Lung transplantation; Identify predisposing factors that influence lung function and survival after lung transplantation

Background: Lung transplantation (LTx) is an established medical interventions for treating patients with irreversible, end-stage pulmonary disease (ESPD) in patients where standard medical treatment has been proven insufficient, and with an expected survival less than 2 years. The most common diseases are cystic fibrosis, pulmonary fibrosis, chronic obstructive pulmonary disease (COPD) and emphysema. Survival in LTx recipients has increased over the years, mainly due to careful patient selection; improved lung preservation, surgical techniques, immunosuppressive regimes and forceful regimes in antibiotic prophylaxis and treatment. However, chronic rejection defined as bronchiolitis obliterans syndrome (BOS) continues to be a major problems. The development of BOS is rare in the first year after LTx, but the rate increases quickly with cumulative incidence reported to be as high as 40% to 80% within the first five years. It is of the greatest importance to identify risk factors and early signs for BOS to start treatment as early as possible.

Method: Retrospective study based on patients journals. Between January 1990 to June 2014, 278 patients underwent lung transplantation at the Skåne University Hospital Sweden.

Results: Overall 1-, 5-, 10-, 15- and 20-year survival was 88 %, 65 %, 49 %, 37 % and 19 % for the whole cohort.

Discussion: Superior long-term survival rates were seen in recipients diagnosed with cystic fibrosis. Double lung transplantation (DLTx) showed better results compared with single lung transplantation (SLTx) especially 10 years post-transplant. In the present study the higher the value the recipient could perform at the spirometry (FEV1) or 6MWT (6 minutes walking test), the greater were the chance of survival. Recipients with DLTx had a significant survival benefit and probably a protective effect against the development of BOS compared to recipients with SLTx.