Cardiology 2008

CARDIOLOGY 2008 DAILY BRIEFING

FEBRUARY 7 - THURSDAY

Thursday Overview

By Gil Wernovsky, MD

On behalf of the organizing committee and The Cardiac Center at The Children's Hospital of Philadelphia, welcome to Day Two of Cardiology 2008! Today's schedule is jam-packed, with a mix of 'sunrise' hands-on meetings, large group plenary sessions in the morning, and smaller-group subspecialty sessions in the afternoon.

In the morning, we will review two complex congenital lesions: truncus arteriosus and pulmonary atresia with intact ventricular septum. As we have done in previous meetings, we will first review the pertinent anatomy utilizing slide images, 'live' demonstrations of anatomic specimens on the 'heart-cam'® and echocardiography. These presentations will be followed by surgical and catheterization approaches, early cardiac outcomes, and the important later outcomes affecting quality of life. These two plenary sessions will be followed by 3 featured talks on new research and technology. The morning session will conclude with an outdoor lunch buffet.

Our second all-day poster session will feature 27 new studies, with an emphasis on inpatient management and evaluation of new pharmacotherapies. Discipline-specific breakouts will be held all afternoon, including concentrated reviews of electrophysiology, interventional catheterization, echocardiography, cardiac intensive care, cardiovascular nursing, pediatric perfusion and cardiovascular administration. The later afternoon sessions will feature a mini symposium on pulmonary valve replacement, a 'stump the faculty' session with complicated echo images, and a combined session with nursing and administration including an update on the Nightingale initiatives. Our first poster session will be held with 28 new presentations from all around the globe, with a focus on new investigations regarding the care and outcomes for children with single ventricle. Please remember to visit our exhibitors over the course of the meeting and enjoy the day!

Image Is Everything

By Girish Shirali, MBBS, FACC, FAAP

This 6-hour workshop featured cardiac morphologists (Prof. Robert Anderson and Dr. Paul Weinberg), cardiac imaging specialists (Drs. Meryl Cohen, Anthony Hlavacek and Girish Shirali), and cardiac surgeons (Drs. Tom Karl and Jim Quintessenza) who all combined to provide their insights into a wide range of cardiac structural defects. The lesion highlighted today was Atrioventricular Septal Defect. Dr. Weinberg demonstrated the spectrum of this defect using the heart-cam. Prof. Anderson expounded on the fundamental differences between the left AV valve in AV septal defect and the normal mitral valve. The surgeons discussed what they need to know before and after surgery. Dr. Shirali demonstrated the value of 3DE imaging for this defect, and Dr. Cohen presented a systematic approach to postoperative TEE evaluation. Other highlights included intraoperative videos by Dr. Quintessenza. Dr. Hlavacek showed spectacular 3D reconstructions of CT angiograms on children with pulmonary venous abnormalities and also on children with aortic arch abnormalities.

Cardiac Simulation Program

By Stacie B. Peddy, MD

A diverse group of practitioners took part in the second annual Cardiac Simulation program yesterday. *"Practice Makes Perfect: Cardiac Postoperative Simulation & Mock Codes"* kicked off bright and early Wednesday morning and welcomed 24 practitioners from 3 countries and included cardiologists, intensivists, advanced practice nurses and anesthesiologists.

Through technology and techniques developed by CHOP's simulation center, cardiac intensive care scenarios were simulated for a truly "hands-on" clinical experience. Working in small groups, the participants were taken through many of the predictable (low cardiac output, tachyarrhythmias) and sudden, unanticipated events (respiratory failure, cardiac tamponade and shunt thrombosis) that characterize the 24-48 hours after cardiopulmonary bypass. In addition, preoperative scenarios (hypercyanotic spell in the unrepaired Tetralogy of Fallot) and medical scenarios (acute fulminant myocarditis and seizures in a Fontan patient) were used as well.

Each Simbaby station was staffed with clinical and simulation facilitators and teams of 5-6 participants "rotated" through all 8 scenarios. Through open communication and role assignment each team actively worked through the clinical scenario presented to them. The learning objectives were reviewed and an inclusive debriefing session was given at the completion of each scenario.

Through simulation we all trained to excellence!!!

Opening Conference

By Alan H. Friedman, MD

On a beautiful winter afternoon in Scottsdale, Arizona, Dr. Gil Wernovsky welcomed a packed ballroom at the Hyatt Regency Resort and Spa at Gainey Ranch to Cardiology 2008, the 11th annual update on pediatric cardiovascular disease. The international audience was treated to the insightful introductory remarks from the renowned professional football coach, Dick Vermeil. The "Coach," as he is known, has had tremendous professional success on and off the field by employing a leadership style that emphasizes values, teamwork, diligence and hard work. He emphasized that winning isn't complicated, but rather it's people who complicate winning. Drawing analogy to the gridiron, he stressed that putting together a team, cardiovascular or athletic, was based upon clearly setting a plan, defining and then sharing the vision to all members of the team and building meaningful relationships with all members of the team. Caring about the people and having fun in the process creates a format for success he believes.

Dr. Andrew Redington delivered a thought provoking discussion as to whether there should be separate practices for the adult and pediatric patient with congenital heart disease (CHD). He presented data that suggests that there are about 850,000 adults with CHD in the US, and that about half of these people will require specialized CHD care. In this example, it is estimated that there would be a need for some 210 Adult Congenital Heart Centers. Currently, there are less than a dozen Centers that have the requisite patient population and physician/nursing staff established to provide such care. Dr. Redington also stressed that transitioning care for these patients is the ideal approach, and that the transfer of care to a new practice or location results in poor patient follow-up and patient investment in their own healthcare. He proposed a consolidated, centralized approach to the delivery of care for the adult with congenital heart disease.

Published by

CONGENITAL CARDIOLOGY TODAY
www.CongenitalCardiologyToday.com

Dr. Marc de Leval then spoke on the importance of evidence-based medicine in the innovation of surgical practice. To this end, he stressed the need for randomized, controlled trials. The alternative to this, he described as "unreliable medicine". In the world of congenital heart surgery however, one is often relegated to use information from uncontrolled, non-randomized studies, especially when there are no alternative methods or approaches. He cited the example of the Norwood operation as an example of this practice.

Dr. Emile Bacha presented a timely and informative discussion that explored how one can measure a congenital heart surgeon's performance. He suggests that we should focus on competence rather than performance and provided examples of how a standardized mortality ratio and a cumulative sum analysis could be used to assess certain elements of competence and performance. He pointed out that most significant intraoperative adverse events are, in fact, not technical in nature. Communication skills, leadership and cognition skills were discussed as non-technical factors that are key components of a surgeon's competence. Dr. Bacha used an interesting example that sometimes the surgeon's "best performance" is demonstrated when the patient doesn't in fact, have surgery.

Dr. Edward Bove discussed the current training models for the congenital heart surgeon. The process is a long one, often requiring as many as 16 years of training following college. A team approach to training is mandatory, and a balance must be reached between service and education. He also addressed the difficulties in assessing competency of the young congenital heart surgeon, and emphasized that the days of the "apprentice method" for teaching congenital heart surgery are gone. He described the current efforts to create a structured curriculum. There is no room for "practice on patients" by the novice in the current model. Virtual reality and simulation training should be incorporated into the training model to provide the opportunities to learn and develop expertise. There is currently a programmatic approach being developed by the ABTS to have special certification for the congenital heart surgeon.

Kim Delaney then spoke on the efforts Hospital administrations can make to do a better job of retaining and recruiting cardiovascular nurses. Recruitment continues to be a challenge for all, but retention is the key to building the strongest nursing programs, composed of a multi-generational cohort of dedicated nursing professionals.

Dr. Wernovsky then closed the session by addressing the question of whether we should change the follow-up paradigm for patients with congenital heart disease. He emphasized that one needs to consider the length of time of follow-up, the developmental stage, including adolescence, of the patients being studied, and the delayed and time-related outcomes.

The opening session was informative, insightful and interesting and has set the stage for what promises to be a wonderful, enlightening and enjoyable conference.

Risky Business: Delivering Safer Care to Our Patients

By Geoff Bird, MD

The Wednesday patient safety preconference, *"Risky Business: Delivering Safer Care to Our Patients,"* was an amazing experience. Drawing on the success of similar meetings at Great Ormond Street Hospital in London (November 2006), and Children's Hospital Boston (October 2007) the organizing committee was delighted to be able to bring such a wonderful group of speakers together in the name of inspiring attendees to become change agents back home at their own institutions.

Martin Bromiley, Senior First Officer, bmi, led the session by setting the stage with a poignant outline of the events and subsequent inquiry around the death of his wife, Elaine, due to a medical error.

Guy Hirst, BA Training Captain, Ret'd, followed on by using his years of experience in aviation to frame a commentary on the Con-

corde disaster and the ways in which that occurrence has shaped subsequent changes in aviation safety.

Marc de Leval, pediatric cardiothoracic surgeon, then provided a brief overview of Bristol Inquiry. He used the ten years since the famous Inquiry to outline the knock-on effects which that defining moment has had on patient safety. Patient safety has advanced since Bristol, but we've also a long way to go.

Steven Altschuler, the Children's Hospital of Philadelphia's Chief Executive Officer followed next with a discussion of how administration needs to frame success in patient safety. Commiserating with clinicians in the audience, he noted that regulatory oversight by government may have its downside.

Kathy Jenkins, at Children's Hospital Boston switched gears from "Can we risk adjust for patient safety?" to "Should we risk adjust for patient safety?" She outlined her center's early attempts to understand variations in outcomes. There are difficult questions about adjusting for, versus directly addressing modifiable and unmodifiable factors important to patient satisfaction. The Boston team has taken this work several steps further in using the identified risk groups for targeted intervention.

Martin Bromiley returned to the stage to outline the ways in which he has begun to move on from the events of his wife's death from medical error. As an aviator he noted the difference between the medical investigation that sought to determine what happened and what to do with those involved, versus aviation's approach to discover what happened and then what can be done to prevent future occurrence.

Tom Henricks, former NASA astronaut and current President of Aviation Week, followed by outlining organization, communication, and leadership styles, and the ways in which organizations can both try to correct and fail to correct decision-making processes after disasters like Challenger and Columbia. Narrating a mission video, Henricks enthralled the audience with a unique 22,500 mile view of leadership and teamwork. We could almost feel the sensation of strapping on and "wearing," as he put it, the enormous shuttle system.

Michael Useem, Professor at the Wharton School of Business, kept the audience riveted with his interactive style to "Making leadership decisions under stress." For the safety maven, safety is not easy or a "slam dunk." In a session with an audience "volunteer," we learned that "naturally-born" leaders are not "naturally born," – they are developed. Three methods include: (1) coaches and mentors, (2) being a self-directed student of leadership, and (3) taking opportunities to do what one had not done before.

Allan Goldman, from Great Ormond Street, discussed *"How Safe Is Safe Enough?"* using high reliability organization theory, normal accident theory, discussion of the Mumbai vs UK railway systems, the aim for zero harm, role of financial pressures, and the different perspectives of parent versus doctor. We learned that the "answer" to the "Safe enough?" question lies in, in the end, achieving a balance of many factors…

Marc de Leval, London, Melvin Almodovar, Boston, and James Steven, Philadelphia, worked together to outline the ways in which each of the three following factors can play roles as both hero and hazard in patient safety: humans, healthcare information technology, and regulatory authority.

Guy Hirst took us to the John Radcliffe Hospital to learn "What can pilots learn from watching surgical teams?" To come to a common situational awareness of shared events, he discussed an intervention focusing on effective briefing and effective debriefing. This method asks "could we get it better next time," or make the procedure more efficient?

Kathy Jenkins returned to explore ways in which Children's Hospital Boston is trying to achieve a sustained change in culture through, in part, a formal quality and safety leadership development program using case examples from NASA and aviation. Boston offers the chance at institutional grant awards to team members with a contribution to make towards improved safety. Dr. Jenkins sees "sustaining a change in culture" as "adjusting normative behavior."

Dick Vermeil, Super Bowl Champion NFL coach, closed the day with his seven common sense principles of leadership: (1) you have to like people, (2) be a good example as a leader, (3) create an atmosphere in which people enjoy working and enjoy giving of themselves, (4) define, delegate, then lead. Leadership of high-performance teams is shared leadership, (5) bring energy to your workplace, (6) build relationships as you implement your process and give more than you expect in return, and (7) be sincere in establishing credibility. Noting that big egos weren't a frequent fixture on his three NFL teams, Coach Vermeil gave us all food for thought with a closing thought that "No one on the team can be allowed to become bigger than the team."

It was a heartfelt and masterfully delivered close to a wonderful day. The whole group of speakers came across as dynamic professionals who were committed to helping all in the audience solve patient safety problems back home. All of our patients are better off for us having had the chance to take part.