Induction chemoradiotherapy and sleeve lobectomy: present status and future trend

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We read with interest the paper by Gómez-Caro et al. about sleeve lobectomy (SL) after induction chemoradiotherapy (CRT) [1] based on their notable experience of 79 cases submitted to curative SL in the last 5 years, 26 of whom underwent SL after CRT. It is remarkable that SL is the procedure of choice for 13% of all patients treated surgically at their institution for lung cancer. The authors have discussed some particular topics that are worth emphasizing.

Sleeve lobectomy has historically been an established alternative to pneumonectomy in patients with impaired pulmonary function. Despite the respiratory data for each case not being labelled, in only 14% of patients was pneumonectomy (PN) precluded because of functional reasons. The authors’ decision to perform SL irrespective of the possibility for PN is consistent with the practice of different prestigious institutes based on the experience that parenchymal sparing procedures and PN are equivalent in terms of oncologic efficacy [2]. These experiences encourage the use of SL with the intent to reduce the rate of PN, because the authors reached the remarkable goal of only 23 of 597 patients (4%) undergoing PN for central tumours.

In a recent paper reviewing 199 cases over 25 years [3], Rea et al. concluded that preoperative radiotherapy is inadvisable before SL, because it is a significant risk factor for perioperative mortality (P = 0.003) and anastomotic complications (P = 0.04). This introduces the second interesting topic. In the series of Gómez-Caro et al., all clinical N2 patients were selected for CRT, and the main aim of the study was to assess the efficacy of SL after induction CRT. Their data are encouraging, reporting overall no bronchial stenosis and only one bronchial fistula, with no significant differences between the CRT and non-CRT groups (P = 0.042). Our opinion is that this was probably due to the excellent surgical technique in performing a tension-free bronchial anastomosis and to the systematic use of a muscle flap around the suture. Our experience confirms the efficacy of bronchial covering, which we carry out routinely in all SLs, regardless of induction CRT. However, should be noted that most of the patients (22 of 30) in the series of Gómez-Caro et al., as in other reported series [4], received a traditional preoperative radiation dose (45 Gy), while only eight patients received a higher dose (60 Gy). In 2009, Cerfolio et al. [5] presented an interesting series, concluding that pulmonary resection after concurrent chemotherapy and high-dose (60 Gy) radiation for non-small cell lung cancer and N2 is safe and may provide increased survival. This suggests that further studies are needed in order to provide a better definition of the maximal therapeutic induction radiation dose allowed before SL.

The last topic concerns long-term outcomes. Gómez-Caro et al. report an excellent long-term survival and a low rate of local recurrence despite persisting N2 at postoperative histology in 5 of 30 (16%) patients [1]. This underlines that after CRT restaging is still an unsolved problem, but it also suggests that the effect of pathological N2 disease on survival is not so clear and must be better defined.

We conclude by congratulating the authors on their brilliant results concerning the feasibility of performing SL safely after induction CRT.

REFERENCES