

CONGENITAL CARDIAC ANESTHESIA SOCIETY

CCAS 2022 Annual Meeting

March 31, 2022

Tampa, FL

THURSDAY, MARCH 31, 2022

6:00 AM – 5:00 PM

Registration

Session: PBLDs/Round Tables - *PBLDs and Round Tables Offered Virtually*

6:15 AM – 7:15 AM

PBLD 1: Mommy and Me Anesthesia: Caring for the Pregnant Patient with Adult Congenital Heart Disease

Viviane G. Nasr, MD; Katherine L. Zaleski, MD

*Objectives:**Upon completion of this PBLD, the participant will be able to:*** Appreciate the "normal" physiological changes of pregnancy, with an emphasis on the cardiovascular system.*** Discuss risk stratification for the pregnant patient with congenital heart disease.*** Formulate a safe, comprehensive periprocedural care plan for the pregnant patient with adult congenital heart disease.*

6:15 AM – 7:15 AM

PBLD 2: Patent Ductus Arteriosus (PDA) Stent Placement in Neonate with Pulmonary Atresia and Intact Ventricular Septum (PA-IVS)

Mikel Gorbea, MD; Faith J. Ross, MD

*Objectives:**Upon completion of this PBLD, the participant will be able to:*** Review the spectrum of morphologies and unique physiologic features associated with pulmonary atresia with intact ventricular septum.*** Discuss the preoperative evaluation and anesthetic considerations unique to transcatheter ductal stent placement in infants with ductal dependent circulation.*** Identify the key perioperative challenges encountered in managing neonates presenting for interventional transcatheter procedures in the cardiac catheterization suite.*** Describe appropriate consultation, preoperative planning, anesthetic risks, and palliative options for infants scheduled for interventional transcatheter placement of ductal stents.*

6:15 AM – 7:15 AM

PBLD 3: Anesthesia for the Hybrid Procedure for HLHS

Nina Deutsch, MD; Andrew T. Waberski, MD

*Objectives:**Upon completion of this PBLD, the participant will be able to:*** Discuss the indications for and timing of the hybrid procedure as compared to the Norwood palliative procedure.*** Develop an anesthetic plan for a neonate undergoing a hybrid procedure.*** Simulate therapies for anticipated complications from the hybrid procedure.*

6:15 AM – 7:15 AM

RT 1: So You Like Blue Babies? - Entering the Field of Congenital Cardiac Anesthesiology

Megan L. Albertz, MD; Nicholas M. Houska, DO

*Objectives:**Upon completion of this Roundtable Discussion, the participant will be able to:*** Discuss the current state of congenital cardiac anesthesia workforce and the occupational outlook for the future of the specialty.*** Describe training pathways in congenital cardiac anesthesia and how ACGME accreditation will impact fellowship training.*** Recognize the challenges in transitioning from trainee to attending and examine resources to improve personal and professional outcomes in the first-year post-training.*

6:15 AM – 7:15 AM

RT 2: ERAS in CV Surgery

Calvin Kuan, MD; Zoel Quinonez, MD

*Objectives:**Upon completion of this Roundtable Discussion, the participant will be able to:*** Understand pathophysiologic considerations for appropriateness of ERAS in the pediatric and adult patient with CHD.*** Name three evidence based ERAS interventions you can implement in your institution.*** Describe logistical barriers to implementation of ERAS and how you can overcome them.*

6:15 AM – 7:15 AM

RT 3: The Royal Treatment: Perioperative Hemostatic Management for Pediatric Patients with Severe Hemophilia

Laura Downey, MD; Nina A. Guzzetta, MD

*Objectives:**Upon completion of this Roundtable Discussion, the participant will be able to:*** Understand the pathophysiology and treatment of severe hemophilia and the implications for congenital cardiac surgery requiring cardiopulmonary bypass.*

- * Learn about new treatments for hemophilia patients and how this affects heparin management on CPB.
- * Discuss the perioperative management of hemophilia patients for cardiac surgery with CPB.
- * Practice interpreting VET and determining appropriate hemostatic treatment in patients with complex bleeding disorders.

Breakfast with Exhibitors 6:30 - 7:20 AM

7:20 AM – 7:35 AM

Welcome and Outline of Educational Program

Gregory J. Latham, MD; Mark D. Twite, MD, BCh

Session I: Controversies in the Approach to the Child and Family with CHD

Moderators: Stephanie N. Grant, MD; Gregory J. Latham, MD

7:35 AM – 8:00 AM

Severe Chromosomal Abnormalities and CHD: Is There One Correct Answer?

Lawrence I. Schwartz, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Review characteristics of severe chromosomal abnormalities, including congenital heart anomalies.
- * Understand the anesthetic implications of severe chromosomal abnormalities for surgical repair of congenital heart disease.
- * Examine the ethical dilemmas with reparative congenital heart disease surgery for patients with severe chromosomal abnormalities.

8:00 AM – 8:25 AM

When to Cannulate? ECMO and Neurodevelopmental Outcomes

Melania Maria Bembea, MD, PhD, MPH

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Describe the epidemiology and outcomes of children with CHD requiring ECMO support.
- * Discuss ECMO initiation considerations for the child with single ventricle physiology.
- * Discuss neurodevelopmental outcomes after ECMO and future directions for clinical follow-up programs and research.

8:25 AM – 8:50 AM

The What, Why and How of Palliative Care in CHD

Katie Moynihan, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Understand the current landscape of end of life care for children with CHD and differences with other life threatening disease processes.
- * Appreciate the dispelled myths and benefits of palliative care in children with CHD.
- * Propose some communication tools for applying palliative care principles in difficult peri-operative conversations.

8:50 AM – 9:10 AM

Q & A Discussion

Coffee Break with Exhibitors 9:10 - 9:40 AM

Session II: Focus on a Lesion: HLHS - Part 1

Moderators: Anne E. Cossu, MD; Jamie McElrath Schwartz, MD

9:40 AM – 10:00 AM

Dolly D. Hansen, MD Lecture: Evolution of Surgical Management on Hypoplastic Left Heart Syndrome - A Historical Perspective

Marshall L. Jacobs, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Understand the early efforts to address HLHS surgically that preceded Norwood's innovative approach.
- * Understand the nature of some of the obstacles to broader early acceptance of Norwood's approach to palliation of HLHS.
- * Understand the contemporary staged approach to surgical reconstructive surgery for HLHS and the role for transplantation in the current era.

10:00 AM – 10:20 AM

Joint Lecture with PCICS - Contemporary Considerations in the Preoperative Management of Hypoplastic Left Heart Syndrome

Andrew Smith, MD, MSCI, MMHC

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Identify factors apparent in the prenatal period that may predict perioperative instability.
- * Recognize preoperative management considerations of premature and VLBW infants with HLHS.
- * Understand preoperative patient-specific factors that may predict challenges in management of intra and postoperative hemodynamics.

10:20 AM – 10:35 AM

Q & A Discussion

Session III: Focus on a Lesion: HLHS - Part 2

Moderators: Chinwe C. Unegbu, MD; David F. Vener, MD

10:35 AM – 10:55 AM

What Do I Need To Know: Anesthesia for the Norwood

Rebecca Scholl, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Evaluate the anesthetic management of HLHS patients - what's new!*
- * Appreciate how anesthesia decisions impact Stage I outcomes.*
- * Future direction? Explore the anesthetic challenges for biventricular staging and repair.*

10:55 AM – 11:15 AM

Joint Lecture with AmSECT - STARTING Single Ventricles Out Right: A Perfusion Technique to Eliminate Ischemic Time and Hypothermia during Norwood Operation

Travis Siffring, CCP

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Describe STAR (Sustained Total All-Region) perfusion.*
- * Discuss the application of this technique.*
- * Highlight the similarities and differences in the Norwood operation with STAR vs traditional perfusion.*
- * Discuss outcomes of STAR vs traditional perfusion at a single center.*

11:15 AM – 11:35 AM

What's on the Horizon? --- Challenges, Innovations and Unanswered Questions in HLHS

Marshall L. Jacobs, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Become familiar with the status of "regenerative medicine" in the form of stem cell therapy as it pertains to HLHS.*
- * Become familiar with approaches to improving the efficiency and durability of the Fontan circulation, including the possibility of mechanical support/enhancement of Fontan physiology.*
- * Become familiar with "cutting edge" strategies of mitigating the risks associated with intact atrial septum/highly restrictive atrial septum in HLHS, including the potential role of fetal and transitional interventions.*

11:35 AM – 11:50 AM

Q & A Discussion

Lunch with Exhibitors

11:50 AM - 12:50 PM

Session IV: Best Posters and Research Award Update

Moderator: Nischal K. Gautam, MD

12:50 PM – 1:30 PM

Best Posters (Five Best)

Objectives:

Upon completion of this session, the participant will be able to:

- * Discuss the latest scientific studies that are being performed in pediatric cardiac anesthesia to advance the specialty.*
- * Discuss the advantages and disadvantages of new techniques and data related to pediatric cardiac anesthesiology studies.*
- * Understand specific lessons learned from the literature as they relate to various aspects of pediatric cardiac anesthesia.*

1:30 PM – 1:40 PM

CCAS Initiatives Update

Luis M. Zabala, MD

Session V: Failing Hemodynamics

Moderators: Destiny F. Chau, MD; Rodrigo Lopez Barreda, MD

1:40 PM – 2:05 PM

RV Function and RV Failure in CHD/HLHS

Mark Friedberg, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Review normal RV function and how we assess it by echocardiography.*
- * Identify mechanisms leading to RV failure in HLHS.*
- * Identify the impact of the left ventricle on RV function in HLHS.*

2:05 PM – 2:25 PM

The Failing Glenn Circulation

Sana Ullah, MB, ChB, FRCA

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Understand the common etiological factors leading to Glenn failure.*
- * Describe the clinical features of the failing Glenn.*
- * Understand the therapeutic options for a failing Glenn.*

2:25 PM – 2:45 PM

Identifying the Failing Fontan

Lindsey Loveland Baptist, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Describe common clinical findings that indicate a failing Fontan circulation.*

- * Differentiate between early and late Fontan failure.
- * Describe common assessments and their findings used to understand the degree of dysfunction including laboratory, catheter-based assessment, echo, MRI.
- * Predict declining function of the Fontan circulation based on hemodynamic assessment.
- * Understand risk stratification in Fontan physiology.

2:45 PM – 3:00 PM

Q & A Discussion**Ice Cream Break with Exhibitors****3:00 - 3:30 PM****Session VII: Workshops (Optional)**

3:15 PM – 5:15 PM

WORKSHOP: Extracorporeal Life Support: Ventricular Assist Device (VAD); Options, Decisions and Management

Coordinator: Pablo Motta, MD

Erica P. Lin, MD; Travis Siffring, CCP; Sana Ullah, MB, ChB, FRCA

Objectives:

Upon completion of this workshop, the participant will be able to:

- * Identify various forms of VAD support utilized in the pediatric patient population.
- * Explain the transition from CPB to full VAD support physiology.

3:15 PM – 5:15 PM

WORKSHOP: When One Size Doesn't Fit All: What's New in Hemostasis and Coagulation Management for Congenital Cardiac Surgery Patients?

Coordinator: Laura Downey, MD

Destiny F. Chau, MD; Anne E. Cossu, MD; David Faraoni, MD, PhD, FAHA; Nischal K. Gautam, MD; Stephanie N. Grant, MD

Objectives:

Upon completion of this workshop, the participant will be able to:

- * Understand the prevalence and management of preoperative anemia in congenital cardiac surgery patients and how this affects patient outcomes.
- * Discuss the risks and benefits of non-red blood cell transfusions in pediatric cardiac surgery patients.
- * Discuss the use of transfusion algorithms for optimizing hemostasis and reducing donor exposures in congenital cardiac surgery.
- * Demonstrate proficiency of interpreting VET and determining appropriate hemostatic treatment.
- * Understand risk of bleeding and thrombotic risks in pediatric patients presenting with COVID-19 and appropriate treatments

3:15 PM – 5:15 PM

WORKSHOP: Quality Improvement Methodology and Safety In A High Risk Environment: Congenital Cardiac Anesthesia

Coordinator: Morgan L. Brown, MD, PhD

Phillip S. Adams, DO; Stephen J Gleich, MD, FAAP

Objectives:

Upon completion of this workshop, the participant will be able to:

- * Review quality improvement methodologies to improve your local practice through demonstration and group discussion.
- * Examine handovers and the role they play in creating a safe culture in your practice.
- * Discuss the management of medication errors through an apparent cause analysis.

3:15 PM – 5:15 PM

WORKSHOP: Academic Career in Pediatric Cardiac Anesthesia: Trials and Tribulations

Coordinator: Chandra Ramamoorthy, MBBS, FRCA

James A. DiNardo, MD; Nina A. Guzzetta, MD; Zoel Quinonez, MD

Objectives:

Upon completion of this workshop, the participant will be able to:

- * Identify challenges in forging an academic career in anesthesiology.
- * Understand whether easier or more difficult in Pediatric Cardiac Anesthesiology.
- * Discuss traditional research pathway.
- * Identify newer academic opportunities.
- * Understand publishing and flourishing.
- * Identify other forms of recognition for academic work.

Session VI: New Developments in CHD

Moderators: Rania K. Abbasi, MD; Jimmie E. Colon, MD

3:30 PM – 3:50 PM

Pediatric Interventional Cardiology: Innovations and Complications

David Nykanen, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Identify barriers to innovation in the development of new treatment strategies.
- * Anticipate complications in transcatheter closure of a PDA in a premature neonate.
- * Identify etiology of hemodynamic instability during transcatheter rehabilitation of the RVOT in Tetralogy of Fallot.

3:50 PM – 4:10 PM

Clinical Innovations in Electrophysiology for Pediatric Congenital Heart Disease

Manchula Navaratnam, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Identify advances in implantable devices and cardiac resynchronization therapy for pediatric cardiac and congenital heart disease.*
- * Discuss implications for anesthesia and peri-operative management.*

4:10 PM – 4:30 PM

Optimal Hgb - From Preop Anemia Clinic Through the ICU

Dheeraj Goswami, MD

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Evaluate the peri-operative risk factors for pediatric cardiac patients that may affect optimal hemoglobin through the peri-operative period.*
- * Review the recent literature regarding blood utilization.*
- * Discuss the novel concepts and therapies that may guide blood utilization in the coming years.*

4:30 PM – 4:50 PM

The High-Risk Transplant - Anesthetic Perspective

Christopher T. McKee, DO

Objectives:

Upon completion of this lecture, the participant will be able to:

- * Describe factors that predispose patients to intraoperative risk.*
- * Identify strategies to optimize pre-transplant management.*
- * Formulate intraoperative strategies to mitigate risk in the post-operative period.*

4:50 PM – 5:10 PM

Q & A Discussion

Session IX: Professor Poster Rounds

5:15 PM – 6:00 PM

Professor Poster Rounds

Objectives:

Upon completion of this session, the participant will be able to:

- * Discuss the latest scientific studies that are being performed in pediatric cardiac anesthesia to advance the specialty.*
- * Discuss the advantages and disadvantages of new techniques and data related to pediatric cardiac anesthesiology studies.*
- * Understand specific lessons learned from the literature as they relate to various aspects of pediatric cardiac anesthesia.*

**CCAS Reception
6:00 - 7:30 PM**