Is limited surgery recommended if nodal involvement cannot be ruled out?

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We have read with interest the paper by Hattori et al. [1] about appropriate surgical strategy for sub-centimetre solid lung cancer. Indications for limited surgery of <1 cm tumours have become of greater concern in thoracic surgery, but, to date, there has been no definitive answer on the proper parenchymal resection extension (lobar, sub-lobar, non-anatomical) and on the correct nodal management (single biopsy, sampling, complete dissection). The authors have correctly distinguished <1 cm tumours in solid and non-solid nodules, and focused their attention on solid tumours (both part-solid and pure-solid). Their results are interesting since they have statistically determined that, even in case of <1 cm nodules, nodal metastases are frequently observed if the tumour has a pure-solid appearance and SUVmax >2.5. These two factors also predicted survival. However, we have many concerns regarding the material and methods and, the conclusions.

Patients in both pure-solid and part-solid nodule groups underwent different kinds of surgical resection (lobectomy, segmentectomy or wedge resection) but the criteria adopted to determine surgical strategy are not reported. The authors only report that all patients had cN0 lung cancer. We think that such a dishomogeneous population could be a relevant bias in determining survival.

Also regarding nodal staging management, patients enrolled underwent very different procedures. In fact, some of those underwent complete dissection or nodal sampling, and, more surprisingly, 31% of candidates did not receive any nodal biopsy at all. The authors reported that, in some cases, this surgical strategy was determined by the patients’ poor general conditions. In our opinion, these criteria affect parenchymal resection extension, and not nodal dissection.

As for the conclusions, the authors do not explain if limited surgery is recommended for <1 cm solid nodules, and the only suggestion is intraoperative nodal evaluation to prevent loco-regional failure in pure-solid, SUVmax >2.5 tumours. We think that two considerations are mandatory. First of all, nodal involvement could probably be excluded only in selected pure-ground-glass opacity (GGO) tumours, if we always perform and suggest nodal sampling in every other type of neoplastic pulmonary nodule. Secondly, if nodal involvement is suspected, oncological radicality is not guaranteed by limited parenchymal resection because of incomplete intraparenchymal lymphatic pathway resection [3].

We conclude that limited surgery should be considered as a second choice when lobar resection is not feasible, and nodal sampling should be performed in every patient affected by non-small-cell lung cancer.

REFERENCES


Reply to Baisi et al.

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We are really grateful to the letter by Baisi et al. [1] regarding our recent study [2], and we are delighted by their thoughtful insights into our results.

Appropriate indication of sub-lobar resection for small-sized lung cancers has been discussed frequently and is still a controversial issue. One of the most important indications for sub-lobar resection is the absence of nodal involvement; that is, p-N0. In the current study, clinically significant predictors of pathological nodal disease were identified based on the findings on thin-section computed tomography (CT) and positron emission tomography (PET) scan in patients with c-N0 sub-centimetre lung cancer [2].

As noted by Baisi et al., patients enrolled underwent different procedures regarding nodal staging management, which may be due to the retrospective nature of this study. Therefore, we selected 49 of c-N0 patients who underwent intraoperative nodal assessment to evaluate significant predictors of pathological nodal disease in both univariate and multivariate analyses. Furthermore, regarding the operative modes, some of the sub-centimetre lung cancer patients with part-solid nodules underwent wedge resection without nodal assessment, if the patients showed GGO-dominant appearance on thin-section CT scan, that is, consolidation tumour ratio less than 0.5, due to the excellent prognostic, minimally invasive and possible absence of pathological nodal involvement based on the result of prospective study conducted in Japan [2,3].

However, there has been no definitive answer on the appropriate operative modes even in sub-centimetre lesions (i.e. lobar, sub-lobar, non-anatomical). As an opinion by Baisi, nodal sampling even for sub-centimetre lung cancer except for pure-GGO lesions, is a mainstay when oncological radicality is not guaranteed by limited resection. With regard to this issue, the results of two important prospective trials conducted in Japan, the JCOG0804/WJOG4507L trial evaluating the feasibility of wedge resection for clinical T1a non-invasive adenocarcinoma, and the JCOG0802/WJOG4607L [4] trial evaluating the feasibility of segmentectomy for clinical T1a NSCLC with a radiologically part-solid or pure-solid appearance should help thoracic surgeons decide whether or not to apply limited resections for selected patients who are at good risk. However, what we could conclude from this study is that a thorough intraoperative evaluation of lymph nodes is mandatory to prevent loco-regional failure when adopting limited surgery especially for radiological pure-solid sub-centimetre lung cancer with a high SUVmax level, because lymph node metastasis is frequently observed in these populations, regardless of how small it is [2,3]. In addition, for the patients with part-solid or pure-solid sub-centimetre lung cancer with low SUVmax level, limited resection could be an option because of the possible absence of nodal metastasis. Owing to the less invasive nature and good prognosis in lung cancer patients with GGO component and rapid increase of opportunities to detect multiple lung cancers, a study for identifying feasible candidates of sub-lobar resection in these populations is crucial in the future. Further studies...
regarding the appropriate operative strategies for sub-centimetre lung cancers are warranted.

Finally, we hope that our study will pave the way for a more refined treatment strategy in dealing with sub-centimetre lung cancer.

REFERENCES


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