REFERENCES


eComment. Laser application on lung parenchyma

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We have read the important contribution by Kirschbaum and colleagues about the airtightness of lung parenchyma without a closing suture after atypical resection [1]. Laser resections might extend the indications for pulmonary metastasectomy [2]. Animal models might enhance the knowledge for daily clinical practice. However, we would like to comment on the limitations of the study. The authors state that lung metastases can be resected in case of absent lymph node metastases. In an ESTS survey, 64% of responding surgeons expressed their believe that the presence of clinically positive lymph nodes is a relative contraindication to pulmonary metastasectomy. However, only 55.5% of the surgeons perform mediastinal lymph node sampling and 13% complete mediastinal lymph node dissection at the time of pulmonary metastasectomy, whereas 32.2% of the surgeons perform any lymph node assessment during metastasectomy [3]. Thus, there is a lack of data confirming this hypothesis since lymph node assessment has not been routinely done in most studies.

The number of study objects are very low. It remains inappropriate to conclude that there is no need for closing suture after laser resection since there are no two groups comparing the airtightness with and without closing suture. The coagulation necrosis zone and airtightness might be influenced by the duration of laser application at a specific point on lung parenchyma. The authors do not state about their technique of laser application on lung parenchyma. The conclusions are not based on their own results. Laser induced coagulation necrosis might be the reason for immediate airtightness. On the other hand, repair of the coagulation might lead to permeability of the lung parenchyma leading to fistulas in the later course. Thus, long-term results would be of great interest.

We think that the above-mentioned concerns should be considered cautiously when the results of the study are interpreted. It would be great if the authors could address the above-mentioned issues in further experimental studies.

Conflict of interest: none declared.

References


eComment. New frontiers of pulmonary resections: possible usefulness of autologous adipose mesenchymal cells

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We read with interest the paper by Kirschbaum and colleagues about airtightness of lung parenchyma after pulmonary resections without closing suture using the Nd:YAG Laser LIMAX® 120 [1]. The authors performed pulmonary resections using laser technique in an animal model, without closing suture of the parenchyma defect.

We would like to add to the discussion a recent preclinical experience which demonstrated the possible usefulness of autologous fat tissue (AFT) in repairing injured lung after pulmonary resections [2]. In this study AFT improved wound healing and cell proliferation, indicating a trophic effect on both mesenchymal and epithelial cell types, without stimulating in vitro proliferation of a lung adenocarcinoma reporter cellular system (A549).

As a possible clinical application of these findings we would suggest the use of autologous adipose tissue for repair of the coagulation necrosis. This can be achieved by suturing an autologous adipose tissue flap to the lung parenchyma defect.

In our Institute the feasibility, safety and outcomes of AFT in this field are currently studied by ongoing clinical trials.

References
