CONGENITAL CARDIOLOGY TODAY

Timely News and Information for BC/BE Congenital/Structural Cardiologists and Surgeons

Volume 6 / Issue 10
October 2008
International Edition

IN THIS ISSUE

CONGENITAL CARDIOLOGY TODAY

Editorial and Subscription Offices
16 Cove Rd, Ste. 200
Westerly, RI 02891 USA
www.CongenitalCardiologyToday.com

Absent Right and Persistent Left Superior Vena Cava: Case Report

By Anant Khositseth, MD

Introduction

Absent right superior vena cava (SVC) with persistent left SVC in visceroatrial situs solitus is a rare congenital anomaly occurring in 0.07-01.3% of congenital heart malformation[1]. It is commonly associated with other congenital heart defects in 46% [2]. Here, we report a case of ostium secundum atrial septal defect (ASD) associated with this anomaly in a patient who underwent Amplatzer Septal Occluder (ASO) implantation.

Case Description

An 11-year-old boy presented with presented with frequent tiredness during exertion. Physical examination revealed widely fixed splitting S2 with normal P2 and grade 2/6 systolic ejection murmur along the left upper sternal border (pulmonary valve area). His EKG had an abnormal P axis (-15O), right axis deviation for age (+120O), and pure R in V1 (Figure 1).

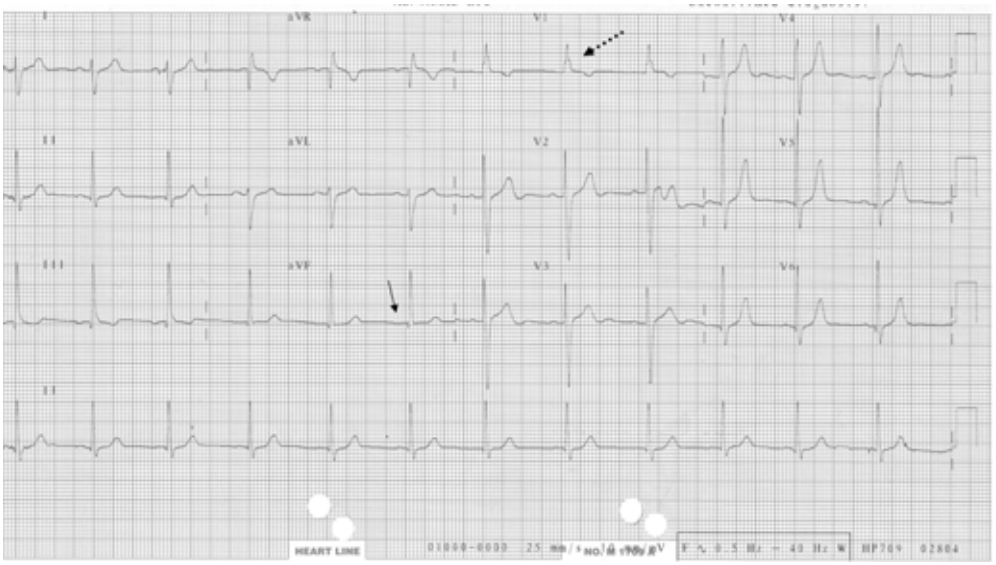


Figure 1. A 12-lead electrocardiography demonstrated ectopic atrial pacemaker (upright P wave in I and negative P wave in aVF, bold arrow) and pure R in V1 (dash arrow) indicated right ventricle hypertrophy.

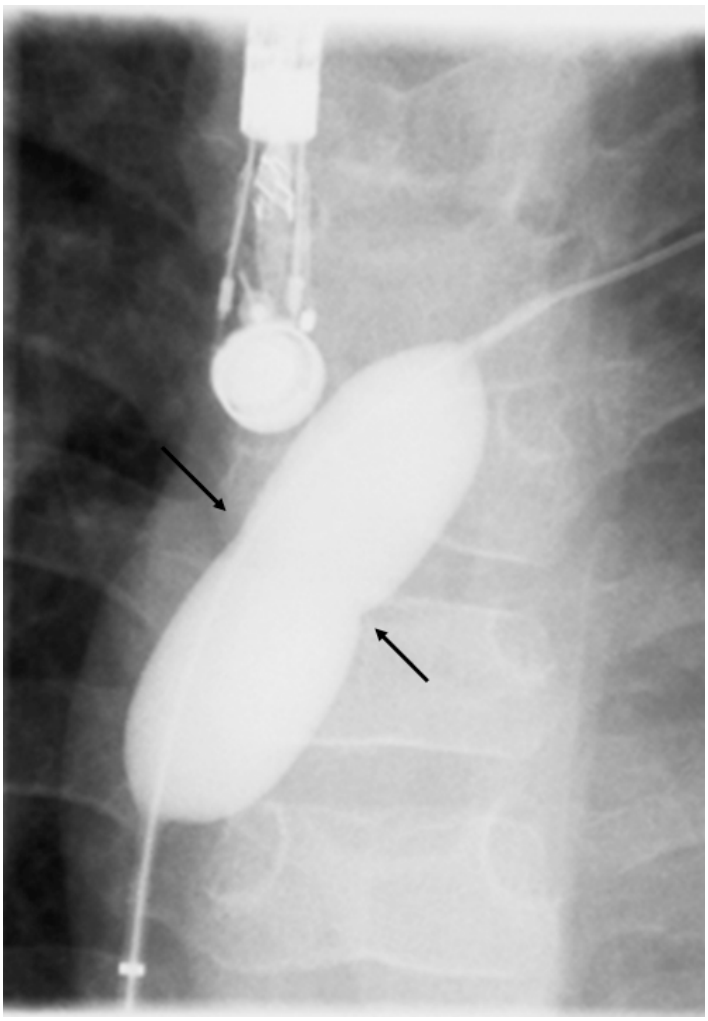


Figure 2. A fluoroscopy demonstrated a waist in balloon sizing (bold arrows) indicated a stretched diameter of the atrial septal defect.

A chest x-ray demonstrated mild cardiomegaly with slightly increased pulmonary vasculature. All of these findings were suggestive of an ASD. Echocardiography demonstrated mild dilatation of the right atrium and ventricle, ostium secundum ASD (8 mm in diameter), and dilated coronary sinus suspected left SVC. He was scheduled for cardiac catheterization for device closure by ASO. Tranesophageal echocardiography (TEE) was performed during the catheterization. This demonstrated an ostium secundum ASD with stretched diameter of 14 mm., a dilated coronary sinus, and adequate rims for device closure. A 24-mm balloon sizing was inflated with stretched diameter of 14 mm. by fluoroscopy (Figure 2). A catheter could not be passed from the right atrium into the right SVC, but it could be passed from the right atrium through dilated

WATCH LIVE CASES ON THE WEB

Performed by Experts in the field
Hosted by Congenital Cardiology Today
www.CHDVideo.com

From ISHAC 2008 LIVE CASES

- NCH Hybrid Catheterization/OR Suites
- Pulmonary Artery Flow Restrictors
- Transcatheter Valve
- Intra-operative PA Stent
- Perventricular Muscular VSD Device Closure
- Perventricular Muscular VSD Device Closure
- Perventricular Muscular VSD Device Closure
- Closure of Septal Defect Using Real Time 3D Echo Guidance

From ISHAC 2007 LIVE CASES

- Perventricular Muscular VSD
- Perventricular Membranous VSD
- Hybrid Stage I Palliation for HLHS PA Bands and PSA Stent
- Intraoperative Aortic Stent for CoA
- Intraoperative LPA Stent Using Endoscopic Guidance
- Creation of ASD after PA Bands & PDA Stent for HLHS in a Preemie
- Perventricular Implant of Edwards Valve Stent in the Pulmonary Position
- Closure of Septal Defect Using Real Time 3D Echo guidance
- High Frequency Ultrasound Creation of ASD

From PICS-AICS 2007 LIVE CASES

- PmVSD Closure
- Percutaneous Closure of ASD(s) with TEE or ICE Guidance
- Percutaneous Valve Implantation
- Hybrid Stage I Palliation for Complex Single Ventricle in a 1.4 kg Neonate
- Transcatheter Implantation of Implantable Melody Valve

From 6th INTERNATIONAL WORKSHOP IPC LIVE CASE

- Perimembranous VSD Closure with Amplatzer Membranous

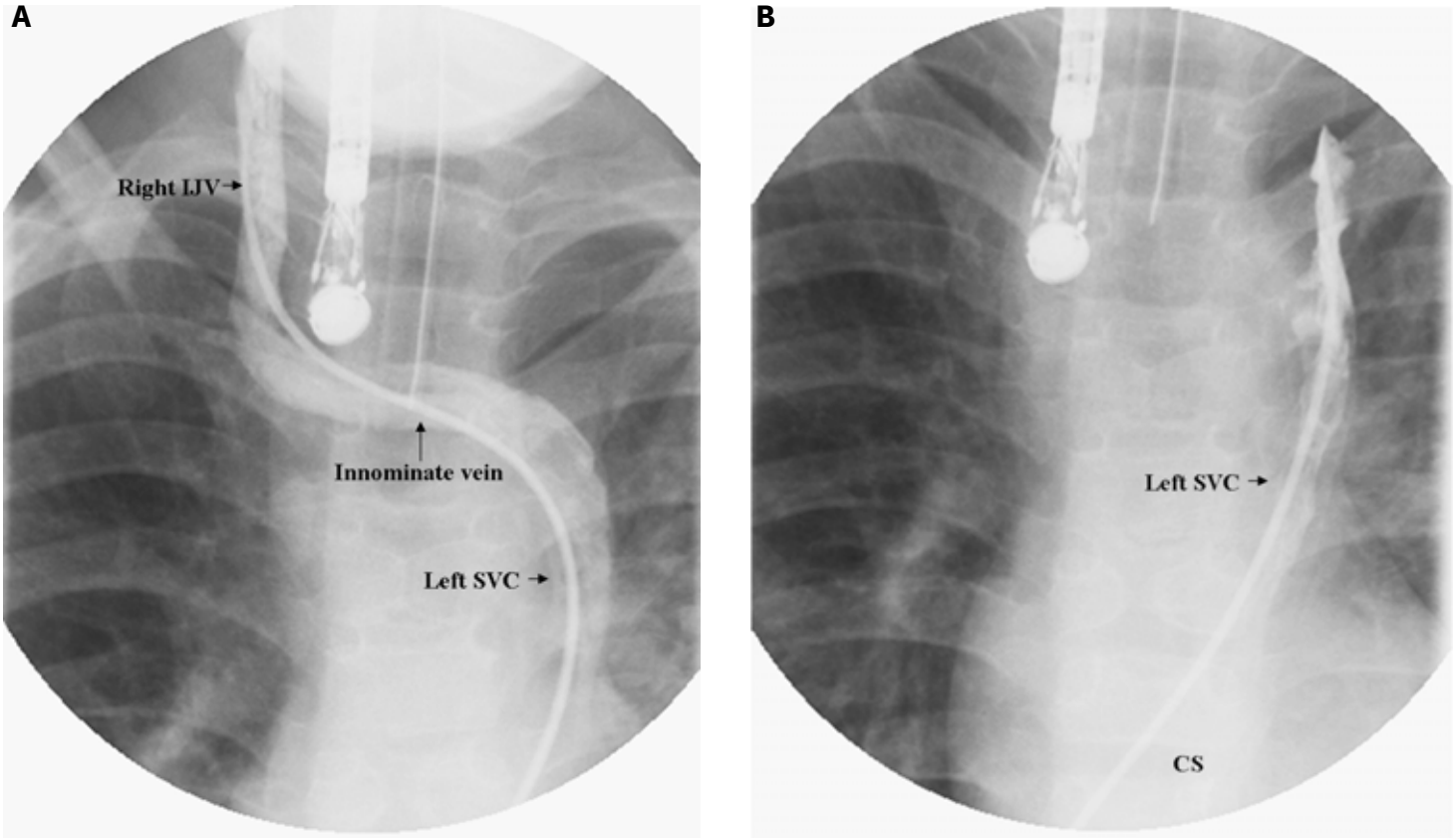


Figure 3. Angiography in the right internal jugular vein (IJV) (3 A) and the left superior vena cava (SVC) (3 B) demonstrated absent right superior vena cava (SVC), right internal jugular vein (IJV) draining via the right innominate vein, and the persistent left SVC draining into the right atrium via the dilated coronary sinus (CS).

The echocardiography performed at 1 day and 3 months after the procedure demonstrated proper position of the device without residual shunt. The ASO device did not obstruct the dilated coronary sinus.

Discussion

Bilateral SVC with persistent left SVC draining into the coronary sinus and then the right atrium which is a normal variation of normal systemic venous return is not uncommon in general, occurring in 0.3% of the general population. This condition is commonly associated with congenital heart defects in 3-34% of patients. However, persistent left SVC with absence of the right SVC is very rare. Bartram et al.[2] reported 121 cases with the absence of the right SVC in visceroatrial situs solitus found that this anomaly is typically characterized by persistent left SVC draining into the right atrium via the coronary sinus and additional cardiac defects could be found in 46% of these cases. Srivastava et al.[3] reported a case with persistent left SVC with absent right SVC associated with ostium secundum ASD which was accidentally detected during the surgical closure of the ASD due to the right internal jugular triple lumen venous catheter placement.

In this case report we successfully closed the ostium secundum ASD by using an ASO device. TEE performed before the procedure demonstrated dilated coronary sinus which was suspected to have the persistent left SVC, but the absent right SVC was not detected. However, the venous catheter course and angiography demonstrated absent right SVC and persistent left SVC

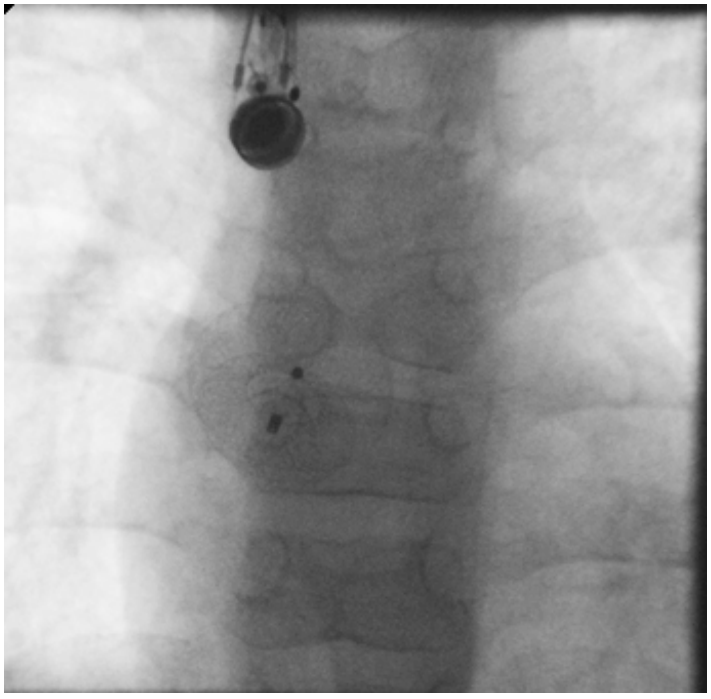


Figure 4. Fluoroscopy of a 14-mm Amplatzer septal occluder after deployment.

draining into the right atrium via dilated coronary sinus. We thought that this finding was of concern due to the possibility of the device obstructing the dilated coronary sinus and its orifice. During the device deployment, we selected the size of the device properly using the stretched diameter of the defect by measuring the sizing balloon by TEE and fluoroscopy. We were also aware of the device position related to the large orifice of the coronary sinus by imaging of the TEE. Figure 4 demonstrated the ASO device in the proper position after the deployment. The patient's EKG had abnormal P axis, which indicated ectopic atrial pacemaker. This finding was reported in 3 of 4 hearts with absent right SVC, and may be the key factor in the development of arrhythmias [4]. The incidence of arrhythmia after device closure may be increased in this patient.

To our knowledge, this was the first case report of Absent Right and Persistent Left Superior Vena Cava in which an associated ASD was closed by the ASO device. Although this is a rare condition, we do recommend all patients with ASD undergoing device closure should be performed complete echocardiography to examine the systemic venous drainage to the heart thoroughly.

References

1. Bartram U, Van Praagh S, Levine JC, et al. (1997) Absent right superior vena cava in visceroatrial situs solitus. Am J Cardiol 80:175-183.
2. Lenox CC, Zuberbuhler JR, Park SC, et al. (1980) Absent right superior vena cava with persistent left superior vena cava: implications and management. Am J Cardiol 45:117-122.
3. Lenox CC, Hashida Y, Anderson RH, et al. (1985) Conduction tissue anomalies in absence of the right superior caval vein. Int J Cardiol 8:251-260.
4. Srivastava V, Mishra P, Kumar S, et al. (2007) Persistent left SVC with absent right SVC: a rare anomaly. J Card Surg 22:535-536.

CCT

Anant Khositseth, MD
Department of Pediatrics, Faculty of Medicine,
Ramathibodi Hospital
Mahidol University
Bangkok 10400, Thailand
Phone: 662-201-1685; FAX: 662-201-1850
alaks@diamond.mahidol.ac.th

Anant Khositseth is now a Pediatric Cardiologist and Associate Professor in Pediatrics at the Department of Pediatrics, Faculty of Medicine, Ramathibodi Hospital.

Charles E. Mullins Interventional Lecture Series

By Frank Ing, MD

On May 30, 2008, Texas Children's Hospital held its 2nd Annual, "Charles E. Mullins Interventional Lecture Series," in honor of the lifetime contribution of Dr. Mullins.

Dr. Mullins retired at the end of 2006 and this series started with a lecture by Dr. Philip Bonhoeffer, entitled, "The Pulmonary Valve Stent" in January, 2007. The second lecture of this series was provided by Dr. Zahid Amin, entitled "Perventricular Occlusion of Muscular VSD's."

Charles E. Mullins in front of the plaque that bears his name.

Left to right: Frank Ing, Tom Fagan, Jeff Towbin, Zahid Amin, Charles Mullins, Richardo Pignatelli, Howaida El-Siad and Chris Petit.

The event started with an informal dinner held the evening before, attended by current staff and some of Dr. Mullins' former trainees working in other pediatric cardiac centers. Following the lecture, which was attended by approximately 50 people, a "Charles E. Mullins" display case was unveiled at the Texas Children's Hospital heart center library and learning center. The display case was intended to show off some of Chuck's collection of publications, catheters, antiques and other historically important artifacts pertaining to pediatric cardiology interventions.

"Texas Children's Hospital held its 2nd Annual, "Charles E. Mullins Interventional Lecture Series," in honor of the lifetime contribution of Dr. Mullins."

Overall, it was a great time for a mixture of academic discussions and renewal of old friendships. If the reader has any "old artifacts" of Chuck's, and would like to donate them to the "Mullins" display case, please contact the author.

The date for the third lecture will be sometime in the Spring of 2009. Those interested in possibly attending, are encouraged to send an email to the author, and information will be sent when available.

CCT

Frank F. Ing, MD
Director, Cardiac Catheterization Laboratories
Texas Children's Hospital
6621 Fannin Street
MC 19345-C
Houston, TX 77030 USA
Phone: (832) 826-5908

fxing@TexasChildrensHospital.org

Highlights of PICS-AICS 2008

By Ziyad M. Hijazi, MD

With over 700 attendees from 65 countries, PICS (Pediatric and Adult Interventional Therapies for Congenital and Valvular Heart Disease) was a huge success. Fifty percent of the attendees were from the US. A faculty of ninety-five members participated, the largest of its kind in the world.

Similar to last year, we combined the pediatric and adult sessions for interventional therapy of congenital and structural heart disease. Live cases from twelve sites were transmitted via satellites to the venue at the Bellagio Hotel. The quality of live cases this year was outstanding.

PICS started Sunday July 20th at 8:30 AM with an industry-sponsored workshop (Cook Medical). The workshop was well-attended due to its excellent faculty and subject matter. Among the speakers in this workshop was Dr. Robert White from Yale, who is the world's expert on pulmonary AVMs. Other speakers included: Drs. Lee Benson, Shakeel Qureshi, Jeff Feinstein, Jo De Giovanni and Omar Galal. Feedback from attendees on this workshop was overwhelmingly excellent.

In the afternoon, we had an excellent workshop on the atrial septum and imaging. There were fourteen talks discussing various aspects of imaging and devices for the septum. In that workshop, there were two excellent debates: one on ICE vs TEE and another on surgery for ASD vs device closure. The last debate between Dr. Fu and Dr. Ilbawi was particularly lively,

The day ended with "Meet the Expert" sessions and oral abstract presentations. At the end of the day, all attendees were invited to the welcome reception in the exhibit hall. This year, we had 29 exhibitors representing the wide range of manufacturers in our field.

The following day, Monday, July 21st, 2008, was full of action. Live cases were transmitted from Danta Pazzanesse Instituto de Cardiologia in Sao Paulo, Brazil, where Dr. Carlos Pedra and his team performed four excellent cases; from Rush University Medical Center in Chicago, where Dr. Hijazi and his team performed two cases; from Miami Children's Hospital, where Dr. Evan Zahn and his team performed two cases, and from Seattle Children's Hospital where Dr. Tom Jones performed three cases. Between the live cases, there were seventeen excellent talks discussing various aspects of interventional therapies in children and adults. Topics included were the following: Covered Stents, Medical Simulation, Percutaneous Aortic Valve Therapies, the Mitral Valve (Imaging and Therapies), and Percutaneous Pulmonary Valve Implantation. At the end of the day, there were two excellent sessions: one, a debate between Drs. Schranz and Bacha about management of AS in infants <3 months of age, and the other session was about catheterizing critically ill babies. Monday included the ever-popular "My Nightmare Case in the Cath Lab" session!

At the end of the day, we had our traditional "*PICS Achievement Award*." This year's recipient was Dr. Carlos Ruiz. Dr. Bill Hellenbrand reviewed Dr. Ruiz's many accomplishments. Everyone was very impressed with Carlos' background, and what he has achieved in our field.

Tuesday July 22nd, 2008 was the third full day of the meeting. Again, we had many excellent live cases transmitted from Atlanta, where Dr. Bob Vincent and his team performed two excellent cases; from Columbus Nationwide Children's Hospital, where Drs. John Cheatham and Mark Galantowicz performed two excellent cases; from Detroit, where Dr. Tom Forbes and his team performed three very good cases, and from San Diego, where Dr. John Moore and his team performed three very good cases. Also on Tuesday, we had twenty-five talks covering a broad range of topics. The topics included the following: a debate about whether to angioplasty native coarctation, ventricular septal defects, the PFO, the LAA, heart failure monitoring devices, and the PDA.

At the end of the day, the attendees were treated to a night of fun at the traditional Gala Dinner. The gala was very well-attended, and similar to each year, we had drawings from B. Braun and the PICS Foundation for free registration and hotel for two for next year's PICS.

The last day of the meeting, Wednesday, July 23rd, 2008 was as enjoyable as the first. Again, four sites transmitted live cases. From Cincinnati, Dr. Russel Hirsch and his team transmitted three very good cases. Dr. David Nykanen and his team transmitted two very good cases from Orlando. From St. Louis, Dr. David Balzer transmitted two very educational cases, and from Vancouver, Dr. John Webb and his team transmitted two excellent cases. For the first time at PICS, we had a transapical aortic valve replacement transmitted live from Vancouver. The same day we had twelve excellent talks covering: cath lab issues for nurses and techs (inventory

management, sedation in the cath lab, vessel closure devices and surgical procedures in the cath lab); pericardiocentesis; vascular thrombosis and its management; vascular closure devices; hybrid management of HLHS. At the end of the day, five speakers talked about what is coming down the pipe that we should be looking for.

That was our last meeting in Las Vegas, at least for the next two years.

I hope that you all can join us in Cairns, Australia, June 21-23rd, 2009 for PICS at the *World Congress of Pediatric Cardiology and Cardiac Surgery*. It promises to be educational as usual, but more fun for you and for your family. For more information, go to www.picsymposium.com.

See you in Cairns,

Ziyad M. Hijazi, MD
on behalf of all course directors

CCT

Professor Ziyad M. Hijazi, MD, MPH, FSCAI, FACC, FAAP
Director, Rush Center for Congenital & Structural Heart Disease
Section Chief, Pediatric Cardiology
Professor of Pediatrics & Internal Medicine
Rush University Medical Center
Suite 770 Jones
1653 W. Congress Parkway
Chicago, IL 60612 USA
Phone: (312) 942-6800
Fax: (312) 942-8979

zhijazi@rush.edu

Do you or your colleagues have interesting research results, observations, human interest stories, reports of meetings, etc. that you would like to share with the congenital cardiology community?

If so, submit a brief summary of your proposed article to Congenital Cardiology Today at: **RichardK@CCT.bz**

Medical News, Products and Information

Should We Use Echocardiography to Screen Young Athletes?

Sudden and unexpected deaths in young competitive athletes are uncommon, but highly visible events, which raise concern and ethical issues in both the lay public and medical community. Which is the best strategy to timely identify individuals with cardiac disease responsible for sudden death (primarily, HCM) is largely debated. Namely, the extent to which sophisticated testing, such as echocardiography, is needed is still undefined.

To address this question, we carried out an echocardiographic assessment of the structural cardiac diseases in a population of 4,450 athletes, initially judged free of cardiac disease and eligible for competition on the basis of pre-participation screening with 12-lead ECG.

None of the 4,450 athletes showed evidence of HCM. Other cardiac abnormalities were detected in only 12 athletes, including myocarditis (n=4), mitral valve prolapse (n=3), Marfan's Syndrome (n=2), aortic regurgitation with bicuspid valve (n=2), and arrhythmogenic right ventricular cardiomyopathy (n=1). In addition, four athletes were identified with borderline LV wall thickness (i.e., 13 mm) in the "gray-zone" between HCM and athlete's heart. In two of these athletes, subsequent genetic analysis or clinical changes over an average 8-year follow-up resulted, respectively, in a diagnosis of HCM.

In conclusion, the pre-participation screening program including 12-lead ECG appears to be efficient in identifying young athletes with HCM, leading to their timely disqualification from competitive sports. The data also suggest that routine echocardiography is not an obligatory component of large population screening programs designed to identify young athletes with HCM. For more information, European Society of Cardiology - www.escardio.org

---

Cardiac Ultrasound Imaging Goes to Handheld

Cardiac ultrasound imaging, also known as echocardiography, has been recently challenged by several new imaging methods. However, echocardiography has unique characteristics that make it very attractive: it is cheap, can be done bedside and without ionizing radiation. Recently, devices have also become very small.

Actually, in echocardiography there are two diverse and ongoing trends: the development of handheld miniature echo devices and even more advanced systems for more quantitative analyses.

Handheld echocardiography makes the method resemble the role of the stethoscope in doctors' everyday work. We may soon see physicians on regular wards or during typical outpatient visits taking out pocket size echocardiography machines and checking whether the valves are okay, or if the heart has normal pumping power. Also, identifying life-threatening cardiac issues in emergency environments could be done immediately. This exciting development obviously implies an increase in the need for training doctors.

The current limitation of echocardiography is that the image analysis is subjective and depends on the imager maybe more than with other imaging techniques. This leads us to the second trend: more automatic analysis of echo images. The novel image tracking systems allow automatic detection of structures such as cardiac walls and cardiac structures and can be visualized in 4D. These systems will likely increase the accuracy of the image analysis.

It is of great interest to see how these trends will change costs and cost-effectiveness. There are a number of trials studying cost-related issues of the current techniques. Obviously, advanced imaging is more expensive, but so are new therapies. One of the scenarios is, indeed, that advanced imaging is needed to target therapies more accurately, and thereby, make significant savings by more tailored therapy roadmaps.

European Society of Cardiology - www.escardio.org

Stem Cell Regeneration Repairs Congenital Heart Defect

Mayo Clinic investigators have demonstrated that stem cells can be used to regenerate heart tissue to treat dilated cardiomyopathy, a congenital defect. Publication of the discovery was expedited by the editors of Stem Cells and appeared online in the “express” section of the journal’s web site at http://stemcells.alphamedpress.org/.

The study expands on the use of embryonic stem cells to regenerate tissue and repair damage after heart attacks and demonstrates that stem cells also can repair the inherited causes of heart failure.

“We’ve shown in this transgenic animal model that embryonic stem cells may offer an option in repairing genetic heart problems,” says Satsuki Yamada, MD, PhD, cardiovascular researcher and first author of the study. “Close evaluation of ge-

netic variations among individuals to identify optimal disease targets and customize stem cells for therapy opens a new era of personalized regenerative medicine," adds Andre Terzic, MD, PhD, Mayo Clinic Cardiologist and senior author and principal investigator.

How They Did It

The team reproduced prominent features of human malignant heart failure in a series of genetically altered mice. Specifically, the "knockout" of a critical heart-protective protein known as the KATP channel compromised heart contractions and caused ventricular dilation or heart enlargement. The condition, including poor survival, is typical of patients with heritable dilated cardiomyopathy.

Researchers transplanted 200,000 embryonic stem cells into the wall of the left ventricle of the knockout mice. After one month the treatment improved heart performance, synchronized electrical impulses and stopped heart deterioration, ultimately saving the animal's life. Stem cells had grafted into the heart and formed new cardiac tissue. Additionally, the stem cell transplantation restarted cell cycle activity and halved the fibrosis that had been developing after the initial damage. Stem cell therapy also increased stamina and removed fluid buildup in the body, so characteristic in heart failure.

The researchers say their findings show that stem cells can achieve functional repair in non-ischemic (cases other than blood-flow blockages) genetic cardiomyopathy. Further testing is underway.

Others members of the multidisciplinary team are: Timothy Nelson, MD, PhD; Ruben Crespo-Diaz; Carmen Perez-Terzic, MD, PhD; Xiao-Ke Liu, MD, PhD; and Atta Behfar, MD, PhD, of Mayo Clinic; Takashi Miki, MD, Chiba University, Japan; and Susumu Seino, MD, Kobe University, Japan.

The research was supported by the National Institutes of Health, the American Heart Association, the Marriott Foundation, the Ted Nash Long Life Foundation, the Ralph Wilson Medical Research Foundation, and the Japanese Ministry of Education, Science, Sports, Culture and Technology.

Emotional Intelligence Training Might Help Doctors Relate to Patients

Training in emotional intelligence could help medical residents and fellows become more sensitive toward their patients, according to a commentary in the September 10, 2008 issue of the *Journal of the American Medical Association*.

Patients are less likely to complain and more likely to have positive health results if their physician communicates well with them. For these and other reasons, medical schools include interpersonal and communication skills in their training programs. The *JAMA* article argues that medical education needs to delve even deeper to help doctors relate better.

The four components of emotional intelligence — the abilities to (1) perceive, (2) use, (3) understand and (4) manage emotions — are building blocks for interpersonal and communication skills. The challenge in medical education is to understand the psychology behind these skills, and build programs to develop them, according to commentary authors Daisy Grewal, PhD, and Heather Davidson, PhD, of the Department of Medical Education at Stanford University Medical Center.

The goal is to learn "how we can improve assessment tools to better understand how to train better doctors," Davidson said.

Currently, many graduate medical education programs use self-assessments, which tend to rely on students' perceptions of their own personalities. The beauty of ability measurement for emotional intelligence evaluation, according to the authors, is that it could separate out personality traits from these core abilities, giving trainees a more objective assessment of their skills.

The *JAMA* authors suggest that future studies could link emotional intelligence measurements with performance evaluations. Graduate students who score low in one or a combination of abilities, might benefit from targeted training in their weaker abilities.

Grewal and Davidson note that not all educators agree on the value of emotional intelligence. Few studies have tested the benefits of training programs, and none has done so within medical education. Some research shows that emotion skills training in medical schools has improved empathy and "soft" skills, suggesting that the right kind of training might help those students who are not natural-born communicators to learn and develop their abilities — assuming they can accurately read and manage their own emotions and those of others.

"Hopefully, such training will improve the caring environment in medicine," Davidson said.

Internet-Based Learning for Health Professions Associated with Positive Effect

A study led by a team of education researchers from Mayo Clinic and published in the *Journal of the American Medical Association (JAMA)* concludes that Internet-based education generally is effective.

Lead author David Cook, MD, an Associate Professor of Medicine who practices general internal medicine at Mayo Clinic, worked with researchers from Mayo and McMaster University in Hamilton, Ontario. They reviewed more than 200 studies about Internet-based instruction. The researchers concluded that Internet-based instruction is associated with largely positive effects compared with no intervention. The research also showed that Internet-based instruc-

tion compared favorably to traditional methods.

"Our findings suggest that Internet-based instruction is an effective way to teach health care professionals," says Dr. Cook. "We now can confirm that, across a wide variety of learners, learning contexts, clinical topics, and learning outcomes, Internet-based instruction appears to be as effective as similar to traditional methods."

Dr. Cook also notes that Internet-based instruction has unique advantages, including flexible scheduling, adaptability of instruction, and readily available content that is easily updated. "As health care workers balance challenging practice demands, the ever-expanding volume of medical knowledge requires us to find more effective, efficient ways to learn," says Dr. Cook. "Internet-based instruction will be an important part of the solution."

He also notes that this research likely applies to training outside of health care, citing studies in the engineering, computer science, and teaching fields that have shown similar results.

"There is more research to be done as we try to find out how to make Internet-based instruction most appropriate," says Dr. Cook. "We are currently conducting research looking at this issue. We also are reviewing other studies to see how to optimize Internet-based instruction."

Other researchers were Denise Dupras, MD, PhD, Patricia Erwin, and Victor Montori, MD, all of Mayo Clinic; and Anthony Levinson, MD, and Sarah Garside, MD, PhD, from McMaster University.

Last Minute Appeal From the International Children's Heart Foundation (ICHF)

SANTIAGO-DOMINICAN REPUBLIC
The ICHF is in need of more PICU nurses for their trip to Santiago, Dominican Republic (DR) from Oct. 26-Nov. 8, 2008. The hospital is the Hospital De Ninos Dr. Arturo Gruillon - in Santiago Dominican Republic - The ICHF has been assisting this unit since January 2006, and currently makes 4 trips/year there. The surgeons on this trip are Drs. Tom Karl and Joanne Starr, who will each do a week. The total trip duration is two weeks, and preference is for volunteers who can do both weeks, although they will look at people who cannot make the full two weeks, in case they are unable to recruit for the full period. Useful, but not essential is any level of Spanish speaking ability, and prior visits to DR or any ICHF site - please specify if any of these apply.

BEIJING-CHINA
The ICHF is in need of another pediatric cardiac intensivist for their trip to Beijing Children's Hospital from Oct. 19 - Nov. 1, 2008. The ICHF has been assisting Beijing Children's Hospital for 4 years now, and the unit now does over 400 cases a year independently. The surgeon on this trip will be Dr. Novick. The total trip duration is two weeks, and their preference is for volunteers who can do both weeks, although they will look at people who cannot make the full two weeks, in case they are unable to recruit for the full period. You will be one of two intensivists. Useful, but not essential is any level of Chinese speaking ability, and prior visits to China or any ICHF site - please specify if any of these apply.

For more information, contact:

Frank Molloy, RN, MSc
ICU Clinical Educator and Coordinator
International Children's Heart Foundation
1750 Madison #500
Memphis, TN 38104 USA
+(901) 869-4243
frankmolloy@babyheart.org
http://www.babyheart.org

DECEMBER CONGRESS FOCUS

ICCA Frankfurt 2008 (International Course on Carotid Angioplasty)
Dec. 3-6, 2008; Frankfurt, Germany
www.iccaonline.org/

Course-Director: Horst Sievert, MD, PhD

Co-Directors: Giancarlo Biamino, MD; Marc Bosiers, MD; Patrick Peeters, MD; Nina Wunderlich, MD

With lectures, simulator sessions and live case demonstrations ICCA will provide you all you need to start your own carotid stenting program.

ICCA 2008 will provide an update on latest developments in interventional techniques, materials and strategies for treating supra-aortic disease. Comprehensive lectures given by leading interventional specialists will be combined with live case demonstrations from different centers. Attendees will have the opportunity to see different approaches and techniques, step-by-step for beginners, as well as difficult cases for experienced interventionalists.

Topics:
- What is the Best Stent for the Carotids?
- How to Select the Best Embolic Protection Device
- Asymptomatic Carotid Stenosis: To Treat or to Wait Until They are Symptomatic?
- Vulnerable Plaque: Does it Tell us who Needs Which Treatment?
- New Trends in Vertebral Stenting
- How to Recanalize the Subclavian Artery
- A new Frontier: Intracranial Stents
- Cerebral Aneurysms
- How to Build an Acute Stroke Program
- How to Manage Complications in the Cath-lab

Who should attend?
* Cardiologists
* Radiologists
* Neurologists
* Vascular Surgeons
* Neuroradiologists
* Angiologists

6th SPR SYMPOSIUM
ON PEDIATRIC CARDIOVASCULAR MR
Dec. 10-14, 2008; Toronto, Canada

www.pedrad.org or contact Ms. Vicki Corris (vicki.corris@sickkids.ca)

UPCOMING MEDICAL MEETINGS & SYMPOSIA

Current Topics in Patent Ductus Arteriosus: Strategies for Improved Outcomes. A CME Accredited On-Demand Webcast
Online Webcast available through Feb. 2009
www.5starmeded.org/pda-outcomes

The Morphology of Congenital Heart Disease with Imaging and Surgical Correlation
Oct. 25, 2008; Boston, MA USA
www.massgeneral.org/children

Management of Congenital Heart Disease
Oct. 25, 2008; Washington, DC USA
www.childrensnational.org

First Phoenix Fetal Cardiology Symposium
Oct. 31 - Nov. 1, 2008; Phoenix, AZ USA
www.fetalcardio.com

16th Charleston Symposium on Congenital Heart Disease
Nov. 16-19, 2008; Charleston, SC USA
www.musckids.com/heart/

The Pediatric Cardiac Intensive Care Society 7th International Conference
Dec. 2-6, 2008; Miami Beach, FL USA
www.pcics.com/annualsymposium

ICCA Frankfurt 2008 (International Course on Carotid Angioplasty)
Dec. 3-6, 2008; Frankfurt, Germany
www.iccaonline.org/

6th SPR (Society for Pediatric Radiology) Pediatric Cardiovascular MR Symposium
Dec. 10-12, 2008; Toronto, Canada
Vicki.Corris@sickkids.ca

The 4th Advanced Course in Pediatric Cardiovascular MR
Dec. 13-14, 2008; Toronto, Canada
Vicki.Corris@sickkids.ca

Cardiology 2009 - 12th Annual Update on Pediatric Cardiovascular Disease
Feb. 4-9, 2009; Paradise Island, Bahamas
www.chop.edu/cme/

Joint Meeting: The 7th International Workshop IPC and ISHAC Workshop
Mar. 22-25, 2009; San Denato, Italy
www.workshopipc.com

ACC 09 (American College of Cardiology) 58th Annual Scientific Sessions
Mar. 28-31 2009; Orlando, FL USA
www.ACC09.ACC.org

i2 Summit 2009
Mar. 28-31 2009; Orlando, FL USA
i2summit09.ACC.org

Do you or your colleagues have interesting research results, observations, human interest stories, reports of meetings, etc. that you would like to share with the congenital cardiology community?

If so, submit a brief summary of your proposed article to Congenital Cardiology Today at:
RichardK@CCT.bz

CONGENITAL CARDIOLOGY TODAY

Headquarters
9008 Copenhaver Dr. Ste. M
Potomac, MD 20854 USA

Publishing Management
Tony Carlson, Founder & Editor
TCarlsonmd@mac.com
Richard Koulbanis, Publisher & Editor-in-Chief
RichardK@CCT.bz
John W. Moore, MD, MPH, Medical Editor/ Editorial Board
JMoore@RCHSD.org

FREE Subscription
Congenital Cardiology Today is available free to qualified professionals worldwide in pediatric and congenital cardiology. International editions available in electronic PDF file only; North American edition available in print. Send an email to Subs@CCT.bz. Include your name, title, organization, address, phone and email.

Contacts and Other Information
For detailed information on author submission, sponsorships, editorial, production and sales contact, current and back issues, see website or send an email to: INFO@CCT.bz.

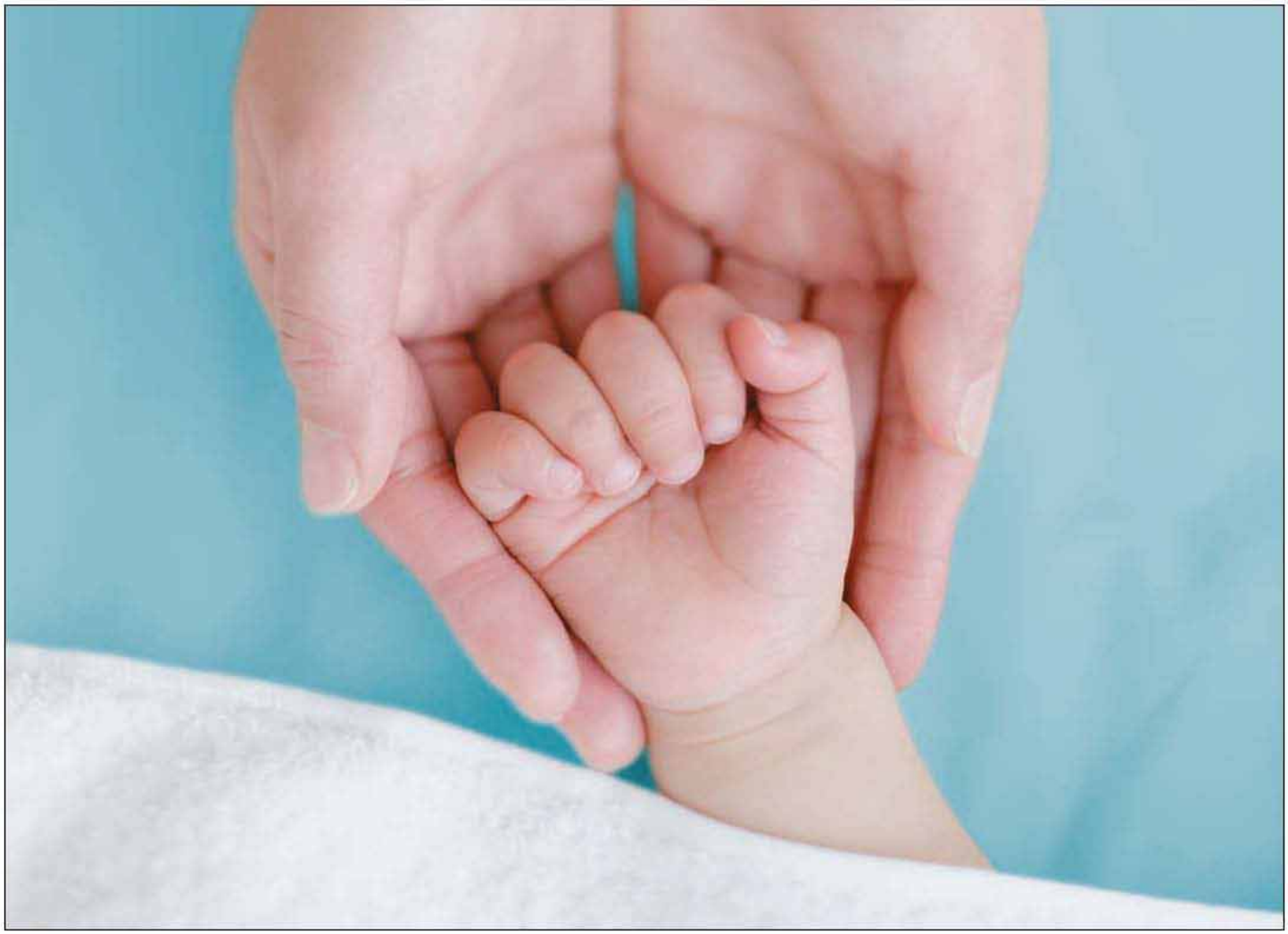
Augment *systemic* data with noninvasive *regional* oxygen saturation (rSO_2) from up to four sites. Only the INVOS® Cerebral/Somatic Oximeter monitors oxygenation data from the brain and body simultaneously and continuously. This site-specific tissue perfusion can enhance your clinical assessment in a meaningful way and help detect ischemic problems earlier than traditional measures. This additional vital sign lets you intervene and put things right—before they escalate.

CEREBRAL/SOMATIC INVOS OXIMETER
REFLECTING THE COLOR OF LIFE®

SOMANETICS®

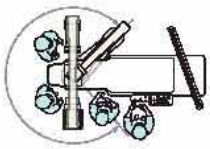
www.somanetics.com 800-359-7662

TOSHIBA
Leading Innovation



The smallest lives often need the greatest access.

(Our Infinix™-i cath lab provides you the vital room to operate.)



The slender c-arms of our Infinix-i cath lab positioners were built with design input from leading pediatric clinicians, not just engineers in faraway laboratories. Those arms are intricate mechanisms that articulate into optimal positions, yet are simple enough to be driven with one hand. They can be manuevered in the perfect place, out of the way but right where your team needs them for the best possible access to the patient. Discover how Infinix-i can provide the room you need to operate. Get more details at www.medical.toshiba.com.

medical.toshiba.com

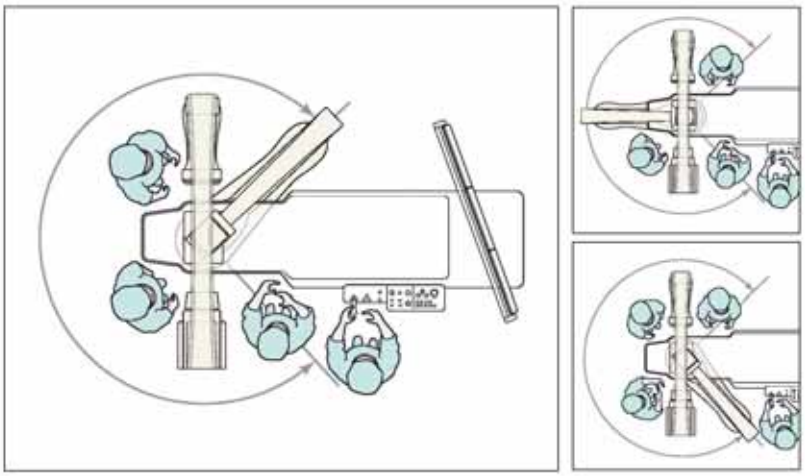
TOSHIBA

Leading Innovation >>>

Industry recognition for access and coverage validates the Infinix-i.

2007 FROST & SULLIVAN
North American Technology Innovation Award

Whether for diagnostic, interventional or hybrid procedures, Toshiba Infinix-i represents the industry's broadest selection of systems, including the Infinix CF-i/BP biplane.



AWARDED FOR INNOVATION

Infinix™ CF-i/BP cardiovascular biplane system has received the Frost & Sullivan 2007 North American Cardiovascular X-ray Technology Innovation Award.

"Currently, Toshiba is the only manufacturer to offer a system that can be manuevered in all angles, supporting the ability to do cardiac and peripheral work...Toshiba's significant contribution to the medical imaging market with its innovative, first-to-market 5-axis Infinix CFi-BP system ensures the ability to meet the needs of the cardiac population while staying abreast of the surging hybrid market."

- 2007 Frost & Sullivan award statement

For more information, please call (800) 421-1968 or visit us at medical.toshiba.com