

Pediatric Clips

*21-year-old with complex congenital heart disease –
Joseph E. Ross, MD*

January 2006 • Volume 4 • Issue 1

Pediatric Clips
from The Children's
Medical Center are
quick reviews of
common pediatric
conditions.

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CASE: MANAGEMENT OF CONGENITAL HEART DISEASE THROUGH ADULTHOOD

Due to advances in interventions, more patients with congenital heart disease (CHD) are growing into adulthood. As these patients age, they require a specialized,

multidisciplinary approach to transition from pediatric care and to plan for their continued health care needs. However, there is a lack of adult cardiologists in the community

trained and willing to take care of these patients. This creates a unique need in the community for adolescent/adult cardiology care for CHD patients.

CASE DISCUSSION

Laura, a patient with congenital heart disease, has received treatment to repair many of her heart defects from birth. As the patient grew into adolescence, then adulthood, the patient would traditionally be transitioned to an adult practitioner for continued care. However, despite her improved condition, she and her family have learned that a patient with congenital heart disease has unique needs. Often, like Laura, these patients require the attention of a specialist in congenital heart disease.

HISTORY

Laura was born at term gestation with a birth weight of 3.6 kg. She was referred for cardiology evaluation at 3 weeks of age due to the presence of a heart murmur. The initial assessment suggested the likelihood of a ventricular septal defect and mild congestive heart failure, but the noninvasive cardiac testing was not confirmatory. She was started on furosemide and digoxin and cardiac catheterization was performed two weeks later. Laura was ultimately given the

diagnosis of dextroposition of the heart, l-transposition of the great vessels with ventricular inversion (corrected transposition), and a large subpulmonary ventricular septal defect. Because of the complexity of the lesion and the subsequent development of pulmonary hypertension, she underwent placement of a pulmonary artery band at 5 months of age.

At 23 months of age, a repeat cardiac catheterization confirmed normal pulmonary artery pressure. At nearly 5 years old, Laura's ventricular septal defect was surgically closed through the aortic valve, the pulmonary artery band was removed and the main pulmonary artery was patch repaired. Her postoperative course was complicated by the transient development of complete heart block. She was rapidly weaned off all of her cardiac medications and was felt to have had a very satisfactory overall result. During her elementary school years, Laura was free of cardiovascular symptomatology and participated actively in recreational sports. She does not have a

history of inappropriate dyspnea, reactive airway disease, chest pain, palpitations, syncope or swelling.

PRESENT CONDITION

Laura is one of many individuals with repaired complex congenital heart disease who has survived into adulthood. At the present time, she requires no cardiac medication and appears to be hemodynamically stable. Her exam and noninvasive studies reflect normal oxygenation, mild to moderate systemic AV valve insufficiency, mild to moderate aortic valve insufficiency and well tolerated resting bradycardia. There is no suggestion of residual shunting. Due to the nature of her congenital defect and her previous surgeries, Laura will continue to be at risk to develop cardiac arrhythmias, AV block and worsening of her aortic and systemic AV valve insufficiency. Because her anatomic right ventricle remains her systemic ventricle, the prospect that she will ultimately develop pump

Continued

Continued from the front.

dysfunction and congestive heart failure is high as well. Therefore, it remains imperative that consistent, frequent cardiac follow-up be maintained despite her passage into adulthood.

Though Laura is generally aware of her medical status and has been compliant with appointments in the past, she has become considerably more independent over the last few years. She is also beginning to think about the future and wonders about

her longevity. She periodically fights with bouts of depression related to the uncertainties of her cardiovascular status. Her mid-thoracotomy incision, now a noticeable keloid, is a constant source of displeasure and an ongoing reminder of her birth defect. This presents a challenge, since follow-up appointments remain critical, despite her current satisfactory health status.

Adulthood can be a very harsh reality for many patients with complex

congenital heart disease, so it is requisite that the most appropriate, well-trained individuals remain available to them to provide their ongoing cardiology care. These patients require a specialized, multi-disciplinary approach to transition from pediatric care and to plan for their continued health care needs.

FEATURED SPECIALIST



JOSEPH E. ROSS, MD, is the medical director of pediatric cardiology at Dayton Children's. He is board-certified in pediatrics and

pediatric cardiology. Dr. Ross received his medical degree from the University of Cincinnati and completed his pediatric

residency, chief residency and pediatric cardiology fellowship at Rainbow Babies and Children's Hospital in Cleveland, Ohio. He joined Dayton Children's Cardiology at Dayton Children's Medical Center in 1989 after completing his fellowship.

PEDIATRIC CARDIOLOGY AT DAYTON CHILDREN'S

Pediatric cardiology is a full-service subspecialty involved in the assessment, diagnosis and treatment of congenital heart disease, arrhythmias and acquired heart disease of the fetus, neonate, child, adolescent and young adult. Dayton Children's cardiology division is partnering with Columbus

Children's Hospital and The Ohio State University to provide a monthly Adolescent/Adult Congenital Heart Disease clinic. This service provides high-quality outpatient care to adolescents and adults with unrepaired, palliated or repaired complex congenital heart disease.

CONTACT INFORMATION

To make a referral or if you have any questions regarding this service call 937-641-3418 or toll free 1-800-228-4055 extension 3418.



For further information about The Children's Medical Center of Dayton or its specialists contact us at 937-641-3666 or marketing@childrensdayton.org.



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