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Who Actually Profits from Pulmonary Metastasectomy Operation? Retrospective Analysis of 12 Years

Pulmoner Metastazektomi Operasyonundan Gerçekte Kim Fayda Görüyor? 12 Yılın Retrospektif Analizi

To the Editor,

We read the article on pulmonary metastasectomy with interest (1). There are several issues on which we would like to comment. We would like to share our experience and current data with the readers.

1. Considering the study period, we understand that the preoperative radiological evaluation was not standardized. No data were given about the usage of PET-CT scan. Readers would like to know additional data about chest computerized tomography (CT): the type of CT, as well as the length of slice and the time period between CT and the operation. It is known that monitor evaluation may demonstrate 10% more metastatic lesions (2). Thus, before performing a pulmonary metastasectomy procedure, we routinely prefer to have a multidetector CT, with 0.6-mm collimation, within 1 week before the planned operation and to evaluate these images with a chest radiologist on the monitor. These images are performed for metastasectomy candidates, not for screening or follow-up purposes. For screening and follow-ups, we prefer to have 1-mm reconstruction maximum intensity projection.
2. A single lesion demonstrated with techniques mentioned above is the only indication for a VATS metastasectomy operation in our department. Otherwise, we think that palpation is a "must," and VATS metastasectomy may not be as efficient as an open procedure. In this series, readers would like to know the recurrence rate after VATS metastasectomy operations. Also, a comparative analysis would be interesting to demonstrate whether open resections are more effective or not. The rate of VATS metastasectomy was presented as 2% in the International Registry; meanwhile, it is higher (9%) in this series (3). We would like to learn the reasons for such a higher incidence of VATS metastasectomy in this cohort.
3. In this series, we have noticed that most of the resections are so-called "wedge resections". Considering the possible need for a future remetastasectomy operation, we strongly recommend increasing the number of precision incisions to preserve lung functions. Also, anatomic segmentectomy operations may be more economical compared to wide wedge resections. We would like to learn the reasons for which most of the operations were wedge resections in this series.
4. This study demonstrated decreased 2- and 5-year survival in patients who had mediastinal lymph node metastases. The authors indicated that they dissected the lymph nodes only when a pathological condition was detected preoperatively. However, performing a mediastinal lymph node dissection is recommended in the presence of epithelial tumors, preferably in gastrointestinal tumors. The mediastinal lymph node dissection was reported to be a good prognostic indicator and may be effective in deciding about the need for postoperative adjuvant treatment (4). In addition, it is not uncommon to find a metastatic lymph node in patients with sarcomatous lung metastases (5). Thus, we routinely dissect mediastinal lymph nodes in pulmonary metastasectomy operations when the primary tumor is gastrointestinal in origin, and we prefer mediastinal sampling in sarcomatous lesions.

We would like to thank the authors for sharing their experience with the readers and for having such nice results.

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Author Reply

Dear Editor,

You have correctly mentioned in your letter that the preoperative radiological evaluation was not standardized. It was 1) conducted by both our department and the oncology department; and 2) the usage of PET-CT screening was initiated after 2005, as pointed out in the "Methods" section, with a sensitivity and specificity of 72% and 80%, respectively (1). The routine 5-mm CT examination, performed preferably within the last 2 weeks up to the operation, has been used primarily to detect the "existence" of any metastatic lesions and not for the exact lesion count, as palpation is the best possible method to identify the precise number of metastases, which you have also stated. Multidetector CT and 0.6-mm reconstructive imaging will surely give a more precise result and even may eradicate the need for palpation, which unfortunately was not present at our institution (2).

The second point you have mentioned was the relatively high (9%) percentage of our VATS cases. The main indication for VATS was a solitary peripheral lesion with a high suspicion of metastasis, detected during the follow-up period of any extrathoracic primary malignancy, most of which were diagnosed definitely after the resection. We have not compared the survival or recurrence rates between VATS patients and thoracotomy patients, as recommended in your comments; but, a recent meta-analysis has shown no significant difference of long-term outcomes in between them and found VATS to be equivalent to open thoracotomy in terms of overall and recurrence-free postoperative survival (3).

Most of our resections were actually "wedge" resections, performed manually or by endoscopic staplers. We have chosen this method for patients with adjacent multiple metastases and/or for suspicious multiple millimetric lesions within a localized parenchymal area in order to avoid parenchymal laceration and air leakage.

The last issue of your letter concerns the mediastinal lymph node dissection. N2 involvement is not common (<30% in our cohort) in patients undergoing pulmonary metastasectomy operation but is certainly a negative prognostic factor for survival (4). Since some authorities do not accept "sampling" and advocate "radical dissection," we have not mentioned the routine 3-station sampling we performed during open thoracotomy and VATS operations. As you have also indicated, mediastinal lymph node examination is essential for deciding the need for adjuvant or second-line chemotherapy and is especially required by our oncologists, as well.

We would like to thank you for your interest and kind encouraging comments for our article.

With regards,

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