Congenital Heart Disease

About 1 in 120 babies born each year in the United States has a congenital heart defect. One million people in the United States have congenital heart disease. In some cases, the disease is life-threatening at birth. However, some cases are not discovered for years. Cleveland Clinic has expertise in the diagnosis and treatment of patients with all forms of congenital heart disease. The newly opened Special Delivery Unit allows patients diagnosed in utero with complex heart conditions to receive immediate treatment after birth. The department is focused on achieving excellent outcomes in a family-centered care setting.

Adult Congenital Heart Disease Volume

2011

The Adult Congenital Heart Disease Center offers a collaborative approach to treatment. Cardiologists who specialize in pediatric care, adult care, intervention and cardiovascular surgery work together to create individual, expert treatment plans and care. In 2011, we saw 1,401 patients, including 460 new referrals.

Percutaneous Interventional Procedures for Adult Congenital Heart Disease

Volume and Outcomes

2011

A total of 214 adult patients with congenital heart disease received interventional treatment in 2011. Although many of these cases were complex, we achieved a 100 percent success rate and 0 percent mortality.

| Total Adult Congenital Heart Disease Patient Visits | 1,401 |
| New Referral Visits for Adult Congenital Heart Disease | 460 |

| Adult Congenital Cases | 214 |
| Complex Congenital Cases | 119 |
| Complex Congenital Interventions | 37 |
| Success Rate | 100% |
| 30-Day Mortality | 0% |

Percutaneous Closure Procedures

Volume and Outcomes

2011

In 2011, we performed 77 percutaneous closure procedures. The success rate was 99 percent with 0 percent mortality.

| Percutaneous ASD Closures | 25 |
| Percutaneous PFO Closures | 52 |
| Successful Repair* | 99% |
| 30-Day Mortality | 0% |
| Patients Requiring Repeat Procedure | 0% |

*Based on one complication, including stroke, myocardial infarction or need for surgery. Abbreviations: ASD, atrial septal defect; PFO, patent foramen ovale.
Adult Congenital Heart Surgery Mortality

2011

Cleveland Clinic’s Department of Congenital Heart Surgery offers a full range of comprehensive surgical treatments for adults with congenital defects. In 2011, our mortality rate was 0.2 percent, which is well below the expected rate for these procedures.

Pediatric Congenital Surgery Volume and Type (N = 135)

2011

In 2011, Cleveland Clinic surgeons performed 135 pediatric congenital surgeries of varying complexity. The procedures within the majority “other” category include coarctation repair, truncus arteriosus repair, etc.

We continue our commitment to innovation in heart failure and transplant care. In 2011, we successfully implanted three Berlin Heart EXCOR® ventricular assist devices (Berlin Heart GmbH, Berlin) as a bridge to transplant for children with life-threatening conditions.

Abbreviations: ASD, atrial septal defect; AV, atrioventricular; PDA, patent ductus arteriosus; TOF, tetralogy of Fallot; VSD, ventricular septal defect.
Pediatric Congenital Heart Surgery – Mortality

2011

In 2011, the rates of mortality for pediatric patients with congenital heart disease who had surgery were lower than expected. We continue to strive for the lowest possible mortality rates for all patients.

Repair of Sinus Venosus ASD with Anomalous Pulmonary Veins

Cleveland Clinic surgeons have developed a new technique to treat patients with sinus venosus atrial septal defect with anomalous pulmonary veins. A total of 32 patients have undergone this procedure since 2000.
Treatment of a Coronary Fistula

Injection to the right coronary artery. This shows blood flow diverted to a fistula just proximal to the opening of the coronary artery from the aorta. It is draining to the pulmonary artery.

A guide wire is advanced into the fistula through a guide catheter.

A telescoping technique is used to maintain a stable position so the occlusion device can be safely deployed.

The AMPLATZER™ Vascular Plug II (arrow) is deployed in the fistula.

Within seconds, the fistula is occluded and no flow is seen beyond the device (arrow).

After the intervention, reinjection of the right coronary artery demonstrates that flow remains normal in the right coronary artery and that blood flow is no longer being diverted in the direction of the fistula.