

5th ICR Workshop Summary

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Following four successful European workshops on integrated cardiovascular repair, the 5th ICR Workshop was held March 25-27, 2010, in Baltimore, Maryland, USA. The workshop brought together a diverse group of participants from 5 continents and more than 15 countries. Sponsored by the University of Maryland School of Medicine and Innsbruck Medical University, cardiologists, cardiac surgeons, anesthesiologists, basic scientists, and others involved in the care of patients with heart disease presented data and discussed opportunities for integrated approaches for treatment of patients with a wide range of cardiovascular disease. Highlights of that workshop are presented in this special section of the *Heart Surgery Forum*.

The workshop began with an address by Dr. Albert Reece, Dean of the University of Maryland School of Medicine, and continued with greetings from the heads of the departments of medicine and surgery. The theme of the workshop was then introduced by the course directors with a historical review and update on the status of integrated procedures in cardiovascular medicine.

The initial sessions focused on hybrid approaches to coronary revascularization. Dr. David Zhao introduced the topic of collaborative approaches with an assessment of the value of intraoperative angiography in surgical coronary revascularization, describing his extensive experience at Vanderbilt University. We were then honored to have Professor Sheng-Shou Hu from Beijing, China, director of the largest cardiac surgery program in the world, report on the current use of hybrid revascularization at Fuwai Hospital. Dr. Robert Poston subsequently assessed the relative value of hybrid revascularization and traditional off-pump coronary bypass surgery. The audience was then invited to participate in an interactive case presentation highlighting the practical application of the hybrid approach involving a totally endoscopic bypass of the left anterior descending artery by Dr. Bonatti, followed by percutaneous coronary intervention for revascularization of the remaining jeopardized vessels.

The next session completed the exploration of the topic of hybrid revascularization with a talk on the simultaneous

approach by Dr. Guy Friedrich, a pioneer in the field from Innsbruck, Austria, and a discussion by Dr. Poston on the challenges inherent in designing a prospective trial to assess the value of the technique.

Capt Michael McCarten, Chief of Staff of the United States Navy Bureau of Medicine and Surgery, concluded the day's formal presentations with the featured talk regarding the organization of an aircraft carrier. The talk provided insight and perspective on the challenges and opportunities of collaboration in a large complicated environment.

Day 2 morning sessions were divided between updates on the current status of minimally invasive coronary bypass surgery and percutaneous coronary intervention. Minimally invasive approaches to surgery were explored first.

Dr. Valavanur Subramanian, a pioneer in the field, described the current status of minimally invasive coronary artery bypass, and Dr. Johannes Bonatti took the concept of minimally invasive surgery one step farther with a discussion of the totally endoscopic, robotic approach. Dr. Marco Zenati from the Harvard Medical School compared the evidence regarding the relative merits of off-pump bypass compared to conventional coronary artery bypass graft surgery, and Drs. Friedrich, Schachner, and Bonaros provided a bridge to the percutaneous coronary intervention session by sharing an interesting case managed with a simultaneous hybrid revascularization strategy at Innsbruck Medical University.

The audience was updated on the current status of percutaneous coronary intervention, including new strategies for platelet inhibition and intervention on saphenous vein grafts with a series of talks by Drs. Anuj Gupta and David Zimrin from the University of Maryland and Dr. Augusto Pichard from the Washington Hospital Center, who subsequently gave the audience a preview of the afternoon sessions by sharing challenging cases of transcatheter aortic valve replacement.

Drs. Mandeep Mehra and Bartley Griffith, medical and surgical leaders in the field of heart failure and transplantation, described complementary surgical and percutaneous options for cardiocirculatory support, and Drs. Timm Dickfeld and Marco Zenati did the same for invasive treatment of arrhythmias.

The afternoon was devoted to exploring integrated options for mitral and aortic valve repair. Drs. Eric Lehr and James Gammie described robotic and minimally invasive approaches to mitral valve disease, followed by Dr. Howard Hermann from the University of Pennsylvania with an update on the current status of transcatheter repair. An interactive presentation of a case of robotic mitral valve repair from

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Cincinatti was then presented by Dr. Michael Smith. A series of discussions by Drs. Jeffrey Popma, Mathew Williams, and Jamie Brown reviewing the current status of minimally invasive surgical and transcatheter approaches to disease of the aortic valve followed to complete the day's formal presentations. A festive dinner on the observation level of Baltimore's Word Trade Center then provided an opportunity for personal interaction among the faculty and attendees.

After a fascinating presentation of posters and abstracts describing innovative integrated approaches in various fields of cardiovascular medicine, the final day of the workshop was dedicated to exploring the technical aspects of design and operation of a hybrid operating room and how to organize a modern heart center. Drs. Zimrin and Bonatti shared their personal observations and experiences, and Dr. Williams described a day in the life of the hybrid interventionalist. Dr. John Byrne described the successful

Vanderbilt Heart Center, and Mr. Jeffrey Rivest discussed the challenges of heart center organization from an administrator's point of view.

The opportunities and practical application of the integrated approach to cardiovascular disease presented in this 5th ICR workshop confirms the vision of previous workshops and will encourage ongoing exploration of new methods of cooperation and collaboration to improve the treatment of patients with heart and vascular disease. We thank all the faculty members and participants for their valuable contributions and recognize Althea Pusateri of the University of Maryland School of Medicine CME office for her invaluable assistance and Conventive for the superb meeting organization. We also would like to thank our colleagues at the University of Maryland and Innsbruck Medical Institution for their support. We hope to see participants again at the 6th ICR workshop.

For information visit www.icrworkshop.com.