Primary spontaneous pneumothorax: is resection of contralateral blebs indicated?

In ~50% of patients with primary spontaneous pneumothorax (PSP), contralateral blebs or bullae are present. In this prospective study, the question was asked whether elective treatment of asymptomatic contralateral blebs is effective in preventing contralateral occurrences.

Message
VATS is an effective treatment for contralateral blebs.

Methods
In a prospective study from May 2006 to June 2008, 86 consecutive patients with PSP were divided into three groups: group A (n=35), PSP without contralateral blebs who underwent unilateral video-assisted thoracic surgery (VATS); group B (n=35), PSP with contralateral blebs who underwent unilateral VATS; and group C (n=16), PSP with contralateral blebs who underwent bilateral VATS. High-resolution computed tomography (HRCT) was used to detect blebs or bullae. The study was not randomised: a bilateral procedure was offered without any persuasion to patients with contralateral blebs on chest CT. In every case treatment consisted of VATS with resection of blebs by endostaplers, followed by pleural abrasion.

Results
No significant differences were present regarding age, sex, smoking habits, body mass index, blood loss or postoperative pain. Operative time and length of stay were longer in group C, who had a bilateral VATS intervention. During follow-up, the incidence of contralateral pneumothorax in groups A, B and C were 2.9, 17.1 and 0%, respectively.

Conclusion
This prospective study showed that elective VATS treatment of contralateral blebs was effective in preventing a contralateral pneumothorax.

Editorial comment
Specific indications for surgical treatment of PSP remain controversial. With the introduction of VATS, a minimally invasive technique became available to treat PSP. Generally accepted indications for surgical intervention include recurrent and persistent PSP, bilateral pneumothorax and haemopneumothorax, and professions at risk such as aircraft personnel and divers. Recurrence rates for PSP are ~5% at 5-yr follow-up. In approximately half of patients, contralateral blebs or bullae are found on HRCT scanning. Should these be resected when they are asymptomatic? The present prospective study tries to answer this interesting question. Unfortunately, the study was not randomised and the decision to undergo a bilateral procedure was taken solely by the patients and their relatives. It is not clear why most patients chose not to undergo a bilateral intervention. As can be expected, operative time and length of stay were longer in group C, who had a bilateral procedure. In this group there were no contralateral pneumothoraces or ipsilateral recurrences, in contrast to a contralateral occurrence rate of 17.1% in the patients with contralateral blebs in group B, who underwent a unilateral VATS intervention only. So, in this study a bilateral procedure was effective in preventing a contralateral pneumothorax.

This paper certainly presents interesting data and conclusions on PSP, and adds to the ongoing discussion on the optimal treatment of patients with PSP.

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