



## Surgical Treatment of Adult VSDs

Written by Brian Hoyle

Giovanni Teodori, MD, Caribbean Heart Care Medcorp, St. Clair, Trinidad and Tobago, summarized the institution's 4-year experience with the surgical treatment of adult ventricular septal defects (VSDs).

Adult VSDs can be congenital or can arise following a myocardial infarction (MI). The tissue surrounding defects is usually strong in congenital cases but is markedly fragile in post-acute MI VSDs. Treatment differs as well. Congenital adult VSD involves patching or direct suturing following access through the aortic valve or right atrium, whereas post-acute MI VSD access is treated using single stitches to suture a patch or gluing of a double patch following mainly through the infarct, right atrium, and tricuspid annulus. Treatment of congenital VSD carries the risk for atrioventricular block. Post-acute MI VSD surgery carries the risk for bleeding, and treatment can fail.

From January 2010 to February 2014, 9 patients with adult VSDs were treated at Caribbean Heart Care Medcorp. Of these, 5 cases were congenital (perimembranous) and 4 were post-MI VSDs (3 were acute and 1 was chronic, following a surgical procedure conducted in 2006). Eight cases were diagnosed by preoperative echocardiography, while the remaining case was incidentally diagnosed during intraoperative echocardiography.

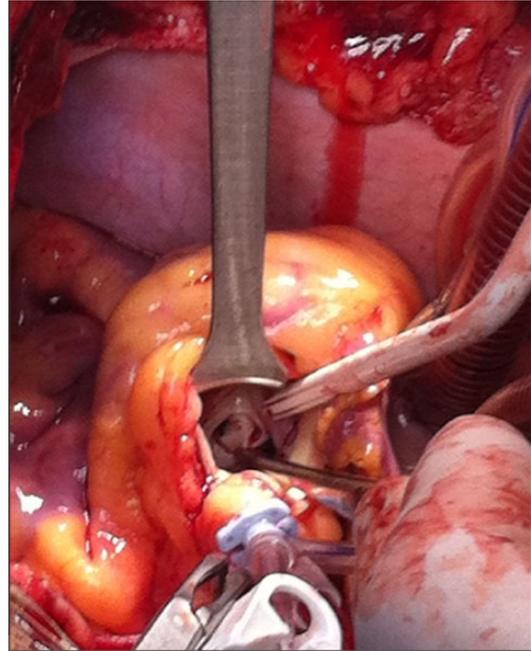
The 5 congenital cases involved patients aged 22 to 56 years (mean age, 37.5 years). Four cases were treated using a GORE-TEX™ (W. L. Gore and Associates, Newark, Delaware) patch with pledgetted single stitches, with the remaining case treated by direct suture. One case is presented in Figure 1.

The 4 cases of postinfarct VSD involved patients aged 45 to 68 years (mean age, 61 years). The time from diagnosis to surgery was 3 days in 2 patients and 9 days in another patient, with the remaining patient presenting with chronic VSD. Preoperative clinical condition was the use of an intra-aortic balloon pump (n=2) and New York Heart Association (NYHA) functional classes III (n=1) and IV (n=1). Surgical access was through the area of infarct (n=3) or the tricuspid annulus (n=1) (Figure 2). Surgery involved a single patch (n=2), a double patch with the use of glue (n=1), and the reinforcement of a prior repair (n=1).

All the patients were discharged with no residual VSDs, which was maintained at 6 months. One patient died 8 months following surgery because of bowel infarction, with the remaining 8 alive and assessed as NYHA classes I and II.

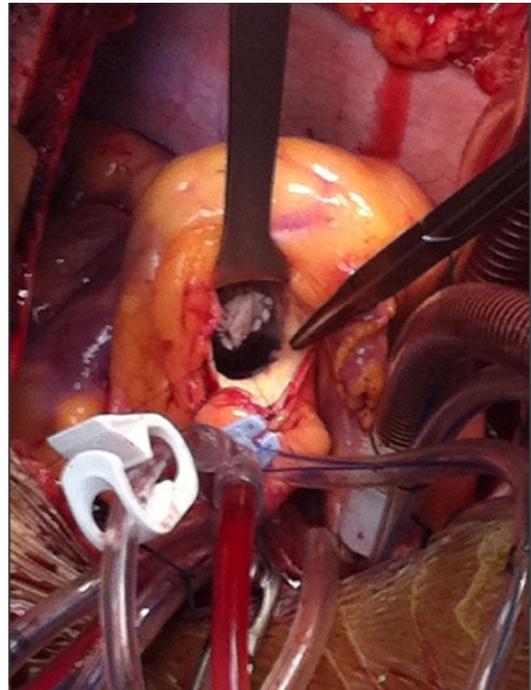
Figure 1. Case of Perimembranous Ventricular Septal Defect Prior to Repair (a) and Following Repair (b)

A



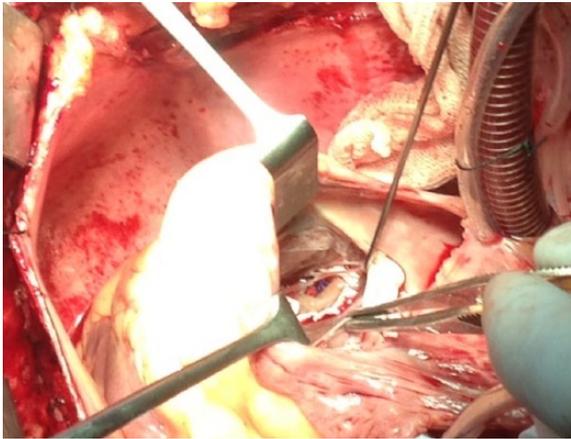
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B



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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.ccsdi.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, inter-institutional 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.