ISHLT ACADEMY
MASTER CLASS IN PEDIATRIC MECHANICAL CIRCULATORY SUPPORT
APRIL 21, 2020
MONTRÉAL, CANADA

Scientific Program Committee
Chair: Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA
Co-Chair: Holger Buchholz, MD, University of Alberta Hospital, Edmonton, Canada

Faculty
Case Moderators:
Antonio Amodeo, MD, Bambino Gesù Children Hospital, Rome, Italy
Jennifer Conway, MD, Stollery Children's Hospital/University of Alberta, Edmonton, Canada
Martin Schweiger, MD, PhD, Children's Hospital Zurich, Zurich, Switzerland
Christina J. VanderPluym, MD, Boston Children's Hospital, Harvard School of Medicine, Boston, MA, USA

Case Discussants:
Lara Danziger-Isakov, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA
Lucas Eastaugh, MD, The Royal Hospital of Melbourne, Melbourne, Australia
Pirooz Eghtesady, MD, St. Louis Children's Hospital, Washington University, St. Louis, MI, USA
Matthew O'Connor, MD, Children's Hospital of Pennsylvania, Philadelphia, PA, USA

Educational Goals
The pediatrics Master's class will be focused on the use of mechanical support in more complex scenarios. Providers will be also be able to discuss and share best practice for device and patient selection. In addition, there will be discussion regarding the complications that can occur and the best ways to prevent and treat them.

Target Audience
This course is intended for members with higher levels of expertise (completed the core curriculum course on MCS and/or primary practice in MCS>5 years. The target healthcare professionals would be pediatric cardiac surgeons, pediatric cardiologists, pediatric pulmonologists with pulmonary hypertension or advanced lung failure expertise, pediatric intensivists, pediatric anesthesiologists, pediatric ICU and cardiology nurses, perfusionists, VAD coordinators and VAD teams. While all members are invited to enroll, Master Classes are primarily designed to be of benefit for health care professionals who are beyond the training stages of their careers. This may be professionals who are seeking additional proficiencies, who wish to understand current areas of controversy, or who desire an update on the current advanced topics of the field. The information presented is intended to provide insights beyond core competencies established in the specialty.

Learning Objectives
After completion of this class, participants will have improved competence and professional performance in their ability to:

1. To recognize bleeding and clotting challenges and the appropriate therapy
2. To identify the unique challenges in congenital patients with MCS support
3. To understand the potential complications and the management during MCS support
4. Identify the different mechanical support options in patients with pulmonary hypertension.

Disclosure
Current guidelines state that participants in CME activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. Please refer to the Participant Notification document for a list of all disclosures. Additionally, all speakers have been asked to verbally disclose

at the start of their presentation if a product they are discussing is not labeled for the use under discussion or is still investigational.

Accreditation Statement
The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation Statement
ISHLT designates this live activity for a maximum of 4.25 *AMA PRA Category 1 Credits*.™ Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nurses and Pharmacists

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and ISHLT. Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Credit Designation Statement – Amedco LLC designates this live activity for a maximum of 4.25 contact hours for nurses and 2.25 knowledge-based contact hours for pharmacists. Learners should claim only the credit commensurate with the extent of their participation in the activity.

ISHLT ACADEMY
MASTER CLASS IN PEDIATRIC MECHANICAL CIRCULATORY SUPPORT
APRIL 21, 2020
PRELIMINARY SCIENTIFIC PROGRAM SCHEDULE

8:00 AM – 8:05 AM
WELCOME AND OVERVIEW
Angela Lorts, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA
Holger Buchholz, MD, University of Alberta Hospital, Edmonton, Canada

8:05 AM – 9:10 AM
SMALL GROUP INTERACTIVE DISCUSSION A: BLEEDING, CLOTTING AND BEYOND
Moderator: Christina VanderPluym, MD, Boston Children's Hospital, Harvard School of Medicine, Boston, MA, USA

8:05 AM
Summary of the state of the science of the session topic and the most pressing challenges relevant to the session topic
Christina VanderPluym, MD, Boston Children's Hospital, Harvard School of Medicine, Boston, MA, USA

8:10 AM
CASE SCENARIO A1: From the Clotting Cascade to the Complication Cascade – How a Small Bleed Leads to a Small Clot and a BIG Problem
Christina VanderPluym, MD, Boston Children's Hospital, Harvard School of Medicine, Boston, MA, USA

Teaching/Discussion Points

1. What are common minor and major bleeding events in pediatric VAD patients?
2. How do you treat nuisance bleeding?
3. How to diagnose pump thrombosis?
4. Understand management strategies for pump thrombosis?

8:40 AM
CASE SCENARIO A2: To Bleed or Not to Bleed! Managing Anti-Thrombotic Medications after VAD-Related Stroke
Lucas Eastaugh, MD, The Royal Hospital of Melbourne, Melbourne, Australia

Teaching/Discussion Points

1. Understand the incidence and types of stroke in the current era of VAD support for children.
2. How is acute stroke managed in children with VADs in the outpatient and inpatient setting.
3. What are the pharmacological, interventional and surgical treatments of stroke in VAD patients?
4. When and what antithrombotic therapies are stopped and restarted after stroke?

9:10 AM – 10:15 AM
SMALL GROUP INTERACTIVE DISCUSSION B: THE COMPLEXITY IS REAL – CURRENT STRATEGIES TO SUPPORT PATIENTS WITH CONGENITAL HEART DISEASE
Moderator: Martin Schweiger, MD, Children's Hospital Zurich, Zurich, Switzerland

9:10 AM
Summary of the state of the science of the session topic and the most pressing challenges relevant to the session topic
Martin Schweiger, MD, Children's Hospital Zurich, Zurich, Switzerland

9:15 AM
CASE SCENARIO B1: MCS Support of Patients in Heart Failure after a Senning/Mustard Operation
Martin Schweiger, MD, Children's Hospital Zurich, Zurich, Switzerland

Teaching/Discussion Points

1. Understand the anatomy and physiology of patients suffering from heart failure related to atrial switch operation.
2. Learn different mechanical support strategies for this patient population.
3. Understand device selection in this patient population.
4. Discuss different implantation approaches for this patient population.

9:45 AM
CASE SCENARIO B2: When the "Failing" Fontan Patient Needs MCS
Matthew O'Conner, Children's Hospital of Pennsylvania, Philadelphia, PA, USA

Teaching/Discussion Points

1. Understand the physiology of "failing" Fontan patients and which patients may benefit from mechanical support.
2. Describe the physiology of mechanical support in Fontan patients.
3. Discuss different treatment options for "failing" Fontan patients.
4. Learn different device options for MCS for the "failing" Fontan patients.

10:15 AM – 10:45 AM
COFFEE BREAK

10:45 AM – 11:50 AM
SMALL GROUP INTERACTIVE DISCUSSION C: WHEN THINGS DON'T GO AS PLANNED!
Moderator: Jennifer Conway, MD, FRCPC, Stollery Children's Hospital/University of Alberta, Edmonton, Canada

10:45 AM
Summary of the state of the science of the session topic and the most pressing challenges relevant to the session topic
Jennifer Conway, MD, FRCPC, Stollery Children's Hospital/University of Alberta, Edmonton, Canada

10:50 AM
CASE SCENARIO C1: The Great Masquerade – Infection or is it Just the Pump?
Lara Danziger-Isakov, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

Teaching/Discussion Points

1. What are the common infections in pediatric VAD patients.
2. What are some common problems seen in VAD patients secondary to inflammation.
3. How can inflammation and infection be differentiated?
4. Describe treatment strategies to target inflammation.
5. Are steroids a mainstay therapy now?

11:20 AM
CASE SCENARIO C2: Missed but Not Forgotten – What is Happening to the Right Ventricle?
Jennifer Conway, MD, FRCPC, Stollery Children's Hospital/University of Alberta, Edmonton, Canada

Teaching/Discussion Points

1. Review predictors of RV failure following LVAD insertion.
2. Review the utility of RV scores in pediatrics.
3. Discuss recognition of RV failure post operatively.
4. Discuss prevention and management strategies for RV failure.

11:50 AM – 12:55 PM
SMALL GROUP INTERACTIVE DISCUSSION D: PUSHING THE ENVELOPE – NEW DEVICES, NEW STRATEGIES AND NEW GOALS
Moderator: Antonio Amodeo, MD, Bambino Gesù Children Hospital, Rome, Italy

11:50 AM
Summary of the state of the science of the session topic and the most pressing challenges relevant to the session topic
Antonio Amodeo, MD, Bambino Gesù Children Hospital, Rome, Italy

11:55 AM
CASE SCENARIO D1: A New Scenario – Continuous Flow VAD in Small Children – Should We Push for LV Recovery?
Antonio Amodeo, MD, Bambino Gesù Children Hospital, Rome, Italy

Teaching/Discussion Points

1. Beyond the bridge to transplant: redefine new recovery strategies.
2. Short length of the disease and continuous flow LV unloading in small children.
3. Treatment strategies to target recovery.
4. How to assess the LV recovery in miniaturized continuous LVAD?

12:25 PM
CASE SCENARIO D2: Lung Support in Pediatric Patients with Pulmonary Hypertension
Pirooz Eghtesady, MD, St. Louis Children's Hospital, Washington University, St. Louis, WA, USA

Teaching/Discussion Points

1. Device and Cannulation strategies for pulmonary support.
2. Possibilities related to log term support as bridge to transplant
3. Patient management and mobilization.
4. Discuss RV support and assessment of the RV prior to transplant.

12:55 PM – 1:00 PM
CLOSING REMARKS
Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA
Holger Buchholz, MD, University of Alberta Hospital, Edmonton, Canada

1:00 PM
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