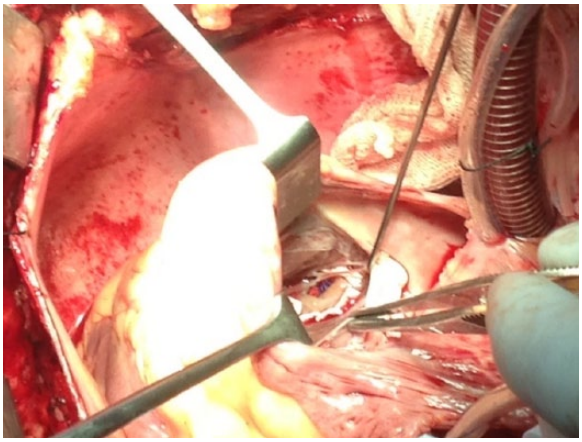
Figure 2. Transtricuspid Repair of a Post–Myocardial Infarction Ventricular Septal Defect



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Although limited by the small number of cases and anatomic variations from patient to patient, the variation in VSD type encountered in the study indicates challenges in terms of the surgical technique used and the operative risks.

An Update on the CCS CDI Registry

Written by Maria Vinall

Ronald Henry, MD, Diagnostic and Interventional Registry Group, encouraged physicians attending the Caribbean Cardiac Society meeting to become actively involved in posting data to the website of Caribbean Cardiac Society (CCS) Cardiac Diagnostic and Interventional (CCS CDI) Registry (research@dirg.co.tt). The CCS CDI Registry is a Caribbean-based quality improvement initiative designed to evaluate current cardiac practice in the Caribbean. In 2012, 8 Caribbean countries were invited to participate in the registry, including 14 catheterization laboratories in the region. Since that time, additional sites have been invited.

The primary purpose of the registry is to build a voluntary quality assurance tool specific for the Caribbean environment. A secondary objective is to provide a combined database of sufficient size to allow for meaningful research. Once the registry reaches a critical mass, it will allow for collaboration with other cardiac societies and databases and increase the opportunities to become more relevant to the needs and wants of the Caribbean populations. It also provides data to Caribbean national and regional health planners and administrations and is a source of revenue for the CCS.

Since the registry went online (www.ccscdi.com) in January 2013, 528 cases from 2 centers have been entered into the database. Some of challenges that have prevented more widespread participation in the CCS CDI Registry include the following: data management, issues of confidentiality, establishment of ethics committee and institutional review boards, multinational involvement with institutional or national requirements and regulations, Internet access, sustainability, interinstitutional rivalry, concerns about market manipulation, and costs.

All data are aggregated and made anonymous. Data definitions and forms have been vetted through all stakeholders. The data form now includes 75 variables in 9 categories, including administrative data, patient demographics, and patient history and risk factors. Due to the absence of public health policy concerning confidentiality, privacy, and copyright issues in many countries relating to online registries and data collection, feedback was solicited from experts with the American College of Cardiology's National Cardiovascular Data Registry to develop policies to address these concerns. The resulting decision was that there was no need for lengthy ethical documentation when data are collected for quality assurance purposes. The use of data for research papers will require application to the CCS for release and will need to be accompanied by the necessary institutional review board approvals.

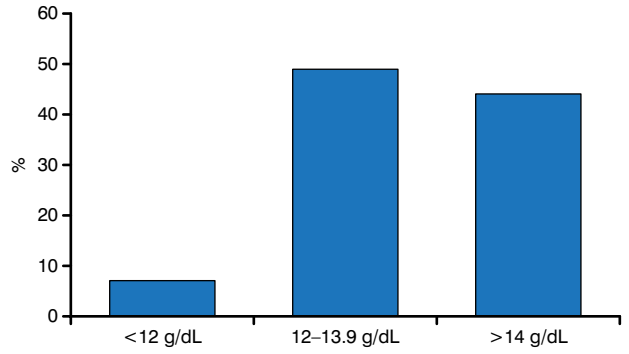
The registry continues to seek increased participation. To ensure that the collection of data is consistent and reliable, adequate funding will be needed. Workshops on the standardization of cardiac care are being planned to ensure that the high-level standards are met for development of the database and analysis of data.

Cardiac Surgical Operations Entered in West Indies Cardiac Surgery Registry Add Value

Written by Brian Hoyle

Randolph Rawlins, MBBS, Advanced Cardiovascular Institute of Surgical Therapies, Cocorite, Trinidad and Tobago, and Oti Esimaje, Cardiac Surgery Resident at Advanced Cardiovascular Institute of Surgical Therapies, reported on the establishment of the West Indies Cardiac Surgery Registry. Similar to the registries of adult cardiac surgery established elsewhere, including the United States, Canada, and countries in Europe, the study supports the value of the West Indies Cardiac Surgery Registry in harnessing regional data to develop models of patient treatment and care.

Figure 1. Hemoglobin Concentration Prior to Surgery



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Launched in 2012, the West Indies Cardiac Surgery Registry is an online database in which participation by regional health units in Trinidad and Tobago is voluntary. The Advanced Cardiovascular Institute of Surgical Therapies has entered data from 107 completed cardiac surgical procedures since the registry's inception. This study was an analysis of the 107 entries.

Triple coronary artery bypass grafting was the most common procedure (96% of patients). Three-quarters of the 107 procedures were elective. Nearly all patients (96%) received at least 1 arterial graft, along with a left internal mammary artery graft to the left anterior descending coronary artery.

The majority of the patients (81%) were men. Three-quarters of the patients were South Asian. Ages ranged from 34 to 84 years, and body mass index ranged from 18 to 36 kg/m^2. The prevalence of diabetes was 50%. Treatment for diabetes consisted predominantly of oral medications to lower blood glucose (63%), followed by insulin (31%) and diet modification (6%).

Smokers constituted almost half of patients, with 14% being current smokers (smoking within the prior year). The majority of the patients (60%) had hypertension. Twenty percent of the total patients had experienced prior coronary events. Five percent of the patients had carotid disease, claudication, or previous stroke or aortic aneurysm. Sixty-four percent of the patients were receiving β-blockers, and 92% were on statin therapy. Prior to surgery, nearly all patients (95%) were not receiving aspirin or clopidogrel bisulfate, and hemoglobin levels exceeded 12 g/dL in ≥90% of patients (Figure 1).

According to Dr. Rawlins, this sort of information highlights the value of a surgical registry in general and the West Indies Cardiac Surgery Registry in particular. Clarification of patient attributes is essential to supporting sound clinical decisions.

PCI at the Caribbean Heart Institute

Written by Phil Vinall

The first percutaneous coronary intervention (PCI) was performed in the mid-1970s; however, PCI has been available in Guyana only since 2006. The Caribbean Heart Institute (CHI), a 5-bed inpatient facility with 1 catheterization lab, 1 resident cardiologist, 2 internists, and 12 nurses, was the first center in Guyana to perform PCI. CHI receives referrals from a 215,000-km^2 area, which can potentially increase the time from symptom onset to revascularization.

Joel Joseph, MD, CHI, Georgetown, Guyana, presented results of a case series that assessed the clinical outcomes of all cases in whom percutaneous transluminal coronary angioplasty (PTCA) or stenting was attempted between January 1, 2011, and June 30, 2013. The outcomes assessed included death (at hospitalization, and at 30 days and 6 months post revascularization), acute renal failure, arrhythmias, myocardial infarction (MI), blood transfusions, and access site hematomas. Vital status of cases treated with PCI was confirmed either by medical record review or by phone. Death was confirmed by entry into the National Death Registry and cause of death on the death certificate.

Fifty-eight cases (mean age 58 ± 8 years; men–women ratio, 3:1) received revascularization. The success rate of revascularization (defined as TIMI 3 flow + < 25% stenosis post procedure) was 97%. Most cases (61%) had their intervention within 1 day of presentation; 86% were discharged within 2 days of intervention.

One case died after discharge from the hospital. She was a 56-year-old woman with diabetes, hypertension, and congestive heart failure as well as a history of prior PCI (2 years prior). The case was discharged within a day of her intervention, with no documented complications, and she was given a prescription for antiplatelet medication. She died 16 days later after failing to comply with dual-antiplatelet therapy and developing acute stent thrombosis. Of the 58 cases treated, 10 had an arrhythmia, 6 had an MI, and 3 had an access site hematoma. Acute renal failure and blood transfusion were reported in 1 patient each (1.72%). All cases remaining in hospital for more than 7 days had complications (Figure 1).

Periprocedural complications were numerically greater, albeit not statistically significant, in men, cases aged >55 years at the time of intervention, and those undergoing PCI for a ST-segment elevation myocardial infarction. Similarly, cases with >28 days between symptom onset and intervention and those requiring multivessel revascularization had more periprocedural complications, but these were also not significant.