

The Very Experienced Time-honoUred Surgeons (VETUS) project

Luca Bertolaccini¹, Piergiorgio Solli¹, Roberto Crisci², Gaetano Rocco³

¹Department of Thoracic Surgery, Maggiore Teaching Hospital, Bologna, Italy; ²Division of Thoracic Surgery, Giuseppe Mazzini Hospital, University of L'Aquila, Teramo, Italy; ³Division of Thoracic Surgery, Department of Thoracic Surgical and Medical Oncology, IRCCS Istituto Nazionale Tumori, IRCCS, Pascale Foundation, Naples, Italy

Correspondence to: Luca Bertolaccini, MD, PhD, FCCP. Department of Thoracic Surgery, Maggiore Teaching Hospital, Largo Nigrisoli, 2 40133 Bologna, Italy. Email: luca.bertolaccini@gmail.com.

Abstract: Senior surgeons who completed their formal surgical training before the video-assisted thoracoscopic surgery (VATS) lobectomy era have had more experience with lobectomy via thoracotomy while their thoracoscopic training background contrasts from younger surgeons. However, this does not seem to have an unfavourable effect on their performance. Despite the literature recognising the critical points of influence of the learning curve for resident surgeons, limited data are focusing on the incremental performance of VATS lobectomy by senior surgeons. The Very Experienced Time-honoUred Surgeons (VETUS) project aims to understand this trend in the VATS group and to introduce an approach to the VATS lobectomy involving senior surgeon. The VETUS project is based on a self-assessment program where the senior surgeon (independently and in complete anonymity) follows a 1-year approach to training in VATS lobectomy. At predefined time intervals, the surgeon will be called to evaluate his performance according to a number of variables such as the choice of VATS lobectomy indications, the number of the port used and length of utility incision, time spent in dissecting the hilar structures and the overall percentage of VATS lobectomy performed in 1 year compared to open. The self-assessment of the VETUS project is a unique opportunity to define the path of a systematic approach to training outside the traditional modalities with the ultimate aim of supporting quality of standardised VATS lobectomy throughout the country.

Keywords: Lung cancer; video-assisted thoracoscopic surgery (VATS) lobectomy; seniority; learning curve; self-assessment

Received: 06 December 2017; Accepted: 21 December 2017; Published: 04 January 2018.

doi: 10.21037/jovs.2017.12.21

View this article at: <http://dx.doi.org/10.21037/jovs.2017.12.21>

Introduction

Senior surgeons who completed their formal surgical training before the video-assisted thoracoscopic surgery (VATS) lobectomy era have had more experience with lobectomy via thoracotomy while their thoracoscopic training background contrasts from the younger surgeons. However, this does not seem to have an unfavourable effect on their performance. Despite the literature recognising the critical points of influence of the learning curve for resident surgeons, limited data are focusing on the incremental performance of VATS lobectomy by senior surgeons. In fact, VATS approach offers inimitable teaching contests at the operating bed, because the mentor has

less occasion than during an open procedure to intervene in an ongoing surgical operation. During thoracotomy as the effort of the procedure changes, the operator and assistant roles could be interchangeable between mentors and resident. Conversely, during VATS lobectomy, the role of the surgeon and the assistant were much more rigidly determined by the side of the table where the operator stands and the specificity, the configuration, and the placement of the instrumentation. On the other hands, senior surgeons were more comfortable to complete a problematic case with open anatomy and thoracotomy techniques and less comfortable in VATS (1).

Surgeons' competency is critically influenced by their primary education and the quality of the training program.

These programs represent a priority for developing country health systems (2), in environments where often adequate training is a relevant cost factor. In public healthcare systems based on reimbursement policies, the expenses related to training may be denied coverage. As a consequence, the costs of surgical training are perhaps, even today, a primary cause for limited training efforts. The costs may be responsible for more decrease of tutorial assistance in case of an augmented competition of the healthcare. Therefore, a remarkable issue is due to the missed training opportunities for senior surgeons. In the past decades, in almost all industrialised countries, healthcare has become at any rate a competitive market, economic disadvantages for teaching institutions will decrease the training capacities (3).

How assess the seniors learning curve for VATS lobectomy?

The credentialing process demands that the thoracic surgeon meet universally recognised standards of practice. Privileging should be based on competence and centred on continuous quality improvement. The responsibility for guaranteeing that a surgeon has acquired the appropriate training and mentorship in the acquisition of new technological skills lies with the practitioner and the hospital where practices (4). Knowledge, decision-making ability, communication and technical skills were involved in the surgical competence. Checklist and Objective Structured Clinical Examination (OSCE)-type scales for evaluation of surgical skills are efficient and unswerving methods of assessing dexterity. To decrease the effects of the patient's variability in the assessment process, the tools for assessing the surgical skills were advanced. Many points should be evaluated when selecting proper models for evaluation of surgical skills. Is the task effective? Can the task correctly distinguish between experienced, intermediate and novice surgeons? Is there a maximum or bottom effect? Is the task too easy/complicated? Therefore, the subjects perform well/poorly? Is the task too complicated, so that even skilled surgeons may perform poorly, making discernment within the control group impossible? Could we assess the skill be isolated from the task? Consequently, the question is not whether a task is valid, but whether it is correct for our group of subjects. Evaluations of surgical skills have many potentials practises beyond the ability evaluation. The development of longitudinal analysis and formative feedback could be

led by repeated examinations of technical performance during training. The longitudinal analysis could enable a helpful evaluation of the performance, allowing the highlight and the correction of the possible deficiencies with targeted training specific. This could be used within a training schedule to control the progress or the repetition requirement (5). Privileging to perform a new procedure should not be based exclusively on the numbers of procedures performed but on the evaluation of knowledge and skills and outcomes of surgical care. The educational experience should be transparent and include verification of knowledge acquisition, safety, skill assessment, monitoring of outcomes, and contribution to a non-stop quality improvement program (4).

The Very Experienced Time-honoUred Surgeons (VETUS) project

VATS for major pulmonary resections in early-stage pulmonary cancer are performed on average only in about 35% of potential patients. In recent years, the causes of such a delay in the narrow distribution of VATS lobectomy have been attributed to costs generated by VATS instrumentation or the absence of a case mix that would allow exposure to patients with early-stage lung cancer. A recent study points out, however, that the cardinal reasons that justify a considerable variability in clinical practice are the lack of preference for VATS by surgeons (6). On the other hand, in Europe, the educational attention towards senior surgeons (i.e., the ones who have practised thoracic surgery independently for at least 10 years) is lacking a defined and transparent path (7). The most senior surgeons should be converted to the VATS lobectomy since the dissemination pattern of this technique is ongoing. On the other hand, the training of senior surgeons could be facilitated if Interpreted with degree of flexibility some of the major tenets of VATS surgery. For example, they could look through the utility port during some well-established phases of the procedure and only for many limited times in the steep part of the learning curve. The original 6–8 cm length of the utility thoracotomy may be acceptable. The number of ports, the case selection for VATS lobectomy, and, the overall percentage of VATS lobectomies per year could be defined as a measure of progress in the learning curve (8).

The VETUS project aims to understand this trend in the VATS group (9) and to introduce an approach to the VATS lobectomy involving senior surgeon. The VETUS

project is based on a self-assessment program where the senior surgeon (independently and in complete anonymity) follows a 1-year approach to training in VATS lobectomy. At predefined time intervals, the Surgeon will be called to evaluate his performance according to a number of variables such as the choice of VATS lobectomy indications, the number of the port used and length of utility incision, time spent in dissecting the hilar structures and the overall percentage of VATS lobectomy performed in 1 year compared to open. From the set of results obtained at each time interval a final score will be extrapolated and its value measured to a ruler representing the range of possible actions to be taken based on the acquired performance. The number of the scale will correspond to an indication on how to continue training in VATS lobectomy. The VETUS self-assessment should be part of a more extensive and complete training program that includes wet lab, simulation, mentorship 1:1, room supervision or movie tutorials. VETUS can also be a useful tool for surgeons already introduced to VATS lobectomy with difficulty to move to a higher level of experience.

In conclusion, the self-assessment of the VETUS project is a unique opportunity to define the path of a systematic approach to training outside the traditional modalities with the ultimate aim of supporting quality of standardised VATS lobectomy throughout the country.

Acknowledgements

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

doi: 10.21037/jovs.2017.12.21

Cite this article as: Bertolaccini L, Solli P, Crisci R, Rocco G. The Very Experienced Time-honoUred Surgeons (VETUS) project. J Vis Surg 2018;4:2.

References

1. Kauvar DS, Braswell A, Brown BD, et al. Influence of resident and attending surgeon seniority on operative performance in laparoscopic cholecystectomy. J Surg Res 2006;132:159-63.
2. Souadka A, Naya MS, Serji B, et al. Impact of seniority on operative time and short-term outcome in laparoscopic cholecystectomy: Experience of an academic Surgical Department in a developing country. J Minim Access Surg 2017;13:131-4.
3. von Strauss Und Torney M, Dell-Kuster S, Mechera R, et al. The cost of surgical training: analysis of operative time for laparoscopic cholecystectomy. Surg Endosc 2012;26:2579-86.
4. Blackmon SH, Cooke DT, Whyte R, et al. The Society of Thoracic Surgeons Expert Consensus Statement: A Tool Kit to Assist Thoracic Surgeons Seeking Privileging to Use New Technology and Perform Advanced Procedures in General Thoracic Surgery. Ann Thorac Surg 2016;101:1230-7.
5. Datta V, Bann S, Aggarwal R, et al. Technical skills examination for general surgical trainees. Br J Surg 2006;93:1139-46.
6. Abdelsattar ZM, Allen MS, Shen KR, et al. Variation in Hospital Adoption Rates of Video-Assisted Thoracoscopic Lobectomy for Lung Cancer and the Effect on Outcomes. Ann Thorac Surg 2017;103:454-60.
7. Rocco G, Internullo E, Cassivi SD, et al. The variability of practice in minimally invasive thoracic surgery for pulmonary resections. Thorac Surg Clin 2008;18:235-47.
8. Rocco G. The impact of outliers on the mean in the evolution of video-assisted thoracoscopic lobectomy. Eur J Cardiothorac Surg 2017;51:613-5.
9. Vats Group. 2017. Available online: <http://vatsgroup.org/sito/index.php>