The omentum has not only a mass effect but also has properties such as the ability to enhance neovascularization and to absorb exudates in the mediastinum [4]. The additional skin incision to harvest pectoralis major muscle flaps may lead to a more painful post-operative course than that with a median skin incision to harvest the omentum, which requires at most an incision just several centimeters longer than the initial sternotomy.

The study by Klesius and associates shows excellent clinical results; and I agree with them regarding the effectiveness of muscle transfer for treatment of mediastinitis. However, is their strategy one that is employed as the first surgical option? I would choose omental transfer with or without muscle flap transfer as a first strategy.

References


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Reply to the Letter to the Editor

Reply to Misawa

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The questions raised are indeed interesting and important. The authors have some personal experience with omental transfer themselves and think that your described strategy is excellent for patients suffering from severe retrosternal mediastinitis or who had undergone implantation of a vascular prosthesis which is potentially infected, but have almost normal bone material to close the sternum. In our patient population, we see in most patients suffering from deep sternal infection, involvement of the sternal bone itself with good retrosternal fibrous tissue protecting the heart from infection. In these cases our approach with mobilization of the pectoralis muscle is superior to omental transfer, as resection of the sternum is required and otherwise stability of the thorax is not achievable to the extent we demonstrated in our results.

Regarding the patient morbidity, the additional small incision at the right infraclavicular region does not cause significant pain or other clinical problems except some decrease in arm strength. On the other hand I have seen some abdominal problems following omental transfer including stomach atony and recurrent vomiting.

In summary the authors think the two approaches have to be applied individually to the patient depending on the underlying extent of infection.

Thank you again for your comment.

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Letter to the Editor

Necessity of needle wire localization during video assisted thoracic surgery for patients with solitary pulmonary nodule

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We would like to express our opinion on the article by Ciriaco and associates [1]; first of all we congratulate them for the results obtained in their study.

We know that for small and deep pulmonary nodules the localization techniques are necessary, and in 1999 Susuki et al. [2] established dimensions and depth of the nodules for which it is necessary for a localization’s technique. We think that preoperative localization techniques have some
negative aspects. First of all, the use of needle wire can provoke pneumothorax, haemorrhages into the lung, parenchimal damage or peri-nodule inflammation in a high number of patients [1,3]. We are sure that in the major number of cases these complications are non-symptomatic, but they can influence negatively the state of health of a patient and surgical approach, for example the peri-nodule inflammation can influence resection’s margins. Second, based on the international literature, the needle wire and the other preoperative techniques (vital dye and radio-guided) do not have a high percentage of localization, and there is no statistical difference in time between thoracoscopy more hook wire placement and thoracotomy [1]. Therefore, we never perform a pre-operative localization technique, like needle wire, and we prefer intra-thoracoscopic ultrasound [4]. For us, ultrasound is the most effective method to localize pulmonary nodules without side effects. Intra-thoracoscopic ultrasound is useful and has a great percentage of 100% of localization in our record of cases (13 cases) and also in other record of cases [4]. With intra-thoracoscopic ultrasound we can study the structures surrounding the nodule, like vessels, bronchi and lymph-nodes and the intra-thoracoscopic ultrasound help to choose resection’s margins. Finally, the intra-thoracoscopic ultrasound can give a histological finding of nodule, thanks to the different ultrasound pattern of the pulmonary nodules [4]. The incomplete pulmonary exclusion and the presence of a less quantity of air in pulmonary parenchyma help to localize the nodules, because the nodules have hypoechoic ultrasound pattern, however, the surrounding pulmonary parenchyma is hyperechoic [5]. The presence of a small amount of air in pulmonary parenchyma is useful to localize the pulmonary nodules. In experienced hands the localization with intra-thoracoscopic ultrasound is quick (12 min in our record of case) and less risk, without side effects related to this technique. The second positive aspect of ultrasound is the possibility to make an intra-operative scan of the lung, to find other nodules are not shown by thorax CT. Visualizing pulmonary lesions at ultrasound does not require complete collapse of the lung. Moreover, the ultrasound is applicable in patients with more than one nodule, while is difficult to position two or three needles. Finally, we would like to know what the authors of this work think about suture system and hook wire.

References

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Reply to the letter to the Editor

Reply to Carcoforo et al.

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Keywords: Pulmonary nodule; Video-assisted thoracoscopy; Hookwire

We appreciate the comments of Carcoforo et al. regarding our paper on ‘Video-assisted thoracoscopic surgery for pulmonary nodules: rationale for preoperative computed tomography-guided hookwire localization’. They highlight several points of discussion: first, they comment on the complications correlated with the positioning of hookwires. Most of the complications reported in the literature are minor and do not require treatment [1,2], and major events such as pulmonary venous air embolism are rarely reported [3]. In our experience the complication rate was 7.5% and none of the patients experienced severe symptoms or required invasive treatment that could modify the outcome of the surgical procedure. The outcome was not influenced either by the peri-nodular inflammation that might have occurred at the site of hookwire positioning since we always provided at least 1.5 cm of free margins on each side of the specimen, which was always confirmed by frozen section [1].

Among the various techniques to localize pulmonary nodules present in literature, hookwire positioning is reported as having a percentage of success close to 95% in contrast with a failure rate of around 13% of other techniques like injection of methylene blue or colored collagen [1,2]. Despite its high sensitivity, specificity and lack of complications, intraoperative ultrasound may...