

PREFACE

VATS and Uniportal VATS: a glimpse into the future

When it comes to perspectives in thoracic surgery, the future appears crowded with the conceptual and technological evolution of video assisted thoroscopic surgery (VATS). The idea behind VATS is to be able to duplicate with subcentimetric instrumentation and visualization devices—thereby complying with the least minimal invasiveness criteria—the same procedures thoracic surgeons were used to perform through open thoracotomies. One thing is for sure: in 2013, we are there. Major pulmonary resections as well as thymectomies, chest wall as well as esophageal procedures are nowadays safely done with VATS. VATS has permeated our thoracic surgical practice to the point that we consider VATS a back-up for even more minimally invasive techniques. Irrespective of generation gaps, surgical teams are adapting to this new era: there is a standard VATS expertise and experience in every group. However, we do also have dedicated VATS lobectomists as well as VATS thymectomists and we increasingly mobilize the esophagus thoracoscopically. There is no doubt that VATS (along with robotic thoracic surgery) represents the highest expression of thoracic surgical skill in the current scenario. But where do we go from here?

Once again, we can learn from the past and especially from the tuberculous era. Like with the Jacobaeus instrument used to effect pneumonolysis, the Singer thoracoscope was originally devised to accommodate multiple functions and instruments through the same port incision. Nowadays, uniportal VATS relies on the placement of the fulcrum of the operative instruments inside the chest and on the use of articulating instruments to address the surgical target. From multiple, needlescopy incisions to a single 2.5 cm VATS port the evolution seems natural. Yet, the approach to the intrathoracic structures is radically different. Albeit effective, multiple port VATS forces the surgeons to an unnatural eye to hand coordination compared to what they are used to in open surgery. The sagittal, caudo-cranial approach of uniportal VATS amends this problem by letting the surgeon work along a plane he/she is mostly accustomed to in open. In addition, articulating graspers and endostaplers contribute to avoid interference of the thoracoscope and the instrumentation.

In the future, as experience accumulates among the centers adopting the uniportal approach, we will understand more on the oncologic validity of single port procedures as well as the reduction of postoperative morbidity. The next step in single port might be represented Natural Orifice Surgery which is already moving forward in other specialties. Also, it is envisaged that technological refinements will possibly make uniportal robotic surgery an appealing alternative to conventional open surgery. Needless to say, education will become crucial to flatten the learning curve of future generations of minimally invasive thoracic surgeons for these procedures. This special issue of the Journal of Thoracic Disease is meant to draw a line on the status quo of VATS and uniportal VATS while we are all getting ready for the much awaited, exciting and intriguing future perspectives.

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