ACGME Congenital Residency Update

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Chair, Congenital Program Directors
Thoracic Surgery Directors Association

April 25, 2015
Seattle, WA
Total Congenital ACGME Programs Per Year

*One program withdrawal, one addition*
Congenital Cardiac Programs in U.S.
Current ACGME Congenital Cardiac Fellowship Programs

Carl Backer, MD (chair)
Lurie Children’s Hospital

David Campbell, MD
Children’s Hospital Colorado

Charles Fraser, MD
Texas Children’s Hospital

Cynthia Herrington, MD
Children’s Hospital of Los Angeles

Brian Kogon
Children’s Healthcare of Atlanta

Richard Mainwaring, MD
Lucile Packard Children’s Hospital

Francis Fynn-Thompson, MD
Children’s Hospital Boston

Richard Ohye, MD
CS Mott Children’s Hospital

Lester Permut, MD
Seattle Children’s Hospital

Brian Reemtsen, MD
University of California Los Angeles

Thomas Spray, MD
Children’s Hospital of Philadelphia

James S. Tweddell, MD
Children’s Hospital Wisconsin
Congenital Curriculum

2010 - Outline – Paper Handout

2012 - Online – Weekly

2014 - Online – Weekly (Draft #2)

2015 – Transition to Moodle

Many Thanks to Lester Permut

2015 – First In Service Exam

Richard Mainwaring
Cynthia Herrington
Stephanie Fuller
TSDA Congenital Curriculum for the Week of January 26, 2015

Week 25 of 32

To ensure you continue to receive timely TSDA news, or to provide another e-mail address for the TSDA Congenital Curriculum, please forward contact information to tsha@tsda.org.

Forward this message to a colleague.

To assist TSDA in tracking this message, please right click to download pictures when viewing this message.

The Congenital Curriculum 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 Curriculum expands your current knowledge base and enhances your learning experience.

**Topic: Cor Triatriatum**

I. Morphology
   a. Left atrium
      i. Type A: Membrane between pulmonary venous chamber and LA
      ii. Type B: Hourglass constriction between pulmonary venous chamber and LA
      iii. Type C: Tubular constriction between pulmonary venous chamber and LA
   b. Right atrium

II. Pathophysiology/Natural History
   a. Pulmonary vein obstruction
   b. Variable shunting through ASD
   c. Diagnosis/Determination of operability
      i. Echocardiogram
      ii. Cardiac Catheterization
      iii. CT/MR
III. Surgical repair
   a. Indications/Timing
   b. Conduct of Operation (Including Cannulation, CPB, DHCA, Myocardial Protection, Approach)
      i. Resection of membrane
   c. Associated Technical Considerations
      i. Approach (RA vs LA)
   d. Post-operative management
   e. Outcomes
IV. Controversies

Readings:


ADDITIONAL TSDA RESOURCES

- Visit TSRA Resources for Residents to view resources written by residents for residents, including TSRA Review of Cardiothoracic Surgery; TSRA Primer of Cardiothoracic Surgery; TSRA Clinical Scenarios; and TSRA Journal Club.
- The McGraw-Hill Companies, Inc., publishers of The Johns Hopkins Manual of Cardiothoracic Surgery, has graciously made available sections of this important textbook to the 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.
- 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 tsha@tsda.org if you have comments or suggestions for the TSDA Congenital Curriculum.
Congenital Programs with a Resident

![Bar Chart: Congenital Programs with a Resident](chart.png)
Resident Participation in Congenital Match

- 2013: 3
- 2014: 7
- 2015: ?
Figure 2. Cumulative Number of Graduates per Year

- 2008: 2 graduates
- 2009: 8 graduates
- 2010: 15 graduates
- 2011: 22 graduates
- 2012: 28 graduates
- 2013: 34 graduates
- 2014: 44 graduates
Summary Congenital Residents (2007 – 2014)

44 Residents completed ACGME Residency

40 Eligible for Subspecialty Certificate

23 Passed Written Exam

22 Passed Oral Exam
Pass Rate: ABTS Congenital Written Exam (Pathways I and II)

Note: Pathway II (Grandfather) has ended
The training of congenital heart surgeons

Brian E. Kogon, MD

Objective: The training of congenital heart surgeons is extremely complex and challenging. It is frequently viewed as a 12-month fellowship followed by an apprenticeship. This study evaluates the initial experience of fellows training in pediatric heart surgery.

Methods: Fellows completing 12 months of training within the past 5 years were included. Questionnaires were completed by e-mail, mail, or telephone correspondence.

Results: Twenty-eight of 42 (67%) fellows responded from 11 training programs. Each fellow assisted in a mean of 294 (±90) operations, 234 (±86) of which were open, and each fellow performed a mean of 75 (±53) operations, 51 (±42) of which were open. Operations were grouped by risk-adjusted congenital heart surgery scores. Fellows were exposed to all groups as the assistant. As the surgeon, fellows typically performed operations only in groups 1, 2, and 3. Only 7 of 28 fellows performed operations in group 4, none in group 5, and 1 of 28 in group 6. On a scale of 1 to 10 (10 being satisfied), 28 of 28 fellows were satisfied with the exposure to congenital heart surgery (mean 9.5 ± 1.0), but only 10 of 28 with the operative experience (mean 4.9 ± 2.8). Twenty-six of 28 were satisfied with the training overall (mean 7.3 ± 1.8).

Conclusions: Challenges in the training of congenital heart surgeons remain. Although fellows received excellent exposure to surgery for congenital heart disease, there is a perceived minimal operative experience as the surgeon, particularly for the more complex operations. There is dissatisfaction with the operative experience, yet the majority of fellows finish satisfied with their overall training.

J Thorac Cardiovasc Surg 2006;132:1280-1284
Resident Survey 2014 (Brian Kogon)

- 36/42 residents responded (82%)
- Median number total cases – 136 cases
  Range 75 – 236
  Increase from 75 cases!
- Median # Complex Neonates – 6 cases
  Range 2 – 17
  Increase from 14 cases in 28 fellows
  (0.5 cases/fellow)
- 84% now practicing Congenital Cardiac Surgery
Conclusions

Initiation of ACGME Congenital Residency (2007)

• Standardized Application (Match) and Curriculum
• Doubled Case Volumes for Residents
• Provided Residents the Opportunity to Perform Complex Cases
• Still needs work to improve Board Pass Rate
• Leads to ABTS Congenital Certificate (n = 22)
Congenital Cardiac Programs in U.S.