International Society for Heart & Lung Transplantation

For Immediate Release

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Approaching CTEPH Metabolically and Surgically at the International Society for Heart and Lung Transplantation (ISHLT) 38th Annual Meeting & Scientific Sessions

NICE, FR April 11, 2018 – Today at the International Society for Heart and Lung Transplantation (ISHLT) 38th Annual Meeting & Scientific Sessions, researchers shared results during Wednesday's **Cutting Edge CTEPH: From Metabolomics to Surgical Technique** presentations. Included in the oral session presentation was Pulmonary Endarterectomy: Relationship Between Total Reopened Branches where Dr. Maurizio Pin presented study results showing a significant relationship between hemodynamic and functional outcomes and the number of reopened pulmonary artery branches within chronic thromboembolic hypertension (CTEPH) patients. The number of reopened branches (Δ 38 SD±16) correlates with total circulatory arrest (TCA) time (R 0.47 95% CI: 0.387-0.552 $p < 0.001$).

Dr. Pin and his Team identified the metrics used to confirm the correlation including pulmonary vascular resistance, or the resistance that must be overcome to push blood through the circulatory system, mean pulmonary artery pressure and arterial pressure of oxygen value during a pulmonary endarterectomy (PEA/PTE) at three months from surgery. The significance of TCA time means a surgeon can clean more artery branches, even in more complex clinical conditions, and still achieve good hemodynamic results.

Identifying CTEPH

Following Dr. Pin's presentation, clinicians discussed creating a predictive tool to identify patients presenting acute pulmonary embolism symptoms who actually have chronic thrombo-embolic disease. During the Oral Session, The Incidence and Identification of Chronic Thromboembolic Disease in Patients Presenting with Acute Pulmonary Embolism, researchers shared the reason for creating the tool was to find undiagnosed CTEPH patients who were presenting symptoms of acute pulmonary embolism (PE). The goal of the study was to find undiagnosed patients prior to undergoing a surgical pulmonary embolectomy.

In this cohort, 90 patients were identified with 12 (33 percent) demonstrating acute on chronic disease. The predictive tool weighed the following four features on a scale of 0 to 11:

- Duration of symptoms less than one month
- Main pulmonary artery dilation greater than 3.5 cm
- Severe right ventricular hypertrophy
- Contrast reflux into the hepatic veins. The team indicated that in this cohort, the occurrence of occult chronic thromboembolic disease in patients presenting with acute PE was significant.

"It's wonderful to see the PH Community coming together at the ISHLT Annual Meeting to discuss various methods and approaches to identifying and treating CTEPH at various stages of the disease," said Christian Benden, MD, FCCP, Scientific Program Chair of the ISHLT 38th Annual Meeting and Scientific Sessions.

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About CTEPH

Chronic thromboembolic pulmonary hypertension can occurs in 1-2 percent of people who have experienced an acute pulmonary embolism (a blood clot in the lungs), although some have no history of a venous thromboembolic event.

Symptoms of CTEPH include shortness of breath, chest pain, fatigue, and signs are absent until late in the disease when right heart failure occurs. Currently, the guideline recommended therapy for CTEPH patients is pulmonary thromb-endarterectomy (PEA/PTE) surgery. Some patients may not be candidates for surgery and there is now evidence for symptomatic benefit from balloon pulmonary angioplasty and/or targeted pulmonary hypertension drug therapy in inoperable patients.

About ISHLT

The International Society for Heart and Lung Transplantation (ISHLT) is a not-for-profit, multidisciplinary, professional organization with more than 3,800 members from over 45 countries, representing over 15 different professional disciplines involved in the management and treatment of end-stage heart and lung disease. All ISHLT members share a common dedication to improving the care of patients with advanced heart or lung disease through transplantation, mechanical support and innovative therapies via research, education and advocacy. For more information, visit www.ishlt.org.

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