



Time to remind old good principles

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Introduction of video-assisted thoracic surgery (VATS) of anatomic pulmonary resection brought major changes to various technical aspects of dissection and management of elements of the hilum of the lung. Older techniques of how to manage pulmonary arterial and venous branches with ligatures or sutures were replaced by endostaplers, which theoretically made this technique easier and faster. However, complications occur also during the use of endostaplers as was described by Shimizu *et al.* (1). The authors analyzed mechanisms of injury of the pulmonary vessels with erroneous lifting and/or twisting of vessels with endostaplers. For older surgeons who gained their experience in the era before introduction of VATS, the conclusions of Shimizu *et al.* were nothing new—we have all been taught how to be extremely delicate during dissection of the branches of the pulmonary artery, how to avoid stretching vessels during ligation, avoid excessive force during securing sutures and how to eliminate lifting and twisting of the vessels, mentioned by Shimizu *et al.* With growing experience, minimally invasive thoracic surgeons intuitively learn to be more and more careful with management of pulmonary vessels, especially with pulmonary artery branches, which are exceptionally vulnerable. Such prudent strategy is invariably rewarded with lower and lower intraoperative complications rate.

The same principles how to manage pulmonary vessels correctly apply also to management of bronchi. Goffi *et al.* recommended to avoid stretching of the main bronchus during stapling because they recognized this maneuver as one of the factors leading to development of postoperative bronchial fistula (2). Although it was not analyzed by Shimizu *et al.*, but supposedly twisting, lifting and the other

erroneous movements may also lead to development of the bronchial fistula in the era of endostaplers, the same as it was with the use of staplers for open procedures (3).

Concluding, Shimizu *et al.* should be commended for reminding old good surgical principles which are the same valid for VATS as they were for open thoracic operations.

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Footnote

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