



Cardiac *rhythms*

MISSION: THE ADVANCEMENT OF KNOWLEDGE OF DISEASE OF THE HEART AND CIRCULATION
AMONG THE MEDICAL AND PARAMEDICAL PROFESSIONALS IN THE CARIBBEAN.

CCS Council 2006-2008

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CCS Conference 2008

The 23rd Annual Caribbean Cardiology Conference will be held in The Bahamas at the Atlantis, Paradise Island, July 23 - 26, 2008 under the theme "The Use of Technology in the Management of Cardiac Disease in the Caribbean." The Bahamas has previously hosted the conference in 1997 and 2000.

The Conference, which is the premier annual event in Cardiology on the region's medical education calendar, will present an excellent opportunity for Caribbean Cardiologists, Internists, Surgeons, Nurses and Allied Health Professionals, to be educated, informed and updated "on advances in technology for the diagnosis, management and treatment of cardiovascular diseases." It will also examine the extent to which these technologies can be employed in the Caribbean, taking into consideration the resource limitations of small-island developing states.

Dr. Renzo Cecere, one of Canada's leading Cardiothoracic Surgeons will deliver the Annual Cardiac Surgery lecture at the conference. Dr. Cecere has been a pioneer in



Dr. Renzo Cecere

the field of Cardiac Surgery, accomplishing much in his 18 year medical career. He is Surgical Director of the Heart Failure and Thoracic Transplant Programme as well as Director of the Mechanical Assist Program, both at McGill University Health Centre. He was the first surgeon in Canada to implant a mechanical heart for destination therapy as well as the first to implant a Berlin Mechanical Heart.



Dr. Matthew Budhoff

Dr. Matthew Budhoff, named as one of America's top cardiologists in 2007, is scheduled to deliver the Annual Cardiology Lecture. Dr. Budhoff, an Associate Professor of Medicine at the UCLA School of Medicine in California, is the Programme Director and Director of Cardiac CT in the Division of Cardiology at the Harbor-UCLA Medical Center. He has worked in Torrance, California for fifteen years, participating in various conferences and symposiums world-wide. He has gained accolades such as being elected to Fellow status in the Society of Cardiac Angiography and Intervention in 2006 and in the American Heart Association in 2003, as well as being

named as one of Los Angeles Super-doctors in 2007. He has published numerous research papers, the majority of which investigate various technological cardiac interventions such as the use of Electron Beam Computed Tomography.

The Society will honour Prof. Charles Denbow of Jamaica and Mrs. Cynthia Hassett of Puerto Rico during the conference at the Awards Banquet for their contribution the advancement of cardiology in the Caribbean.



Prof. Denbow, a founding member of the Society, has raised the standard of cardiovascular care to new heights by his devotion to his patients and the training of young Caribbean doctors. He has made major contributions to the pioneering of Echocardiography,

Ambulatory Electrocardiography, Exercise Testing, Coronary Angiography, and Interventional Cardiology. He has participated in a busy Consulting Cardiology Practice and is a frequent presenter at continuing medical education seminars and workshops in Jamaica, the Caribbean and beyond.

Because of illness Prof. Denbow will be unable to attend the conference and was presented with his plaque and citation in Jamaica in June 2008.

Mrs. Cynthia Hassett is the second female non-physician to be honoured by the Caribbean Cardiac Society. With a Master's Degree in Nursing from the Recinto de Ciencias Médica and numerous certificates and awards since, she excels in her teaching and training abilities and has also been chosen to speak at conferences.

For over 20 years Mrs. Hassett has been working in the field of cardiology, performing a range of duties including providing patient care for adults and children who have undergone open heart surgery, training and supervising staff to perform cardiovascular studies and developing and implementing various cardiac products such as pacemakers and implantable defibrillators for the Caribbean market.

Over 300 medical personnel from across the region, USA and Europe are expected to attend the conference.

Editorial Section

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Percutaneous Aortic Valvuloplasty: Long-Term Survival

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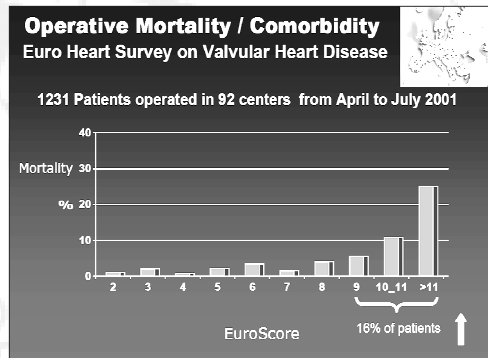
Background

Although Aortic Valve Replacement (AVR) is a surgical procedure with low surgical mortality and excellent long-term results, there exists a large cohort of patients who represent high-risk for AVR or are frankly inoperable. Most of these patients are managed medically with a concomitant inexorable downhill course and very high mortality. Percutaneous Aortic Valve Replacement (PAVR) shows great promise for this cohort of patients. However, PAVR is some years from being available to the general public. In the meantime, we need a treatment for the high-risk and inoperable patients that will serve as a bridge to PAVR when it is finally available.

The Potential Population as part AS Pts Requiring Treatment

	2004 Population	AS Prevalence	Severe AS	Severe AS 50% with Sx
18-44	125,841,694	0.10%	41,947	20,974
45-54	41,618,805	0.20%	27,746	13,873
55-64	29,078,924	0.60%	58,158	29,079
65-74	18,463,472	1.40%	86,163	43,081
>75	17,830,513	4.60%	273,401	136,701
Total	232,833,408	-	487,415	243,708

Based upon Olmsted County AS prevalence data and US population statistics; more than half the severe AS patients are > 75 years old!



Introduction

For more than twenty years, Percutaneous Balloon Aortic Valvuloplasty (PBAV) has been an effective treatment for short-term palliation of signs and symptoms of critical aortic stenosis in patients who are not candidates for aortic valve replacement. Because of a prohibitively high restenosis rate, this procedure fell into disfavor soon after its introduction in 1985. Although the procedure was

generally abandoned after 1990, some centers including our own have continued to perform it on a regular basis for true “no option” patients. We have observed that hemodynamic restenosis does not always correlate with clinical recurrence in these elderly patients who are otherwise limited by age and co-morbid disease.

Methods

In order to assess the magnitude and duration of palliation in this population, we have retrospectively examined the clinical course of patients who underwent PBAV in our center during the past six years. No formal prospective criteria were followed in the determination of suitability for AVR and all patients were referred by cardiologists and/or cardiac surgeons from outside our institution and all were functional classes 3 and 4. All patients were deemed by their referring physicians to be unsuitable candidates for aortic valve replacement. In general, patients were felt to be too old or too frail for AVR, or were rejected on the basis of significant co-morbidities such as advanced pulmonary disease or cancer.

In support of the accuracy of this assessment, two patients in the cohort had AVR subsequent to early clinical recurrence following apparently successful and uncomplicated PBAV.

One patient died immediately post-operatively, and the second patient died within one month.

Technique

All efforts were made to keep procedures as short and simple as possible. Patients were fully evaluated prior to the procedures and all had an echocardiogram done. Many of the patients had prior diagnostic cardiac cath. If coronary angioplasty was necessary, this was done as a separate procedure and right heart catheterization and cardiac output measurements were not routinely performed.

Percutaneous Aortic Valvuloplasty: Long-Term Survival

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The overriding principle was that in these elderly and very sick patients complications could be minimized by minimizing procedure time and avoiding all but essential procedural components. Most procedure times were kept under 30 minutes.

Cohorts

- 38 symptomatic patients with Critical Aortic Stenosis
- Ages 65-95 (mean age 80)
- Follow-up 3-78 months (mean 42 months) after PBAV
- 19 men and 19 women
- All patients were functional classes 3 and 4
- All were prohibitively high-risk for Aortic Valve Replacement (AVR)
- Initial decision that a patient was not a surgical candidate was never made by the physician performing the valvuloplasty procedure
- Vast majority of patients were referred for specific purpose of aortic valvuloplasty

Assessment of Risks

- Logistic Euroscore
 - Range 14.0% - 84.1%
 - Mean 57.5%
 - Median 62%
- STS Predicted Risk
 - Range 14.2% - 79.2%
 - Mean 39.7%
 - Median 35%

Comparative Risk vs. PAVR

Cohort	Logistic Euroscore (%)	STS Score (%)
Vancouver (CE)*	28.0	
Revival (CE)*	33.3	13.0
Leipzig (CE)*	27.1	
CoreValve	25.5	
PBAV	57.5	39.7

*Cribier-Edwards Valve
** Transapical

Results

- Pre-PBAV all patients were functional classes 3 and 4.
- All procedures were initially successful and uncomplicated.
- Two patients (5%) died during

hospitalization.

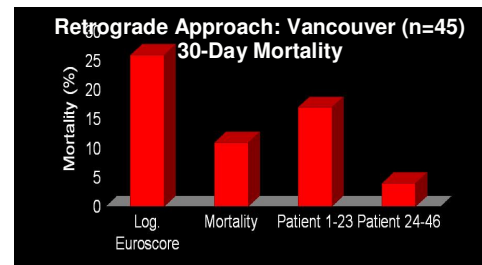
- One from ischemic bowel.
- One from renal failure.
- One patient died at 11 days outside of hospital from unknown cause (30 day mortality 8%).
- Two patients had AVR within 3 months after PBAV.
- Both died shortly after surgery.
- After 36-months there were 19 deaths (5 non-cardiac).
- Mortality was 19% at 6 months, 31% at 12 months, 46% at 24 months, and 52% at 36 months.
- Four patients have survived more than 4 years and 2 have survived more than 5 years – all without re-intervention.
- Eight patients (21%) required re-interventions, 7 between 6 and 12 months after initial PBAV.
- Three patients had 2 re-interventions; one had 3 re-interventions.
- Need for re-intervention did not appear to affect survival.

Pre-operative Risk vs. Mortality



There was a loose correlation between Logistic Euroscore and mortality. Most patients with Euroscores > 70 died in the first year. However, two patients with Euroscores of 80 and 69 were alive at 3 and 4 years respectively and several patients with Euroscores in 50 – 69 range survived more than two years.

Comparison to PAVR



Percutaneous Aortic Valvuloplasty: Long-Term Survival

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Mortality

Cohort	30 Day (%)	6 Month (%)
Vancouver (CE)*	12.1	ca. 20
Revival (CE)*	7.3	14.8
Leipzig** (CE)*	6.6	14.1
CoreValve Gen II	12.7	19.0
PBAV	8.1	18.9

*Cribier-Edwards Valve

**Transapical

Conclusions

Whether these are good or bad results depends on whether one believes that a glass is half-full or half-empty. In this cohort of elderly symptomatic patients with critical aortic stenosis, who were prohibitively high-risk for AVR 50% survived three or more years, and only a minority required re-intervention. The fact that the two patients who crossed over to AVR died peri-operatively lends

credence to the high-risk nature of this cohort. These data suggest that in the absence of a surgical alternative PBAV is a reasonable palliative procedure for patients with end-stage aortic stenosis.

Speculation

It is difficult to compare this cohort to those who have undergone PAVR. The valvuloplasty patients were generally sicker (Logistic Euroscores 58% vs. 30%). PAVR patients have comparable early mortalities with a trend toward more durable results. As equipment and technique improve, PAVR will undoubtedly emerge as the superior procedure. Until PAVR becomes more generally available, PBAV can bridge the gap between ineffective medical management and definitive AVR in these very sick high-risk patients.

Caribbean Cardiac Society Free Cardiac Clinic, Portland, Jamaica

On November 17, 2007, the Caribbean Cardiac Society and the Jamaica Foundation for Cardiac Disease held a free cardiac clinic in Port Antonio, Portland, Jamaica.



Dr. Jerome Lightbourne, The Bahamas performs an ECHO on a patient at the CCS sponsored free cardiac clinic in Portland, Jamaica.

ECG screenings and ECHO screens were preformed thanks to CCS Member, Dr. Jerome Lightbourne, The Bahamas, who brought his portable ECHO machine. Other members of the medical team included CCS Members Prof. Howard Spencer, The Bahamas, Dr. June Francis, Jamaica, Dr.

Mahendra Carpen, The Bahamas, Sister Madge Ricketts, Jamaica, Mrs. Angella Irving-Jackson, Jamaica. They were joined by and Dr. Lorren Scott, Jamaica, Ms. Melissa Matthis, Jamaica and Ms. Georgia Daley, Jamaica. The medical team also got support from six (6) staff members from the Portland Health Department and two (2) US Peace Corps volunteers.

The clinic focused on referred patients, as Dr. Jeremy Knight, the Chief Medical Officer of Health, North-East Regional Health Authority had organized for patients on the rheumatic fever register in eastern Jamaica to benefit from the availability of the ECHO machine. Of the 52 patients referred from the register 46 were seen by the team. A total of 114 patients were seen. Approximately 60% of the patients seen registered as walk-ins. Of the total number of patients seen, approximately 25% were children.

A total of seven (7) patients were recommended for surgery including two (2) children.

Breakthrough! Tapion Hospital Installs First Pacemakers in St. Lucia

On November 26, 2007, St. Lucia celebrated a major medical breakthrough at the Tapion Hospital with the inauguration of an invasive cardiology programme.

A medical team headed by Dr. Romel Daniel, cardiologist, internist and CCS Council Member, successfully implanted pacemakers in two patients. He was assisted by another CCS Member Dr. Kendall Griffith of St. Croix, USVI.



CCS Members Dr. Romel Daniel (right) and Dr. Kendall (centre) prepare for the first pacemaker implantation procedure in St. Lucia.

A hospital statement said the patients had had symptoms due to slow irregular heart beats and the pacemakers took over control of the hearts. Tapion Hospital said it intends to initially perform such procedures electively every three months, but will have the capability of installing pacemakers and defibrillators on an emergency basis.

It was a significant development in St. Lucia's provision of medical and health care. Previously, only Barbados, Jamaica, Trinidad and Tobago and the Bahamas in the English-speaking Caribbean performed such procedures. St. Croix in the U.S. Virgin Islands also installs pacemakers. The historic development at Tapion Hospital comes at a time when lifestyle diseases such as hypertension and diabetes which impact on the heart are on the rise on the island. A lot of patients who suffer from these diseases will have heart problems.

In addition Dr. Daniel told of an increasing number of younger patients

who had had to be sent overseas to be implanted with pacemakers. He said it was very vital that St. Lucia developed its own capability to install pacemakers.

The ability of Tapion Hospital to implant pacemakers and defibrillators will reduce costs to patients. Dr. Daniel pointed out that while such generators were available at a fixed price, there were until now other costs to be borne by patients travelling overseas to be implanted. These included cost of airline tickets and accommodation for both patients and accompanying relatives.

“As a result you can begin to understand the sheer impact of what we have started here at Tapion”, Dr. Daniel said. “Not only can we now perform these implants, we will be saving patients a tidy sum of money as well”.

Although quite elated with the development, Dr. Daniel was quick to point out that this success was only the beginning of things to come. He said it was a team effort and lauded the role of the other team members who assisted him in the operations. The invasive cardiology programme was made possible by the assistance of Medtronic Inc's, Mrs. Cynthia Hassett of Puerto Rico and other health professionals from St. Croix and Trinidad. The local team included doctors, nurses, pharmacists, plant manager and the hospital's Executive Director.



Mission accomplished! Drs. Griffith and Daniel poses for the camera after successfully implanting two (2) pacemakers.