



Editorial

Lung Transplantation: SEPAR Year 2013[☆]

Trasplante pulmonar: Año SEPAR 2013

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“SEPAR years” aim to promoting different topics of particular interest in an area of respiratory medicine every year. The Spanish Society of Pneumology and Thoracic Surgery (SEPAR) has devoted the year 2013 to lung transplantation (LT) and has designed activities targeted to professionals, patients, and the general population in order to foster its development and raise the awareness of LT reality. Archivos de Bronconeumología has decided to join this initiative and has, therefore, lent its pages to a series of review articles in which renowned authors, national leaders in LT, have discussed relevant aspects.

In Spain there are seven teams in charge of LT, who work in University hospitals and are geographically distributed as follows: Vall d'Hebron Hospital (Barcelona), La Fe Hospital (Valencia), Reina Sofía Hospital (Córdoba), A Coruña Hospital Complex, Marqués de Valdecilla Hospital (Santander), and Doce de Octubre and Puerta de Hierro-Majadahonda Hospitals (Madrid). Currently, cardiopulmonary transplantations are also performed in the last center as well as in Valencia and Cordoba hospitals, whereas pediatric transplantations are carried out in the center located in Barcelona and Córdoba. In all seven centers, a total of 200–250 interventions are performed each year,¹ in patients coming from anywhere in the country. Such a figure is essentially limited by the availability of organ donors. Far from being an exception, LT has become a real example in our health system, intimately related to the National Transplant Organization, whose activity has enabled our health system to rank to the international leadership as to the number of transplantations.² The high percentage of donations in Spain would not be understood without the awareness in our society on the relevance of this therapeutic resource, characterized by a universal and equal accessibility to all citizens, which is exclusively based on medical criteria and availability of graft organs.

For the respiratory community, LT remains challenging, with various unsolved controversies and with results that still lie far away from those obtained in other organs' transplantations, such as the heart, liver or kidney. For example, in adults subject to LT, the average probability of survival at one and three years is 72% and 60%, respectively. In the pediatric population, however, survival at

one and three years raises up to 80% and 70%, respectively. Despite that numerous factors limit LT survival, the underlying lung disease and the age of the recipient remain as the most crucial determinants of the long-term patients' prognosis.¹ Therefore, there is a compulsory need for concerted efforts to standardize and unify the criteria for selection of LT candidates.^{3,4} To achieve such an aim, we must progress in the knowledge of the natural history of the underlying diseases, through the development of predictive methods,⁵ and in the early identification of the patients' comorbidities, a factor that strongly influences survival expectations before and after LT.

Briefly, it follows a list of the most important issues influencing decision-making activities in LT: the age of the donor and the recipient, anatomical, immunological and infectious compatibilities between host and donor, preoperative graft conditions and preservation, the surgical technique, the choice of “bridge” treatments up to the LT intervention and afterwards. In this regard, the currently available therapeutic resources for pulmonary hypertension have enabled a greater number of patients to attain a better status at the time of surgery. At the same time, new methods for extracorporeal oxygenation, a valuable means for overcoming early graft dysfunction, rely very promising in the near-future.⁶ In the long-term, the largest problems faced by the LT recipients involve rejection, immunosuppression, toxicity and infections,⁷ which remain as the main cause of mortality in these patients. On this basis, the management of LT as a whole need to be led by multidisciplinary teams, in which pulmonologists gradually play a more active role, both in the reference and the patients' original health centers, which should definitely act as partners in the long-term follow up.

On the other hand, LT proper management requires professionals who are continuously up-to-date, as they will have to handle queries and uncertainties, expectations and risks involving LT procedures with both the patients and their relatives. In this context and in accordance with the LT-SEPAR Year 2013, the editorial committee of Archivos de Bronconeumología has commissioned three national leading teams in different areas of LT management a series of review articles focused on novel interesting aspects.

Although the vast majority of transplantations are conducted on adults, LT is also performed in children and adolescents, whose most frequent indication is cystic fibrosis, followed by diffuse interstitial lung diseases and pulmonary hypertension. Moreover, because of its specific characteristics, fairly different from the adult LT, the first review⁸ explores aspects related to pediatric LT. In the

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second article,⁹ the authors review how the patients' underlying condition and specifically their comorbidities influence the prognosis after LT. Comorbidities affect the selection of LT candidates and the choice of the most appropriate time for intervention. This also means that both LT performing healthcare institutions and the patients' original center should be equipped with the necessary means to carry out a proper diagnosis, prevention, as well as on-time optimal treatment of comorbidities. Apart from the scientific evidence underpinning these data, and in order to minimize risks and increase survival expectations in LT patients, the authors emphasize the need for the coordination and exchange of information between the centers involved. Finally, in a third article, the functional changes of lung graft recipients are discussed, as well as the usefulness of the diagnostic tests currently available for monitoring and following-up patients receiving an LT.¹⁰

We are convinced that the contents of these three reviews will contribute to fostering knowledge and improving clinical practice among pulmonologists and thoracic surgeons involved in the management of patients receiving an LT. In addition, this action will also help fulfill SEPAR's primary objectives defined for the year 2013.

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