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The role of pulmonary arterial wedge pressure in primary graft dysfunction

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Introduction: The presence of pulmonary hypertension (PH) before lung transplantation (LuTx) is a well known risk factor for primary graft dysfunction (PGD). However, the role of the comprehensive cardiopulmonary hemodynamic assessed before LuTx is limited. We aimed to explore if other hemodynamic variables may have a role in PGD, besides absolute PH.

Methods: a retrospective study was conducted at Policlinico Hospital of Milan (Italy) on adults who underwent LuTx for any indication other than cystic fibrosis from 2011 to 2017. PGD was defined as PaO₂/FIO₂<300 with infiltrates at 72 hours after reperfusion. Two groups were identified by the presence of PGD (respectively PGD+ and PGD-). We compared the prevalence of PH and the median values of the following parameters collected through right heart catheterization: pulmonary arterial wedge pressure (PAWP), right atrial pressure (RAP), pulmonary vascular resistance (PVR) and cardiac index (CI).

Results: among 67 patients (57% male, median age 58 years), 28 (42%) had PGD. PH was prevalent in PGD+ group (57% vs 33%, p=0.045). PAWP showed the strongest difference (PAWP: 13.0 vs 10.0 mmHg, p=0.036), while RAP was slightly higher in PGD+ group (RAP: 7.0 vs 5.5 mmHg, p=0.048). No differences were observed between PVR or IC (PVR: 2.61 vs 2.62 UW, p=0.622; CI: 3.13 vs 3.07 l/min/mq, p=0.760).

Conclusion: our data confirm that PH is an important factor in PGD. However normal median values of PVR together with a higher median PAWP may suggest a predominant role of the post capillary component in this disease. From this point of view, RAP may reflect the overload of the right ventricle caused by higher total afterload. Thus, PAWP should be considered in PGD's development.

Session:

Moving lung transplantation forward (Thematic poster)

Date/Time:

Monday, September 17, 2018 / 12:50-14:40

Room:

TP-16

Category:

Transplantation

Keywords:

Transplantation, Lung injury, Pulmonary hypertension

- PA2591 Physical activity, physical fitness and quality of life in lung transplant recipients**
Elisabeth Edvardsen (Oslo, Norway), Mariann Ulvestad, May Brit Lund, Johny Kongerud, Inger Lise Alteren, Hanne Flatsetøy, Vibeke Klungerbo, Stian Roterud, Michael T Durheim
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- PA2592 Donor lung pathological abnormalities and recipient outcomes**
Davide Piloni (Pavia, Italy), Joseph Costa, Andreacarola Urso, Andres N Gomez, Lori Shah, Hillary Y Robbins, Luke Benvenuto, Joshua R Sonett, Selim Arcasoy, Frank D'Ovidio
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- PA2593 Bronchial stenosis, a critical complication in lung transplant: single center experience**
Francesco Tarantini (Vimercate (MB), Italy), Giuseppe Ciaravino, Piercarlo Parigi, Luca Novelli, Lorenzo Corbetta
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- PA2594 The role of pulmonary arterial wedge pressure in primary graft dysfunction**
Federico B. M. Blasi (Milano (MI), Italy), Letizia Corinna Morlacchi, Valeria Rossetti, Rosa Casella, Paolo Tarsia, Mario Nosotti, Lorenzo Rosso, Paolo Mendogni, Federico Lombardi, Marco Vicenzi
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- PA2595 Basiliximab induction reduces the incidence of acute rejection in lung transplant patients**
Víctor Manuel Mora Cuesta (Santander (Cantabria), Spain), David Iturbe, Laura González, Teresa Díaz, Sonia Fernández, Amaya Martínez, Ana Sangrador, Javier Gómez, Ainara Azueta, Laura Sánchez, Sara Naranjo, Carlos Álvarez, Miguel Carbajo, Roberto Mons, Rodrigo Alonso, Virginia Pérez, Alicia De Pablo, José M. Cifrián
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- PA2596 Differential gene expression of aquaporins (AQP) in lung transplant recipients with acute lung rejection.**
Dimitrios Magouliotis (Larisa, Greece), Vasiliki Tasiopoulou, Kyriakos Spiliopoulos, Konstantina Svokos, Alexis Svokos, Kalliopi Athanassiadi
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- PA2597 Retrospective analysis of efficacy of combined CMV prophylaxis scheme: Turin Lung Transplant Center experience**
Filippo Patrucco (Torino (TO), Italy), Elisa Clivati, Giulia Verri, Erika Simonato, Daniela Libertucci, Cristina Costa, Antonio Curtoni, Massimo Boffini, Mauro Rinaldi, Caterina Bucca, Paolo Solidoro
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- PA2598 COPD and alpha-1 antitrypsin deficiency emphysema: characteristics and survival after Lung Transplantation**
Sara Isabel Campos Silva (Paços de Ferreira, Portugal), Nidia Caires, Vânia Caldeira, Ricardo Dias Coelho, Ana Sofia Santos, Telma Lopes, Paulo Calvino, Luisa Semedo, João Cardoso, José Fragata
-
- PA2599 Outcomes and survival in alpha1-antitrypsin deficiency post lung transplantation**
Jana Kleinerova (Dublin 8, Ireland), Lana Khorsheed, Iain Lawrie, Sara Winward, Karen Redmond, Donna Eaton, David Healy, Lars Nolke, Seyed Javadpour, Jim Egan
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- PA2600 Evaluation of early conversion to prolonged-release tacrolimus in lung transplantation.**
Marta Entrenas Castillo (CORDOBA, Spain), Isabel Ordoñez Dios, Francisca Montoro Ballesteros, Javier Redel Montero, Maria Jesus Cobos Ceballos, Francisco Santos Luna, Jose Manuel Vaquero Barrios
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- PA2601 Incidence and risk factors for bronchiolitis obliterans syndrome stage 0p after lung transplantation**
Sehyun Kwak (Seoul, Republic of Korea), Song Yee Kim, Ji Soo Choi, Sungwoo Moon, Juhye Shin, Ji-Eun Park, Moo Suk Park, Hyo-Chae Paik, Jin Gu Lee
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- PA2602 Malignancies in lung transplant recipients: an update of the portuguese experience**
Vania Caldeira (Azueira, Portugal), Tiago Sá, Sara Silva, Nidia Caires, Ricardo Coelho, Sara Alfarroba, Ana Sofia Santos, Luisa Semedo, Joao Cardoso, José Fragata
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- PA2603 Experience of lung transplant consultation in a non-transplant centre**
María Asuncion Macia Palazon (Palma De Mallorca, Spain), Antonio Román Broto, Ernest Sala Llinas, Cristina Berastegui García, Manuel López Meseguer, Jaume Sauleda Roig

TP-17 **Session 278** 12:50 - 14:40

Thematic poster: Predicting the future: biomarkers of respiratory infection

Disease(s) : Airway diseases **Respiratory infections** **Respiratory critical care** Respiratory infections

Method(s) : Cell and molecular biology Public health Respiratory intensive care General respiratory patient care

Chairs : David Connell (London, United Kingdom), Rosario Menendez Villanueva (Valencia, Spain), Sebastian Ott (Bern, Switzerland), Oriol Sibila (Barcelona, Spain)

PA2604 Pepsin as a biomarker of reflux in NAR patients
Rhianna Lenham (Kingston Upon Hull, United Kingdom), Rhianna Lenham, Qiuping Wang, Xiu Wang, Peter Dettmar

PA2605 Vitamin D and Bronchiectasis Severity Index (BSI): A correlation
Sebastian Ferri (Catania (CT), Italy), Enrico Heffler, Raffaele Campisi, Carlo Chessari, Claudia Crimi, Nunzio Crimi



