



RADICALITY OF LYMPHADENECTOMY: VATS VS THORACOTOMY. RESULTS FROM THE SPANISH VIDEO-ASSISTED THORACIC SURGERY GROUP

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Background

Lymph node involvement in patients with surgically treated lung cancer remains a determinant prognostic factor and guides the indication of adjuvant treatment (1). An accurate intraoperative nodal staging is crucial for assigning a pathological nodal (N) category with certainty (2-5).

Since the introduction of video-assisted thoracic surgery (VATS) for anatomical resections in patients with lung cancer, many authors have shown its feasibility and safety, with an improvement in patient's quality of life and comparable oncological outcomes (6-7). Regarding lymph node assessment, VATS has achieved similar results in terms of number of lymph nodes resected when compared with the open approach (8-9), even though many authors have observed a higher proportion of nodal upstaging at thoracotomy (10-12).

Characteristics of GEVATS database

The Spanish Video-Assisted Thoracic Surgery Group (GEVATS in its Spanish acronym) database of the Spanish Society of Thoracic Surgery (SECT in its Spanish acronym) is a national database of all anatomic resections (regardless of surgical approach) that was designed to know the implementation of VATS in our country and collect pre-, intra- and postoperative data for further analysis. All thoracic surgery departments of the Spanish National Health System were invited, and 33 (61%) out of 54 departments participated.

Study design

This is a prospective, observational and multicenter study of all anatomic pulmonary resections for lung cancer conducted from December 20th 2016 to March 20th 2018 (15 months) registered in the GEVATS database.

Objective

To analyze differences in intraoperative nodal assessment in patients undergoing lung cancer resection by thoracotomy and video-assisted thoracoscopy (VATS)

Methods

Main surgical, clinical and oncological variables related with lymphadenectomy were compared according to surgical approach. Corresponding tests for homogeneity were performed. Multiple logistic regression analyses were used to determine the odds ratio (OR) and 95% confidence interval (95%CI).

Results

After exclusions, 2532 patients were analyzed. Systematic nodal dissection (SND) was performed in 65%, with a median of resected/sampled lymph node (LN) of 7 (IQR 4-12) and pathologic (p) pN2 and uncertain (u) pNu rates of 9.4% and 28.9%, respectively.

At multivariate analysis, the following were associated with thoracotomy (OR; 95%CI): SND (1.4; 1.07-1.8; p=0.014), staging mediastinoscopy (2.8; 1.83-4.22; p<0.001), tumor >3cm (1.8; 1.46-2.24; p<0.001), central tumor (2.5; 2.03-3.15; p<0.001); pN1 (1.5; 1.12-2.13; p<0.008), pN2 (1.6; 1.11-2.26; p=0.011), lower FEV1 (0.9; 0.98-0.99; p<0.001) and squamous cell carcinoma (1.3; 1.04-1.68; p=0.022). Nodal upstaging was significantly higher in the thoracotomy group. Complication rates of SND and no SND were similar.

Conclusions

Thoracotomy was associated with a more thorough lymphadenectomy in GEVATS. Therefore, intraoperative lymph node evaluation performed at VATS should be improved to have better prognostic information and more solid grounds to indicate adjuvant therapy

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