Daily Briefing

SEPTEMBER 21st - MONDAY (FINAL DAILY)

On The Scene: Live From PICS~AICS 2015 Day 3

By Karim Diab, MD

Hopefully you got to relax and enjoy the *PICS Gala Dinner* at Arias Palm Pool after a long day of didactic and breakout sessions on Sunday at *PICS~AICS 2015*!

Sunday sessions of **PICS~AICS 2015** were marked by a day full of didactic lectures and updates in various areas of interventions for structural and congenital heart disease.

The morning started with an update on clinical trials with discussion on Device Development and EFS by Dr. Nicole Ibrahim, Atrial Decompression for Left Heart Failure by Dr. Hans Figulla and PARCS and COAST II trials by Dr. Richard Ringel. The latter showed that covered stents are highly effective for relieving coarctation and repairing aortic wall injury with low incidence of serious complications (serious arterial access site injury <1%), and with a common reintervention for stent redilation (17%). Dr. Ringel also talked about the Pulmonary Artery Repair With Covered Stents (PARCS) study which showed that about 88% of patients with RVOT tears had homografts, and 43% developed tears during redilation. The study showed that covered CP stents make transcathter PVR safer, and CCPS use might decrease the risk of contained tears becoming uncontained.

This was followed by an update on occlusion device studies such as: the St. Jude ASO, the GSO, NitOclud PDA device, the LAA devices, Mitraclip, Medtronic self-expanding PV and the Advanta V12 covered stent. Dr. Zahid Amin talked about the SJM post-approval study that showed 0.3% erosion events with a 0.152 erosion incidence per 100 patient years. He also went over the ASO 522 study, the FDA mandated erosion study to further evaluate the potential risk factors associated with erosion. He mentioned that currently, only 46 of the 450 sites in the US are currently activated and encouraged operators to enroll. So far, no erosions have been reported by the study participants.

Dr. John W. Moore then went over the results of the combined U.S. Multicenter Pivotal Study and the Continuing Access Study of the Nit-Occlud PDA device for percutaneous closure of patent ductus arteriosus which showed that closure of small- and medium-sized PDA with the Nit-Occlud PDA is effective and safe when compared with objective performance criteria with no deaths or serious adverse events, and a total adverse event rate of 4.7%.

The morning was marked by a keynote lecture given by Sir Magdi Yacoub during the session on the future in Congenital and Structural Interventions talking about "Innovations at what price." Sir Yacoub is Professor of Cardiothoracic Surgery at the National Heart and Lung Institute, Imperial College London and Founder and Director of

Research at the Harefield Heart Science Centre (Magdi Yacoub Institute), overseeing over 60 scientists and students in the areas of tissue engineering, myocardial regeneration, stem cell biology, end stage heart failure and transplant immunology. He is also Founder and Director of Magdi Yacoub Research Network. He introduced major achievements in the field including: establishing heart transplantation in the UK and becoming the world's leading transplant surgeon, establishing and becoming a master of the 'Ross Procedure' or pulmonary autograft, and pioneering the modern arterial switch operation. Prof. Yacoub highlighted the current challenges facing innovative ideas with the changing environment including gradual evolution and stifling regulations, new bills (such as the one discussed at the House of Lords in UK), and similar processes in the US. He noted that innovation is essential for progress though is becoming more difficult recently, and that a concept of Conjectures and Refutations must be applied. Dr. Ziyad Hijazi asked "who were the critics at the time" he tried to introduce the arterial switch procedure, "was it the surgeons or cardiologists, and how did you convince them that this will be the right thing to do." He mentioned that it was "some colleagues and others were unknown, and tried to refute it in the literature." Dr. Hijazi also asked, "how did you make the transition between being a surgeon busy in the OR, and building a center and doing basic science research." Prof. Yacoub's answer was swift, saying that he knew that "cutting is not the answer, also putting devices is not, a combination might be needed, but knowing the basic mechanisms and targets to go after are the important thing, that's why I got interested in focusing on basic and molecular science." Dr. Shak Qureshi asked, "if you were to make your innovations at this present time, how would the time pace be?" Prof. Yacoub answered that he thinks it would take longer for many reasons, mainly due to the process of discussions and reviews involved.

Following up on innovative ideas, Dr. Yoav Dori talked about catheterizing the lymphatic system in complex CHD, which is barely studied. This included interventions including stenting the lymphatic system, and others and he mentioned building an interventional program for the lymphatic system. Dr. Dan Levi went over bioresorbable stents and occlusion devices, which are quite needed in the field. He mentioned the challenges in the field, and how advances will be driven by material combinations, creative designs and interest, initiatives and financial support.

Dr. Massimo Caputo talked about advances in stem cell technology in the use for CHD. Dr. John Cheatham went over transcatheter Fontan completion and future advances still needed. Dr. Dietmar Shranz talked about the transcatheter systemic-pulmonary shunt in PAH. He described a technique for transcatheter Potts shunt (TPS) creation by fluoroscopically guided retrograde needle perforation of the descending aorta at the site of apposition to the left PA to create a tract for deployment of a covered stent between these vessels to serve as a shunt in patients with pulmonary arterial hypertension. He noted that TPS creation is feasible, and may offer symptomatic relief to select patients with refractory PAH, however, further study of this innovative approach is warranted.

Dr. Thomas Jones talked about treating CHF in the cath lab, including eliminating shunts, fixing leaking valves and supporting pump failure. Dr. Elchanan Bruckheimer talked about 3D holography, and how it will shape interventions in the next 15 years. Its benefits include: hyper-realism in imaging with intuitive understanding of spatial information, freedom for unbounded interaction with the image, precise real-time coordination between the viewer and the image, accurate and immediate communication between different users, and enhanced physician performance.

The mid-day focused on access options during catheterization with techniques including carotid access in infants for interventional procedures, vessel rehabilitation, acute arterial ischemia post- catheterization, simple modifications for successful Fontan fenestration. There was a debate about interventional procedures per and post CPB and whether there should be a time limit or not. Dr. Daniel Gruenstein argued that there should be no limit as to doing urgent interventions pre- or immediately postsurgical cath interventions, pointing out a few recently published studies. Dr. Zahid Amin argued the opposite, mentioning that there needs to be a barred time for doing such interventions, as it was recently shown it can be associated with higher rate of complications as interventions are often at the suture line, and can cause stents to migrate.

The afternoon session focused on Current Controversies in Congenital Heart Interventions. This included topics such as: Palliation In Newborns With Tetralogy of Fallot: Infundibular vs. Ductal Stenting by Dr. JV DeGiovanni, Complex Aortic Arch Narrowing: Stent vs. Surgical Treatment by Dr. David Nykanen, and a hot debate on the risk of erosion after ASD closure (Pro: John Rhodes; Con: Joaquim Miro).

The afternoon also featured the Spanish breakout session which covered fetal cardiac interventions, long-term outcome in PA/IVS and others. The last session of the afternoon focused on Updates on valve interventions in CHD such as updates on the Melody valve, risk for endocarditis, Update on Next Generation "Native" RVOT Valve Studies, valve-in-valve interventions and the COMPASSION data. CCT

The 3rd Annual PICS~AICS **5K RUN: Supporting CHIMS** and Helping Kids with CHD **Around the World!**

By Karim Diab, MD

The 3rd Annual PICS~AICS 5K run took place yesterday at 6 am at the beautiful property of Aria. It was co-sponsored by Siemens for the third year.

One hundred and six people signed up and over seventy participated in the run and Dr. R. Holzer (Pediatric Interventional Cardiologist at Sidra Medical Center, Qatar and a professional fast runner!) was the winning champion!!



Although it was an early start for the PICS attendees, participants had fun, and contributed to making a difference by supporting CHIMS (Congenital Heart Intervention Mission Support), a project that was launched during PICS 2013. This organization has been very active in providing a coordinated and sustainable benefit to interventional catheterization for structural heart disease in developing countries through centralizing and consolidating preexisting charitable mission work. For more info, visit the website at www.chimsupport.com. CCT

Award Winners Announced at PICS 2015 Gala

By Karim Diab, MD

During the Gala Dinner, the winners of several awards were announced. This included the winner of the Charles S. Kleinman Scientific Scholarship Award, which was designed to recognize original scientific work in the field of interventional cardiology. This year's winner was Dr. Matthew Crystal from Columbia University Medical Center in New York. The winner will receive a \$5,000 grant to further the research endeavors.

The oral abstract winner was also announced during the dinner. The Young Leadership Award went to Dr. Nathanial Taggart, who is an

Assistant Professor of Pediatrics at Mayo Clinic in Minnesota, and will receive faculty status, and involvement in the PICS meeting.

Don't Miss These Sessions on the Last Day of PICS~AICS 2015!

By Karim Diab, MD

The last day at PICS~AICS 2015 will be as busy as well! More live cases will be transmitted from national and international sites. The last day of the meeting will again start off with live cases in the morning, followed by more didactic sessions.

The live cases will include cases beamed from:

- Columbus, Ohio: Drs. D. Berman, A. Armstrong and C. Daniels will perform a case of transcatheter PV implantation using the Melody Valve, transcatheter CardioEMS implantation.
- · Houston, Texas: Drs. H. Justino and A. Qureshi will perform percutaneous splenic puncture and possible placement of device in portosystemic shunt, balloon dilatation and stenting of Pulmonary vein stent and a case of transcatheter VSD closure
- Seattle, Washington: Drs. T. Jones, A. Rubio, T. Johnston and B. Morray will perform two cases of transcatheter PV implantation, one using a 3D reconstruction of RVOT conduit.

The live cases will be followed by a special session that focuses on new interventions in extremely premature infants such as: PDA device closure, Hybrid for HLHS in low birth weight newborns, special imaging during interventions in this high risk population, transcatheter treatment of the atretic RVOT in low birth weight newborns, and CPB issues specific to premature and low birth weight newborns. The lunch session will provide a competitive feel, as the girls will challenge the boys to a "Best Case." Other popular sessions including, "My Nightmare Case in the Cath Lab," will take place in the afternoon, and will ensure the opportunity for discussion and learning from each other's experiences. The final afternoon followed by a "Battle of the Continents," a quiz based session on all aspects of catheterization with the winner claiming global victory and dominance!

PICS~AICS 2015 will then end with closing remarks by Dr. Ziyad. Hijazi, and the "Drawing of the Passport Winner" (the winner has to be present to win!!)

See you again March 3rd-5th, 2016 at PICS-CSI Asia taking place in Dubai, UAE, and then PICS~AICS in Miami, Florida, January 16th-19th, 2017! CCT

PICS Session on Current Controversies in Congenital Heart Interventions

By Kamel Shibbani, MD

Sunday's afternoon session on controversies in CHD interventions was an interesting one. It started off with a talk about palliation in the newborns with TOF. Dr. JV DeGiovanni talked about the differences between PDA and RVOT interventions in such patients. After listing the pros and cons for each, he came to the conclusion that both techniques are reasonable, that individual characteristics of each patient vis-a-vis anatomy of the duct should determine which technique to use, and he discussed the importance of taking into account the team policy. Finally, he confessed that his personal preference is to use RVOT stenting with a BMS.

Next, Dr. David Nykanen gave us a talk about stent vs surgical interventions for complex aortic arch obstructions. After discussing each intervention separately, dr. Nykanen concluded that transcather therapy is here to stay, that acute complication rates favor transcatheter interventions, aneurysms appear to favor stents over surgery, re-intervention is similar in surgery and stent placement, and that we should be very proactive in using imaging to look for aneurysms in either group.

We then had a debate about transcatheter ASD closure, where Dr. John Rhodes argued against the use of an amplatzer occluder, and Dr. Joaquim Miro argued for the use of said device. Dr. Rhodes argued that the risk of Heart Wall Erosion is severe and can be catastrophic 10% of the time, and that a reasonable alternative exists that decreases the risk of HWE, that alternative being, the Gore device. That being said, Dr. Rhodes acknowledged that in some patients, the risk of HWE is low and the ASO use is justified. On the flip side of that coin, Dr. Miro argued that one couldn't truly assess the risk of developing HWE until the intervention is performed, and if U/S is used, we risk becoming overselective in terms of which patients need the ASO. He also argued that surgical alternatives also carry a risk of their own. At the end of the debate, the vast majority of the crowd supported Dr. Miro in his argument.

Dr. Mark Fogel gave the last talk in this session about when we should close the Aorto-Pulmonary Collaterals. He started his talk with a quote that set the stage for the rest of his talk, "Because we can do something, doesn't mean we should do something." He then talked about the history of APC, and about how conflicting data existed before 2009, and that recent advancements have allowed us to quantify APC flow. Dr. Mark Fogel then remarked that APC flow should be coiled in the following circumstances: there are symptoms, it effects ventricular flow, and if APC flow is >40%. He ended the session by asking two questions:

- 1. Does embolization decrease APC long-term?
- 2. Does APC flow correlate with QOL measurements? CCT





SAVE THE DATE MARCH 3-5, 2016 **DUBAI, UAE**



Pictures Around & About PICS~AICS

























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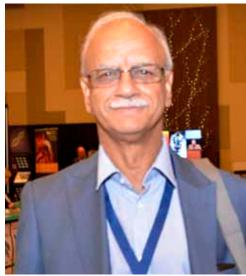




















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CONGENITAL CARDIOLOGY TODAY would like to thank all those who helped put together the Daily Briefing, but especially Drs. Karim Diab, Damien Kenny, Brent Gordon, Kamel Shibbani, who wrote the articles, Dr. Qi-Ling Cao, who provided us with most of the photos, Kimberly Ray, RN, PICS Coordinator, who facilitated the entire process, and Mike Fenn of ATIV Software and Jeff Hall of Jeff Hall Design, both who made sure the Daily Briefing was up and running each day on the EventPilot mobile app. A special thanks goes to Dr. Ziyad M. Hijazi, Symposium Director of PICS~AICS, who has worked with us since 2003 in the development, and yearly creation of the PICS-AICS Preview Issue, the Daily Briefing, and the Pocket Guide Agenda.

If anyone would like to read back issues of the Daily Briefing, go to: www.CongenitalCardiologyToday.com.



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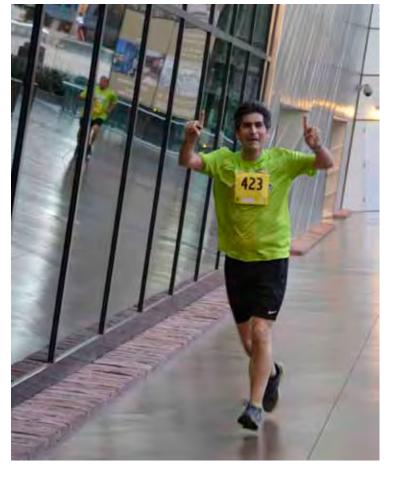
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The PICS Foundation has been organized exclusively for charitable, educational and scientific purposes.

The focus of the Foundation is to educate physicians and healthcare professionals involved in the care of children and adults with congenital and structural heart disease in the latest advances in the field of interventional therapies for congenital and structural cardiac defects. The PICS Foundation will provide educational meetings and materials to pediatric and adult cardiologists from all over the world. The PICS Foundation will also sponsor research in the area of congenital and structural heart disease.

The PICS Foundation may receive funding via individual contributions and grants from hospitals and other members of the medical community, registration fees from attendees of the annual symposium, exhibit fees from vendors attending the annual symposium and funds from individual contributors.

The primary activity of the PICS Foundation will be conducting an annual meeting for healthcare professionals. The Pediatric & Adult Interventional Cardiac Symposium is an annual meeting that is attended by approximately 1,000 healthcare professionals from all around the world. The symposium consists of 4 days of lectures and live case operations.

If you would like to support the PICS Foundation, please contact Ziyad M. Hijazi, MD, Foundation President.

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The PICS Foundation is a 501(c)(3) organization.

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The PICS-AICS Daily Briefing is published by Congenital Cardiology Today www.CongenitalCardiologyToday.com

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