Long-term outcomes of selected patients with operable IIIA-N2 non-small cell lung cancer receiving upfront surgical resection

Objective: Stage IIIA-N2 non-small cell lung cancer (NSCLC) represents a heterogeneous group, which requires multimodality regimens and becomes a formidable challenge to cure. Our previous study confirmed the feasibility and benefits of upfront surgery followed by adjuvant therapy in selected patients with IIIA-N2 NSCLC. This study aimed to report the long-term outcomes of this special group with IIIA-N2 disease.

Methods: Selected cases with IIIA-N2 (T1-2N2) NSCLC receiving upfront surgery from August 2006 to December 2013 were enrolled. Kaplan-Meier curves and Cox proportional hazard analyses were performed to reveal the survival effect of variables.

Results: A total of 475 patients were finally enrolled. With a median follow-up time of 108 months, 5- and 10-year overall survival (OS) rates were 42.2% and 27.7%, respectively, whereas 5- and 10-year progression-free survival (PFS) rates were 21.3% and 14.9%. Overall, 445 patients (93.7%) underwent R0 resection. R0 resection was associated with improved PFS and OS, compared to R1/R2 (P = 0.041 for PFS, P = 0.015 for OS). Patients with single-station N2 had significantly better PFS and OS than those with multiple-station N2 (P < 0.001 for PFS, P = 0.002 for OS). After surgical resection, adjuvant chemotherapy or radiochemotherapy was significantly correlated with prolonged PFS and OS compared to those without any treatment. However, there is no significant difference in PFS and OS between chemotherapy and radiochemotherapy (P = 0.915 for PFS, P = 0.287 for OS).

Conclusions: We presented favorable long-term outcomes in selected patients with stage IIIA-N2 NSCLC treated with upfront surgery followed by adjuvant chemotherapy or radiochemotherapy, shedding a light on the optimization of clinical management and treatment in selected patients with IIIA-N2 NSCLC.