MASTER CLASS
IN
MECHANICAL CIRCULATORY SUPPORT

Tuesday, April 4, 2017
7:45 AM – 12:50 PM
Manchester Grand Hyatt Hotel, San Diego, California, USA

SEAPORT F - G

ISHLT MASTER CLASS IN
MECHANICAL CIRCULATORY SUPPORT

Tuesday, April 4, 2017

Scientific Program Committee

Chair: Stavros Drakos, MD, PhD, University of Utah School of Medicine, Salt Lake City, UT, USA
Co-Chair: Ivan Netuka, MD, PhD, Institute for Clinical and Experimental Medicine, Prague, Czech Republic

Members: Keith Aaronson, MD, University of Michigan, Ann Arbor, Michigan, USA
Anson Cheung, MD, University of British Columbia, Vancouver, BC, Canada
Chris Hayward, MD, St. Vincent's Hospital, Sydney, Australia
Lars Lund, MD, Karolinska Institute, Stockholm, Sweden

Course Summary

The MCS Master Class 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 course setting will generate a highly interactive environment composed of a small group of individuals and designed to enhance individual expertise and network development. Utilizing the concept of "convergent discussion" and the technique of "audience response system", faculty moderators will use complex situations and controversial statements during practical case presentations in order to lead the group through active audience participation, towards specific answers based on practice gaps and learning objectives. The MCS Master Class is arranged in advanced breakout sessions for every participant to take full advantage of an integrated curriculum and the exceptional networking opportunity. The specific topics are devised according to defined clinical practice gaps in this fast developing specialty.

Practice Gaps

1: The outcomes of cardiogenic shock have remained poor, large randomized trials are scarce and the management of these patients remains challenging. Comprehensive clinical expertise of advanced usage of evolving MCS options including patient and device selection and transition to next step therapies constitute currently major limitations in the care of these critically ill patients.

2: Specific approaches to optimize the exercise capacity of MCS patients is an unmet clinical need.

3: The disparities in the cardiac recovery outcomes observed between various centers indicate that implementing targeted patient selection and subsequently effective diagnostic and therapeutic protocols to facilitate cardiac recovery is challenging for the majority of practitioners.

4: The diagnosis and management of complex and combined adverse events such as cerebrovascular hemorrhagic accidents, device thrombosis and gastrointestinal bleeding is challenging and practitioners often face difficulties in developing effective strategies to appropriately identify and treat these adverse events.

5: The diagnostic and therapeutic approaches for early and late right ventricular failure in MCS patients has been evolving with the introduction of new diagnostic criteria and new technologies/therapeutic options. Such practice gaps in specialist knowledge and clinical skills constitute major limitations in the care of MCS patients.

6: With the rapid evolution of minimally invasive surgical approaches the individual practitioners may lack the extensive expertise required to appropriately select patients and surgical approaches to achieve the best possible outcome.

Educational Goals
The overarching goal is to provide an advanced learning opportunity for specialists and developing experts in the field of MCS and devices for treatment of heart failure patients.

Target Audience
The target audience for this class includes cardiothoracic surgeons and cardiologists with MCS experience, specialists in heart failure care, allied health professionals with involvement in MCS patients, VAD coordinators, transplant coordinators, critical care specialists, and heart transplant professionals.

Learning Objectives
Upon completion of the Master Class, participants will be able to:

1: Identify the challenges during the diagnosis and management of complex cardiogenic shock patients and the potential benefits of a multidisciplinary team approach.
2: List effective strategies to optimize exercise capacity and facilitate myocardial recovery in MCS patients.
3: Explain how to appropriately select patients for long-term MCS options with particular consideration in anticipated surgical management aspects.
4: Describe how to develop a systematic approach to diagnosis and therapy of complex and combined adverse events such as device thrombosis, recurrent gastrointestinal bleeding and stroke.
5: Name the diagnostic and therapeutic challenges of early and late RV failure.

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.

ANCC Credit
AMEDCO is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.
This course is co-provided by AMEDCO and ISHLT. Maximum of 4.25 contact hours.

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.

SCIENTIFIC PROGRAM SCHEDULE

7:00 AM – 7:45 AM
REGISTRATION AND MORNING COFFEE

7:45 AM – 8:00 AM
WELCOME AND INTRODUCTIONS
Stavros Drakos, MD, PhD, University of Utah School of Medicine, Salt Lake City, UT, USA

8:00 AM – 9:00 AM
SMALL GROUP INTERACTIVE DISCUSSION A: ACUTE MCS FOR PROFOUND CARDIOGENIC SHOCK/INTERMACS 0-1 PROFILES
Moderator: Stavros Drakos, MD, PhD

8:00 AM
CASE SCENARIO: Management Challenges for 'Crash and Burn' Patients: 'Shock Team' Approach to MCS
Hiroo Takayama, MD, Columbia University, New York, NY, USA

Teaching/Discussion Points

1. Challenges of assessing patients in profound cardiogenic shock:
    a. Lack of universally accepted classification system of cardiogenic shock and its influence on patient management
    b. Important factors to consider at initial evaluation
2. Challenges in choosing the appropriate timing for MCS
3. Challenges in choosing the appropriate MCS device
    a. Theoretical advantages/disadvantages of each device
    b. Existing clinical evidence
4. SHOCK team approach to cardiogenic shock: patient benefits and logistical difficulties
5. Initial attempts in developing an algorithm for MCS therapy for cariogenic shock

8:30 AM
CASE SCENARIO: Transition from Short to Long-Term Support
Keith Aaronson, MD, University of Michigan, Ann Arbor, MI, USA

Teaching/Discussion Points

1. When is the optimal time to transition from temporary to durable MCS?
2. How should you I assess and prioritize end organ function in the decision to proceed with durable MCS?
3. How does temporary MCS affect the risk of RV failure post durable VAD?
4. What are the other considerations when bridging from temporary to durable MCS?

9:00 AM – 9:05 AM
Speakers switch rooms; delegates remain seated

9:05 AM – 10:05 AM
SMALL GROUP INTERACTIVE DISCUSSION B: COMPLEX COAGULATION ISSUES IN MCS PATIENTS
Moderator: Ivan Netuka, MD, PhD

9:05 AM
CASE SCENARIO: Recurrent GI Bleeding and Pump Thrombosis
Simon Maltais, MD, PhD, Mayo Clinic, Rochester, MN, USA

Teaching/Discussion Points

1. Definition, risk factors, and the inevitable “conundrum”.
2. Treatment of recurrent GI bleeding – overreacting on an imprecise science?
3. Treatment of clotting while bleeding: how to treat medically, and when to refer for surgery.
4. Evidence-based approach for pump thrombosis: from prevention to treatment algorithm.
5. Implications and management of neurologic events on treatment.

9:35 AM
CASE SCENARIO: Management of Cerebrovascular Hemorrhagic Accidents
Chris Hayward, MD, St. Vincent's Hospital, Sydney, Australia

Teaching/Discussion Points

1. Epidemiology and risk factors for intracerebral hemorrhage (ICH) in the MCS population.
2. After the bleed, where to next? What are the immediate management priorities?
3. Recommendations for anticoagulation in the setting of intracerebral hemorrhage.
4. Current evidence for alternate anticoagulation options available to minimize ICH.
5. Should we expect a poor outcome post ICH?

10:05 AM – 10:30 AM
COFFEE BREAK

10:30 AM – 11:30 AM
SMALL GROUP INTERACTIVE DISCUSSION C: PATIENT SELECTION AND MANAGEMENT (I)
Moderator: Stavros Drakos, MD, PhD

10:30 AM
CASE SCENARIO: Bridge to Recovery: From Prediction to Implementation
Snehal Patel, MD, Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, NY, USA

Teaching/Discussion Points

1. What accounts for the observed differences in rates of recovery between registry analysis and prospective single center studies?
2. Managing and testing for recovery is hard work… can we target specific populations to limit the effort? – The role of clinical prediction tools.
3. The role of adjuvant pharmacologic therapy in addition to mechanical unloading of the left ventricle to promote reverse remodeling.
4. Practical considerations for cardiac recovery testing – when, how, and what are the endpoints.
5. Recovery or remission? Histopathologic changes and long term follow up of explanted patients.

11:00 AM
CASE SCENARIO: Optimizing the Exercise Capacity of Chronic MCS Pts: Implications for Heart Recovery Assessment
Bart Meyns, MD, PhD, University Hospitals Leuven, Leuven, Belgium

Teaching/Discussion Points

1. Indicate the limitations of exercise capacity in MCS patients, the evolution in time after MCS implantation and illustrate the effect of pump rotational speed.
2. Explain the mechanism of limitation of exercise capacity and learn from patient variability.

3. Indicate the role of potential underlying mechanisms such as underlying left and right ventricular function, anemia, and peripheral muscle deficiencies.
4. Understand the differences in exercise performance of patients after heart transplantation.
5. Draw conclusions on how to optimize exercise capacity

11:30 AM – 11:35 AM
Speakers switch rooms; delegates remain seated

11:35 AM – 12:35 PM
SMALL GROUP INTERACTIVE DISCUSSION D: PATIENT SELECTION AND MANAGEMENT (II)
Moderator: Ivan Netuka, MD, PhD

11:35 AM
CASE SCENARIO: Early and Late RV Failure: From Prediction to Management
Stephen H. McKellar, MD, University of Utah, Salt Lake City, UT, USA

Teaching/Discussion Points
1. RV failure risk prediction: how useful are risk prediction tools and models?
2. RV failure risk minimization: pre- and peri-operative measures.
3. TAH vs. BiVAD vs. temporary RVAD: how to select and deciding on prophylactic versus “as needed” RVAD?
4. Post-op management: speed optimization and medical therapy.
5. Late RV failure: prediction, prevention and management.

12:05 PM
CASE SCENARIO: Minimally Invasive Surgical Approaches from Implant to Explant
Ivan Netuka, MD, PhD, Institute for Clinical and Experimental Medicine, Prague, Czech Republic

Teaching/Discussion Points
1. Advantages and disadvantages of less invasive surgical MCS device implantation
2. Technical “do” and “don’t” for less invasive surgical MCS device implantation
3. Alternative outflow options for usual anatomy
4. Technical tips for less invasive LVAD explantation for cardiac recovery

12:35 PM – 12:50 PM
CLOSING REMARKS
Ivan Netuka, MD, PhD, Institute for Clinical and Experimental Medicine, Prague, Czech Republic

12:50 PM
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