Reply to the Letter to the Editor

Reply to Apostolakis and Baikoussis
There is no need to drain the excessive pleural fluid accumulation after pulmonary lobectomies

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Keywords: Pleural fluid; Chest tube; Pulmonary lobectomy

We thank Drs Apostolakis and Baikoussis for their comments and suggestions [1]. After pulmonary lobectomies, we recommend using two tubes only in patients in whom a higher incidence of haemorrhage is expected, as we implied in the conclusion section of our article [2]. Patients having dense pleural adhesions (who needed extrapleural dissection or not) or having bleeding diathesis or have undergone chest wall resection are expected to have increased haemorrhagic drainage after lobectomies. For this reason, we recommended two chest tubes in these patients.

We do not share the suggestions of Drs Apostolakis and Baikoussis about the necessity of two tubes in those operations when: (1) mechanical stapler is used to divide incomplete fissures, (2) there is suspicion of residual pleural space due to inability of remaining lobe(s) to fill the hemithorax and (3) there is increased pleural fluid secretion due to congestive heart failure, renal or hepatic insufficiency. In our opinion, there is no need to drain the excess transudative (or exudative) pleural fluid accumulated in patients with cardiac, hepatic or renal insufficiency in the postoperative period as we never drain such fluid accumulation in non-operative situations. We also have difficulty in understanding the necessity of two chest tubes when a parenchymal stapler is used during lobectomy. Indeed, staplers are used to decrease the parenchymal air leaks, and it does not increase it! In case of a suspicion of residual space after lobectomy, we think that a second chest tube will not add an advantage to prevent this problem. It may be considered if a patient has massive air leak, which cannot be controlled by a single drain.

In our study, preoperative characteristics of both groups were similar. Patients who had had bleeding diathesis have been excluded from the study (as explained in method section of our article).

References


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Letter to the Editor

Selective antegrade three-vessel cerebral perfusion: a technique to protect the brain and the lower body?

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Keywords: Hypothermic circulatory arrest; Cerebral perfusion; Brain protection; Lower body protection

We read with great interest the article by Miyamoto and colleagues, presented at the 22nd annual meeting of the EACTS 2008 [1]. They raised the interesting topic of different techniques (two- or three-vessel perfusion) for selective antegrade cerebral perfusion (SACP) during thoracic aortic surgery. In this context, they focussed on the impact of lower body perfusion during SACP. They speculate that additional perfusion of the left subclavian artery causes a significant amount of collateral blood flow into the lower body.

In the introduction section of the article, the authors try to convince the reader about the necessity of a three-vessel perfusion in cases of an incomplete circle of Willis. The insufficient circle of Willis is especially a problem in the context of a unilateral cerebral perfusion through the right axillary/subclavian artery, as it is often applied during thoracic aortic surgery [2]. The major concern of bilateral SACP is the steal phenomenon, which can be easily resolved by inserting a Fogarty catheter into the left subclavian artery [3]. The papers cited in the context of the article by Miyamoto and colleagues have focussed on descending thoracic stent grafting and carotid endarterectomy [1].

Unfortunately, the authors failed to provide data on the potential differences of the blood flow to the brain with two- or three-vessel SACP (e.g., near-infrared spectroscopy values). The idea of combining SACP with hypothermic circulatory arrest (HCA) was to allow moderate temperatures for the body and profound temperatures for the brain [4], not increasing the risk of visceral organ damage up to 60 min of HCA [5]. The idea of lower body perfusion techniques are appealing since this technique may allow even mild temperatures by continuously providing blood through the descending aorta or femoral artery; if this is necessary at a core temperature of 20 °C is questionable [1].

In their article, the authors raise the question about the real impact of collateral blood flow on end-organ perfusion. Since only 6.5% of the total SACP reaches the lower body, the effect seems to be negligible, especially compared to 5.3% in the two-vessel perfusion group. The method of blood flow measurement with blood collection via a suction tube is unreliable.

The tissue blood flow of the liver of only 50% of the study patients (22/43) is plotted and seems to increase during additional perfusion of the left subclavian artery, without giving information related to possible correlations of