



A real life evaluation of criteria for listing for lung transplant: a single-centre, five year experience

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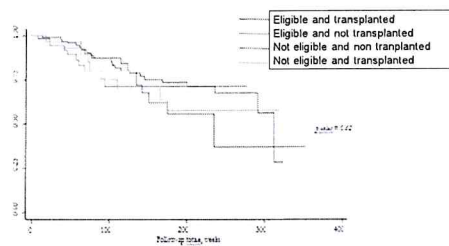
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Purpose

Lung transplant (LuTx) is nowadays considered a valuable option for end-stage lung disease, and appropriate selection of candidates is essential to improve survival. Currently available listing criteria for LuTx are mainly based on experts opinions. The aim of this study is to evaluate physicians' adherence to inclusion and exclusion criteria for LuTx.

Results

305 patients (59% males, median (IQR) age 52 (36-60) years) were enrolled: 54% belonged to Group A, 31% to Group B, and 15% to Group C. With regard to the entire cohort, the most significant contraindications associated with inclusion in WL were the absence of social support [OR 11.3 (95%CI: 1.4-89.4; P= 0.02)] and compliance [OR 21.6 (95%CI: 2.9-164.0; P= 0.003)]. For Group A, no specific criteria were significantly more frequent in listed patients. Conversely, criteria associated with an increased probability of being included in WL were: respiratory failure [OR 7.0 (95%CI: 1.4-34.3; P= 0.02)] for Group B and BODE >7 [OR 12.0 (95%CI: 1.3-111.3; P= 0.03)] for Group C. Ineligible individuals (no criteria and/or contraindications) and transplanted patients showed a better survival than those on WL but not yet transplanted, both for the whole cohort and for different groups.



Conclusions

Placement on active WL seems to be mainly based on multidisciplinary clinical decisions more than on the strict application of listing criteria with an improved survival both in patients not eligible for LuTx and for those transplanted. Currently available listing criteria for DPLD did not prove a suitable tool for candidate selection, owing to high clinical heterogeneity of these diseases.

References

- Weill D, Benden C, Corris PA et al. A consensus document for the selection of lung transplant candidates 2014: An update from the Pulmonary Transplantation Council of the International Society for Heart and Lung Transplantation. *J Heart Lung Transpl* January 2015
- Xaubert A, Ancochea J, Bello E et al. Sociedad Española de Neumología y Cirugía Torácica (SEPAR) Research Group on Diffuse Pulmonary Diseases. Guidelines for the diagnosis and treatment of idiopathic pulmonary fibrosis. *Sociedad Española de Neumología y Cirugía Torácica (SEPAR) Research Group on Diffuse Pulmonary Diseases Arch Bronconeumol* August 2013

Methods

This was an observational retrospective study on adult patients referred to the Lung Transplant Center of the Policlinico Hospital in Milan, Italy for primary LuTx for any indication from January 2012 to May 2017. Prevalence of disease-related contraindications and listing criteria as stated in ISHLT (Orens 2006, Weill 2014) and SEPAR consensus was evaluated. Population was divided into three groups, based on the bundle of listing criteria: a) diffuse parenchymal lung diseases, DPLD; b) cystic fibrosis (CF) and non-CF bronchiectasis; c) COPD. Comparisons between listed individuals and those who were not considered amenable to LuTx were performed for the general population and individual groups. Multivariate logistic regression was used to analyse the association between variables and inclusion in WL. Survival was modelled using the Kaplan-Meier product limit estimator with statistical differences between survival curves assessed using the mantel-Cox log-rank test.

DPLD Listing Criteria	OR (95% CI)	p
Decline in FVC \geq 10% during 6 months follow up	0.8 (0.4-1.8)	0.58
Decline in DLCO \geq 15% during 6 months follow up	0.9 (0.4-2.0)	0.85
On 6'WT: desaturation < 88% or distance < 250 mt or decline > 50 mt during 6 months follow up	0.8 (0.2-2.6)	0.68
PAPm >25 on right heart catheterization	0.5 (0.2-1.3)	0.15
PAPs > 50 or signs of pulmonary hypertension on echocardiography	0.6 (0.2-1.4)	0.22
Hospitalization/pneumothorax/acute exacerbation	1.6 (0.8-3.5)	0.22
UIP pattern	0.8 (0.5-1.5)	0.56
DLCO <40%	1.1 (0.5-2.3)	0.91
NSIP pattern	1.0 (0.5-2.3)	0.96

CF Listing Criteria	OR (95% CI)	p
pO ₂ <60 and/or pCO ₂ >50	7.0 (1.4-34.3)	0.02
Long term non invasive ventilation therapy	1.9 (0.6-6.5)	0.31
Pulmonary hypertension	3.5 (0.7-17.3)	0.12
Frequent hospitalization	2.3 (1.2-27.9)	0.50
Decline in FEV1 > 10% during 6 months follow up	1.5 (0.4-6.1)	0.61
pCO ₂ >45	2.4 (0.5-12.0)	0.28

COPD Listing Criteria	OR (95% CI)	p
BODE \geq 7	12.0 (1.3-111.3)	0.03
FEV1 <20% of predicted	5.4 (0.4-66.7)	0.19
3 or more severe exacerbations during the preceding year	8.0 (0.7-97.3)	0.10
1 severe exacerbation with acute hypercapnic respiratory failure	2.4 (0.3-19.8)	0.42
Moderate to severe pulmonary hypertension	-	-
FEV1 < 20% and DLCO < 20% or homogeneous emphysema	-	-



Thursday, April 4, 2019

5:45 PM - 7:00 PM

POSTER SESSION 2: LUNG TRANSPLANTATION (ADULT)

Room: Hibiscus 2

Poster Discussants:

Mark Greer, MB Bch, Hanover Medical School, Hannover, Germany
Ramsey Hachem, MD, Washington University School of Medicine, St. Louis, MO, USA
Are Holm, MD, PhD, Oslo University Hospital, Oslo, Norway
Monique Malouf, FRACP, St. Vincent's Hospital, Sydney, Australia
Ahmed Menaouar, PhD, Chum University De Montreal, Montreal, Canada
David Weill, MD, Weill Consulting Group, New Orleans, LA, USA

(825) Do Long Term Outcomes Justify Third Time Redo Lung Transplantation?; W. Ragalie, P. Downey, D. Ross, E. Depasquale, A. Ardehali. *UCLA, Los Angeles, CA*

(826) Predicting Long Term Survival in Lung Transplant: Analysis of United Network for Organ Sharing (UNOS) Database; J. Sethi¹, G. A. Garrido Rosa², K. Patel², N. Sharma². ¹*Pulmonary and Critical Care Medicine, University of South Florida, Tampa, FL*, ²*Advanced Lung Diseases & Lung Transplantation, University of South Florida, Tampa, FL*

(827) A Real-Life Evaluation of Criteria for Listing for Lung Transplant: A Single-Center, Five-Year Experience; L. Morlacchi¹, S. Henchi¹, V. Rossetti¹, A. Palleschi², D. Tosi², S. Aliberti¹, G. Sotgiu³, P. Tarsia¹, L. Rosso². ¹*Internal Medicine Department, Respiratory Unit and Cystic Fibrosis Adult Centre, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico di Milano; Università degli Studi di Milano, Milano, Italy*, ²*Thoracic Surgery and Lung Transplant Unit, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico di Milano; Università degli Studi di Milano, Milano, Italy*, ³*Clinical Epidemiology and Medical Statistics Unit; Department of Medical, Surgical and Experimental, Università degli Studi di Sassari, Sassari, Italy*

(828) Frailty is Highly Prevalent in Lung Transplant Candidates and Varies by Frailty Tool; A. O'Boye, K. Leitner, M. Kelly, J. Wright, J. Lee, R. Tomic, S. Bhorade. *Northwestern Memorial Hospital, Chicago, IL*

(829) Surgical and Endoscopic Lung Volume Reduction (LVR) Prior to Lung Transplantation (LuTX); A. Slama¹, C. Raber¹, C. Hedderich¹, V. Besa², D. Valdivia¹, K. Darwiche², A. Koch³, M. Kamler³, C. Taube², C. Aigner¹. ¹*Department of Thoracic Surgery, University Medicine Essen - Ruhrlandklinik, Essen, Germany*, ²*Department of Pneumology, University Medicine Essen - Ruhrlandklinik, Essen, Germany*, ³*Department of Thoracic Transplantation, University Medicine Essen, Essen, Germany*

(830) Lung Transplant Referral Consensus Guidelines for Individuals with Cystic Fibrosis: An Opportunity for Partnerships between CF and Lung Transplant Centers; K. J. Ramos¹, P. J. Smith², E. F. McKone³, J. M. Pilewski⁴, A. Lucy⁵, S. E. Hempstead⁶, E. Tallarico⁶, A. Faro⁶, D. B. Rosenbluth⁷, A. L. Gray⁸, J. M. Dunitz⁹, C. F. Lung Transplant Referral Guidelines Committee⁶. ¹*Medicine, University of Washington, Seattle, WA*, ²*Duke University, Durham, NC*, ³*Medicine, University College, Dublin, Ireland*, ⁴*Medicine, University of Pittsburgh, Pittsburgh, PA*, ⁵, *MD*, ⁶*Cystic Fibrosis Foundation, Bethesda, MD*, ⁷*Medicine, Washington University School of Medicine in St Louis, St. Louis, MO*, ⁸*Division of Pulmonary Sciences and Critical Care Medicine, University of Colorado - Anschutz Medical Campus, Denver, CO*, ⁹*Medicine, University of Minnesota, Minneapolis, MN*

(831) Predictors of Mortality Post Lung Transplantation: Systematic Review and Meta-Analysis; F. Foroutan¹, K. Clark¹, A. Malik¹, T. A. Buchan¹, A. Akhtar², A. Rigobon¹, M. Stein¹, J. Yepes Nuñez², K. Quach³, D. C. Birriel⁴, A. Sidhu⁴, G. H. Guyatt⁵, M. O. Meade⁶. ¹*Cardiology, Toronto General Hospital, Toronto, ON, Canada*, ²*Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, ON, Canada*, ³*Toronto General Hospital, Toronto, ON, Canada*, ⁴*Lung Transplantation, Toronto General Hospital, Toronto, ON, Canada*, ⁵*Department of Health Research Methods, Evidence, and Impact, McMaster, Hamilton, ON, Canada*, ⁶*Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, ON, Canada*

(832) Single-Center Study Evaluating the Impact of Sarcopenia on Outcomes after Lung Transplantation; P. S. Garcha¹, T. Nisar², A. K. Jamil², M. O. Edens², V. L. Flores², J. Feliuss², G. Schwartz¹, D. P. Mason¹. ¹*Baylor University Medical Center, Dallas, TX*, ²*Baylor Scott & White Research Institute, Dallas, TX*

(833) Is Combined Lung-Liver Transplantation Justified? 30-Year Review of UNOS Database; W. Ragalie, P. Downey, D. Ross, E. Depasquale, A. Ardehali. *UCLA, Los Angeles, CA*

(834) Outcomes and Long-Term Survival after Pulmonary Retransplantation-A Single Center Experience; A. Wallinder¹, J. Magnusson², C. Danielsson², G. C. Riise², G. Dellgren². ¹*Dep. of Cardiothoracic Surgery, Sahlgrenska University Hospital, Gothenburg, Sweden*, ²*Transplant Institute, Sahlgrenska University Hospital, Gothenburg, Sweden*

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION

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