



TSDA Congenital Curricula

Thoracic Surgery Directors Association

TSDA Congenital Curricula for the Week of **October 29, 2012**

Week 15 of 32

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Welcome to Week 15 of the TSDA Congenital Curricula. The Congenital Curricula is based on a 32-week lesson plan, and you can expect to receive e-mail messages every Thursday for the upcoming week, with the exception of holiday weekends. The weekly assignments are a supplement to your program curriculum and include basic readings for congenital fellows, faculty, and others interested in congenital heart surgery. TSDA hopes the Congenital Curricula expands your current knowledge base and enhances your learning experience.

TOPIC: Left Ventricular Outflow Tract Obstruction: Valvar

Outline

- I. Morphology
 - a. Unicuspid valve
 - b. Bicuspid valve
 - c. Tricuspid valve
 - d. Annular hypoplasia
 - e. Conduction system
 - f. Associated lesions
 - i. VSD
 - ii. Aortic coarctation/IAA
- II. Pathophysiology/Natural History
 - a. Increased LV afterload
 - b. Aortic valve insufficiency
 - c. Diagnosis/Determination of operability
 - i. Echocardiogram
 - ii. Cardiac Catheterization
 1. LVOT gradient
 2. Balloon valvotomy
- III. Surgical repair
 - a. Indications/Timing
 - b. Conduct of Operation (Including Cannulation, CPB, Myocardial Protection, Approach)
 - i. Open aortic valvotomy
 - ii. Aortic valve replacement
 - iii. Konno procedure

- iv. Ross-Konno procedure
 - c. Associated Technical Considerations
 - i. Aortic valve repair for AI following balloon valvotomy
 - d. Post-operative management
 - e. Outcomes
- IV. Controversies
- a. Choice of prosthetic valve
 - b. Indications for Ross/Ross-Konno
 - c. Decision for single ventricle vs biventricular repair with borderline LV/arch hypoplasia

Talks:

- [Left Ventricular Outflow Tract Obstruction](#) - William M. DeCampi, MD, PhD (University of Central Florida)
- [Left Sided Obstructive Lesions: Supplement VII.f.](#) - Richard Jonas (George Washington University)

Videos:

- [Valvuloplasty by Polytetrafluorethylene Leaflet Extensions for Bicuspid Aortic Valve in a 17 Year-Old Patient](#) - Matej Nosá?, MD, PhD, Rudolf Poruban, MD, Michal Šagát, MD, PhD, Andrea Kántorová, MD, Aref Seif Nagi, MD, Pavel Valentík, MD
- [Aortic Root and Mitral Valve Replacement for Destructive Endocarditis: Reconstruction of the Aorto-Mitral Curtain](#) - Thomas Yeh, MD, Reenu S. Eapen, MD, Hisashi Nikaidoh, MD
- [Valve-Sparing Aortic Root Replacement in a Six Year-Old Child with Bicuspid Aortic Valve and Loays-Dietz Syndrome](#) - Luca A. Vricella, MD, FACS, Duke Edward Cameron, MD

Readings:

- Surgery for Left Ventricular Outflow Tract Obstruction in Children, Chapter 70, in [The Johns Hopkins Manual of Cardiothoracic Surgery](#), New York, McGraw-Hill, 2007.
- [Critical left ventricular outflow obstruction: the disproportionate impact of biventricular repair in borderline cases](#), by Hickey EJ, Caldarone CA, Blackstone EH, Lofland GK, Yeh T Jr, Pizarro C, Tchervenkov CI, Pigula F, Overman DM, Jacobs ML, McCrindle BW; Congenital Heart Surgeons' Society, in *The Journal of Cardiovascular Surgery*, 2007;13:1429-37.
- [Congenital Heart Surgery Nomenclature and Database Project: aortic valve disease](#), by Nguyen KH, in *The Annals of Thoracic Surgery*, 2000; 69:S118-S131.
- [Valve-Sparing Surgery for Balloon-Induced Aortic Regurgitation in Congenital Aortic Stenosis](#), by Bacha EA, Satou GM, Moran AM, Zurakowski D, Marx GR, Keane JF, Jonas RA, in *The Journal of Cardiovascular Surgery*, 2001;122:162-8.
- [Balloon Valvuloplasty Versus Transventricular Dilatation for Neonatal Critical Aortic Stenosis](#), by Cowley CG, Dietrich M, Mosca RS, Bove EL, Rocchini AP, Lloyd TR, in the *American Journal of Cardiology*, 2001;87:1125-7.
- [Intermediate-Term Results of the Ross Procedure in Neonates and Infants](#), by Shinkawa T, Bove EL, Hirsch JC, Devaney EJ, Ohye RG, in *The Annals of Thoracic Surgery*, 2010;89:1827-32.
- [Midterm Results of the Modified Ross/Konno Procedure in Neonates and Infants](#), by Maeda K, Rizal RE, Lavrsen M, Malhotra SP, Akram SA, Davies R, Suleman S, Reinhartz O, Murphy DJ, Hanley FL, Reddy VM, in *The Annals of Thoracic Surgery*, 2012;94:156-63.
- [The Mini-Ross Konno Procedure](#), by Al Halees Z, in the *European Journal of Cardio-Thoracic Surgery*, 2011;39:1067-69.
- [Selective Application of the Pediatric Ross Procedure Minimizes Autograft Failure](#), by Morales DL, Carberry KE, Balentine C, Heinle JS, McKenzie ED, Fraser CD, in *Congenital Heart Disease*, 2008;3:404-10.
- [Bicuspid Aortic Valve Disease and Pulmonary Autograft Root Dilation After the Ross Procedure: A Clinicopathologic Study](#), by Luciani GB, Barozzi L, Tomezzoli A, Casali, Mazzucco A, in *The Journal of*

Thoracic and Cardiovascular Surgery, 2001;122:74-9.

ADDITIONAL TSDA RESOURCES

- The [TSRA Review of Cardiothoracic Surgery](#) is available as a free PDF, e-Book, or as a print book. The textbook, edited by the Thoracic Surgery Residents Association and authored by more than 50 residents, is a valuable resource for CT surgery residents, faculty, and others interested in CT surgery education.
- The McGraw-Hill Companies, Inc., publishers of *The Johns Hopkins Manual of Cardiothoracic Surgery*, has graciously made available [sections of this important textbook](#) to TSDA Weekly Curricula subscribers. TSDA will post three chapters for a three month period over the course of one year. Check back frequently for new postings. [The Johns Hopkins Manual of Cardiothoracic Surgery](#) can be ordered at Amazon.com.
- New congenital, cardiac, and general thoracic talk pdf files now posted on TSDA.org. Visit the [New Talks page](#) to view new talks and download the pdf file.
- Attention program directors, faculty, residents, and fellows: If you know of a congenital curriculum topic for which you would like to create a talk, the TSDA Curriculum Committee encourages such contributions. Instructions for creating a talk can be found on [TSDA.org](#).

NEWS & INFORMATION

- Contact TSDA at tsda@tsda.org if you have comments or suggestions for the TSDA Congenital Curricula.

The next message will be sent on November 1 for the week of November 5.

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