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Title: Use of noninvasive ventilation in the early postoperative period of lung transplantation

Dr. Ana 23335 Hernández Voth anahvoth@gmail.com MD ¹, Dr. Regulo 23336 Avila Martínez reguloavila@hotmail.com MD ², Dr. Javier 23337 Sayas Catalán jsayas.hdoc@salud.madrid.org MD ¹, Dr. Alicia 23340 De Pablo Gafas alicia.pablosga@salud.madrid.org MD ¹, Dr. Eloisa 23338 López López anahvoth@hotmail.com MD ³, Dr. Virginia 23346 Pérez González vperez.hdoc@salud.madrid.org MD ¹, Dr. Olga 23339 González olgagonz@gmail.com MD ³ and Dr. Pablo 23341 Gámez García antonio.gamez@salud.madrid.org MD ². ¹ Pneumology Service, 12 de Octubre University Hospital, Madrid, Spain ; ² Thoracic Surgery Service, 12 de Octubre University Hospital, Madrid, Spain and ³ Anesthesia Service, 12 de Octubre University Hospital, Madrid, Spain .

Body: Aim: to describe the results of noninvasive ventilation [NIV] in the early postoperative period of lung transplantation [LT] Methods: retrospective study of NIV in the early postoperative period of LT patients from October 2008 to December 2011. Patients were selected for postextubation NIV according to their performance in spontaneous breathing t-tube trial and clinical criteria of the LT team. Data regarding to pretransplant condition, surgical procedures and early postoperative management were recorded. Results: During this period 41 patients had LT. Principal indications were due to COPD (45,2%), Usual Interstitial Pneumonitis [UIP] (16,7%) and Idiopathic Pulmonary Fibrosis [IPF] (11,9%). Four patients have had home NIV, all of them due to COPD. Twelve patients (29,2%) received NIV in the early postoperative period (NIV group), 6 of them had IPF, 5 COPD and 7 (58,3%) had bilateral LT. There were no statistical significant differences between NIV and Non-NIV groups in the pretansplant nor in the postransplant variable analyzed.

Pretransplant variables	NIV group mean (SD)	NIV group mean (SD)
Age (years)	54,25 (8,86)	53,14 (13,12)
Apnea-Hypopnea Index (number per hour)	11,57 (13,4)	7,55 (5,9)
Body Mass Index (kg/m ²)	23,82 (5,0)	22,16 (3,3)
Arterial pressure of CO ₂ (mmHg)	46,7 (12,1)	43,5 (9,8)

Postransplant variables	NIV group mean (SD)	Non-NIV group mean (SD)
Invasive ventilation time in the ICU (hours)	41,5 (31,4)	38,8 (36,2)
Length of ICU stay (days)	6,3 (2,5)	6,9 (6,2)

Conclusions: NIV can be a useful tool in the early postextubation period of lung transplantation. We observed a diminution of ICU length stay in the NIV group, although the difference was not statistical significant.