day less in the hospital for a hundred others.

I have been an advocate for minimally invasive surgery more than 25 years now. I will continue to do so but not as fervently as I once did. Major complications are greatly underreported, and benefits are overexaggerated. Caution in every surgery is a must, and smaller incisions can never replace good judgment.

We all want what’s best for our patients, but subconsciously, academic notoriety, financial gain, competition for patient referrals, bravado, and a $63 billion-dollar robotic company can influence our practice. We must be aware of these influences to monitor ourselves and ensure that we provide optimal care. Complications happen. It’s part of the job. As a surgeon you need to be able to look yourself in the mirror and ask “did I do the right thing for this patient?” In the end no one will ever know… but you.

References


