

Incomplete intrapulmonary lymph node retrieval after routine pathologic examination of resected lung cancer

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In their paper entitled “Incomplete Intrapulmonary Lymph Node Retrieval After Routine Pathologic Examination of Resected Lung Cancer” (1), R A. Ramirez and colleagues advocate a special pathologic examination (SPE) protocol for dissection and examination of lung resection specimens in order to make an inventory as complete as possible of lymph nodes (LN) removed with the resected lung.

They conducted a case-control study in which were examined by (SPE) protocol all lobectomy (or greater) specimens obtained after curative-intent resection of non-small cell lung cancer (NSCLC) in 73 patients who underwent previous routine pathologic examination (RPE). They retrieved additional LNs in 66 (90%) of them and discovered metastasis in 56 (11%) of 514 retrieved LNs from 27% of all patients.

They found unexpected LN metastasis in six (12%) of 50 node-negative patients. Three other patients had undetected satellite metastatic nodules. Pathologic stage was upgraded in eight (11%) of 73 patients and four of them became eligible for postoperative adjuvant chemotherapy. Thus, they demonstrated that current routine RPE failed to identify a majority of LNs present within the lung, some of them containing metastasis, and potentially lead to the risk of misjudging accurate stage identification, prognostication, and postoperative treatment selection.

So doing, R A. Ramirez and colleagues draw attention on an important point in the modern treatment of NSCLC which is the accuracy of the LN evaluation. They limited their purpose to the importance of the quality to be required by the pathology examination of resected specimens provided by the surgeon and more particularly focused on the accurate examination of intrapulmonary (N1)

nodes which depends primarily on pathology practice. They excluded from their purpose examination of mediastinal LNs which depends on surgical practice. However, best N1 research pathology practice may improve NSCLC treatment by better selecting adjuvant therapy as they suggested, but all the disease is removed and the efficacy of surgery not compromised. On the contrary, inappropriate examination of mediastinal LNs may jeopardize the final results and as complete lymphadenectomy as possible is mandatory, and the surgeon practice cannot be avoided nor separated.

In a case-control study, G Massard, and colleagues (2) compared accuracy of sampling versus mediastinal lymphadenectomy in patients with NSCLC: in 208 consecutive patients, the surgeon first sampled the main LN stations, and subsequently performed a radical mediastinal dissection.

LN status (dissection) was N0 in 113, N1 in 35, and N2 in 60 patients. N2 disease concerned a single node in 16, a single node station in 19 and multiple levels in 25. Both N1 and N2 nodes were diseased in 36 patients. Sampling adequately recognized N2 disease in 31 patients (52%). Multiple level N2 was accurately identified in 10 patients (40%). Resection based on sampling would have been incomplete with tumor left in the mediastinum in 53 patients (88%), leading to the conclusion that radical mediastinal dissection was a mandatory adjunct to NSCLC lung resection with curative attempt.

Studies' demonstrating that prognosis is improved when more LNs are dissected are currently available, and Sawyer and colleagues (3) reported in 1999, that a greater number of dissected N1 nodes (more than ten LN removed) was a

factor independently associated with an improved outcome in 107 patients with complete resection of N1 disease. They suggested that, if future studies confirmed that the extent of nodal dissection correlates with prognosis, randomized trials concerning adjuvant therapy should require that patients undergo complete dissection. It would no longer be appropriate to study patients who are high risk by virtue of having a few nodes removed.

Gajra and colleagues (4) reviewed 442 patients with N0 disease and studied the impact of total number of LN dissected and of LN stations explored on rough and disease-free survival: 5-year survival rates were 47.3% and 79.1% for patients with less than 4 and more than 9 nodes harvested, respectively. Considering the number of LN stations explored, survival was 55.8% for 1-2 stations and 87.6% for more than 4 stations. The authors concluded that the more nodes are resected, the more likely is the reality of the pStage and that, on the contrary, if few nodes are harvested, there is an obvious risk of missing involved mediastinal LN.

Since Gajra and colleagues (4) publication, many other papers have flourished on that topic but none of them unhappily included the seriousness of pathology practice on the resected specimens and thus, potentially failed to recognize some pN1. It is likely that cumulating both best practices might be a key factor to improve stage

identification, prognostication, and postoperative treatment selection in the management of NSCLC, and that Ramirez and colleagues' take-home message should also be interpreted in that way.

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