Materials and methods

The phase II 9901 trial of the Spanish Lung Cancer Group recruited 136 patients from 19 centres with stage IIIA-N2 NSCLC proven by mediastinoscopy and selected T4N0–1 tumours demonstrated by magnetic resonance imaging or endoscopic oesophageal ultrasound. Patients were treated by induction chemotherapy with a cisplatin-based triplet followed by surgical resection. Complete resection was obtained when both surgical margins and the highest mediastinal node were free of tumour. Prognostic factors for long-term survival were determined.

Results

Stage IIIA-N2 NSCLC was present in 69 patients and stage IIIB in 67; 124 patients completed three cycles of induction chemotherapy. Seven patients were withdrawn owing to toxicity or early death. Overall response rate was 56%. A total of 90 patients underwent surgical resection including 23 patients with stable disease. The complete resection rate was 69% of patients eligible for surgery and 48% of all assessable patients. Pneumonectomy was necessary in 41%. Postoperative mortality was 7.8% and there were major complications in 30% of patients. Median survival time (MST) was 16 months with no significant difference between stage IIIA and IIIB disease. For completely resected patients (n=62), MST and 5-year survival rate were 49 months and 41%, respectively; for incompletely resected patients (n=13), 13 months and 12%; and for unresectable patients (n=15) 17 months and 0%. Five-year survival rate was 32% for 33 completely resected stage IIIA patients and 53% for 29 completely resected stage IIIB patients. Multivariate analysis showed complete resection, clinical response and age <60 years to be significant factors for overall survival.

Conclusion

In selected patients with clinical stage IIIA-N2 and IIIB NSCLC, long-term survival can be obtained when a complete resection is accomplished after induction chemotherapy.

Editorial comment

The role of surgical resection in patients with stage IIIA and IIIB NSCLC remains controversial. In the recent INT 0139 and EORTC 08941 phase III trials, there was no difference in overall survival in patients with proven stage IIIA-N2 NSCLC treated by induction therapy who were subsequently randomised between surgery and radiotherapy [1, 2]. However, prognosis was better in patients with mediastinal downstaging who could be treated by lobectomy to obtain a complete resection.

In the present study, the real denominator is not known, but it is clear that the patients included were a highly selected group. Strict criteria for complete resection were used, including that the highest mediastinal lymph node had to be negative. The rate of pneumonectomies was high, both in stage IIIA and IIIB disease. Seven patients (7.8%) died post-operatively as a result of acute respiratory distress syndrome, empyema, pneumonia and cardiac failure. All seven had undergone pneumonectomy, six on the right side, underscoring the high mortality of right pneumonectomy after induction therapy, especially when chemoradiotherapy is administered as shown in the INT 0139 trial [2]. Although the present study was not randomised, it shows that impressive long-term survival may be obtained in selected patients with stage IIIA and IIIB NSCLC in whom complete resection is obtained after induction therapy.

References