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a PCI registry is one of the most important efforts that can be undertaken; it will provide an invaluable source of information on a national basis and throughout the Caribbean. "It will supply the needed data that are currently lacking in our region and place us in a better position internationally," he concluded.

Status Report: The West Indies Cardiac Surgery Registry

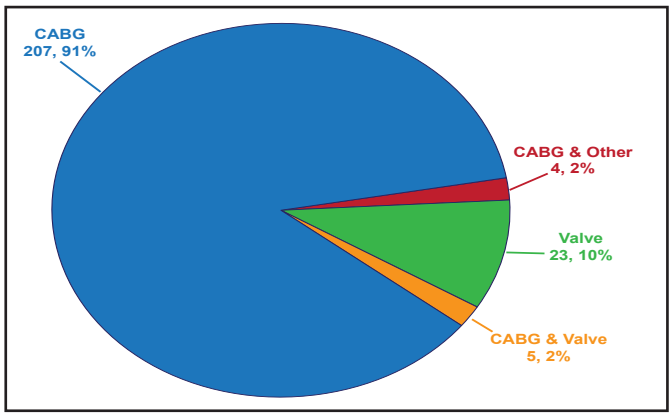
Written by Rita Buckley

Randolph Rawlins, MBBS, FRCS (Ed), FRCS (C/TH), the Doctor's Inn Research Group (DIRG), Trinidad and Tobago, West Indies, discussed progress in the development of a West Indies Cardiac Surgery Database.

According to Mr. Rawlins, cardiac surgery is the first discipline to establish a major international registry of patient characteristics and outcomes. He noted that national registries of adult cardiac surgery have already been established in European countries, the United States, Canada, and elsewhere. "The UK Cardiac Surgical Register dates back to 1977," he said.

In the West Indies, 207 coronary artery bypass grafts (CABGs) accounted for 91% of all cardiac surgeries. Other operations included 23 (10%) valve, 4 (2%) CABG only, and 5 (2%) combined CABG and valve surgeries (Figure 1). Of these patients, 17% was aged <50 years; 35% was aged 50 to 59 years; 31%, 60 to 69 years; 15%, 70 to 79 years; and 3%, 80 to 90 years. The in-hospital mortality rate was 5 patients out of 227.

Figure 1. Types of Cardiac Surgery in the West Indies.



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Data from local units and hospitals can be important for surgeons and surgical units, in that it can be used to create locally relevant risk models. However, data from other national registries can be useful to compare outcomes in one's own country with international benchmarks. "A risk-adjusted database can help surgeons advise their patients on the chances of a good operative outcome," he said.

To date, funding for the West Indies Cardiac Surgical Database has come from various sources, including Ministries of Health, participating surgical centers, and surgical software vendors. Industries in Trinidad and Tobago have also promised support for a database project.

DIRG has proposed a list of 55 variables to the Caribbean Cardiac Society for a pilot project. They run the gamut from demographics to intraoperative, patient-, and cardiac-related factors—eg, left ventricular function, active endocarditis, tricuspid valve, recent myocardial infarction, and unstable angina.

Issues that were identified by Mr. Rawlins included the need for dedicated resources in each hospital for data collection and collation, including IT infrastructure and "database managers." Ideally, the dataset should be centrally defined, with local teams empowered to collect information in ways that best suit their hospitals. The dataset should not be too extensive or be changed frequently. In addition, he noted the importance of compliance with data protection legislation and patient confidentiality principles and the key roles that are played by clinical leaders.

Other issues to bear in mind during registry development include the need to involve all cardiac centers and to recognize that in the early stages, the quality of the data may be limited. He pointed out that the initial effort does not have to be perfect before data is collected and used and that the final stimulus to complete data collection is publication of surgical results.

According to Mr. Rawlins, establishing a Prospective West Indies Cardiac Surgical Database should be a priority. Information from this resource would be of value to surgeons, cardiologists, and other health care professionals, and the registry would advance research, training, and professional development.

Predictors of Ten-Year Survival Following AMI in San Fernando, Trinidad

Written by Rita Buckely

Roy Tilluckdharry, DM, Int. Med., FCCP, FACC, FESC; Sarasvati Bahadursingh; and Andre Jagroop, Dip.

Echocardiography, Cross Crossing Medical Centre, San Fernando, Trinidad, reported on 10-year survival in 134 myocardial infarction (MI) patients who were seen in their medical center between April 1997 and December 1999.

The purpose of this retrospective study was to determine length and predictors of survival in patients who presented with acute myocardial infarction (AMI) to a tertiary care hospital in Trinidad. All patients who were admitted to Cross Crossing Medical Centre between April 1997 and December 1999 with a diagnosis of AMI were identified using the hospital admissions and discharge diagnosis database. Demographic, clinical, and laboratory variables were extracted from the hospital case records of patients with confirmed AMI. This retrospective study investigated 10-year survival among MI patients.

One hundred thirty-four MI patients were tracked during the study period—83 with AMI and 51 with a prior history of MI before April 1997. Mean age of MI occurrence was 55.0 years for males and 59.4 years for females, with an ethnic case mix of 114 (85%) East Indians, 12 (9%) Africans, and 8 (6%) of other descent.

Eighty-three patients (61.9%) were hypertensive, and the same number was diabetic. Twenty-five (18.7%) had a history of cigarette smoking, and 58 (43.3%) had dyslipidemia. Ninety-eight (73.1%) had a left ventricular ejection fraction (LVEF) >45%. Twenty-five (18.7%) had an LVEF between 30% and 45%, and 11 patients (8.2%) had an LVEF that was <30%. The number of involved artery vessels was determined by echo segments: 42 patients (31.4%) had one vessel that was involved, while 61 (45.4%) had two. Three patients (2.2%) had no vessel involvement; 28 (2.9%) had three vessels that were involved.

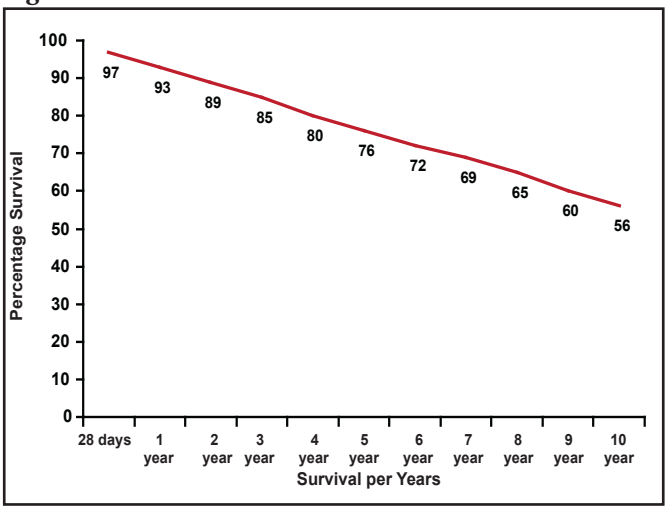
Out of 134 patients, 36% underwent revascularization; aortocoronary bypass surgery (ACBS; 31%); angioplasty (2%); ACBS and angioplasty (3%); and medical therapy only (64%). Five- and 10-year survival rates were highest in the 45 to 54-year age group. Five-year survival was lowest in the 65 to 74-year age group (56%) and increased to 66.7% in the 75 to 84-year age group. Ten-year survival declined sharply between the 45 to 54-year age group (82.5%) and the 55 to 64-year age group (41.9%; Table 1).

Survival at 5 years was 76%; at 10 years, it was 56% (Figure 1). The researchers found that the main risk factors for mortality were diabetes mellitus (diabetics died 7 to 10 years before their nondiabetic peers), hypertension, and dyslipidemia. MI at a younger age was associated with greater 5- and 10-year survival. Females had higher mortality after MI than males.

Table 1. Survival by Age Group after AMI.

Age Group	5 year survival %	10 year survival %
31-44	85.0	70.0
45-54	90.0	82.5
55-64	72.1	41.9
65-74	56.0	36.0
75-84	66.7	16.7

Figure 1. Overall Survival After AMI in Trinidad.



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An epidemiological study of AMI in Tobago found that the most common comorbidities that were associated with AMI were dyslipidemia, hypertension, and diabetes mellitus, followed by end-stage renal disease, smoking, and cocaine use [Alfred R et al. *West Indian Med J* 2009].

Another report investigated 2-year mortality and its predictors after AMI in Trinidad and Tobago. Three independent predictors of mortality were identified: male sex (p=0.04), in-hospital ventricular fibrillation (p=0.001), and an EF <40% (p=0.02). Diabetes mellitus, hypertension, hyperlipidemia, and cigarette smoking were prevalent among patients who presented with AMI. Ventricular function was a major determinant of 2-year mortality. The authors recommended aggressive risk factor modification to prevent first and recurrent coronary events [Thomas CN et al. *West Indian Med J* 2000].