

RUCHIRA GARG, MD, FACC, FASE

DIRECTOR, NONINVASIVE CONGENITAL CARDIOLOGY

Guerin Family Congenital Heart Program

Cedars-Sinai Heart Institute

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POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS

- Aug 2012- Present Cedars-Sinai Medical Center, Los Angeles, CA
Director, Congenital Non-Invasive Cardiology
- Jan 2006 - Jul 2012 Miami Children's Hospital, Miami, FL
Head, Cardiac Magnetic Resonance Imaging
- Aug 2004 - Dec 2005 The Children's Hospital, Denver, CO
Assistant Professor, Dept of Pediatrics, Division of Cardiology
Co-Director, Cardiovascular Magnetic Resonance Imaging
- Jul 2003 - Jul 2004 Children's Hospital Boston, Boston, MA
Senior Fellowship in Cardiac Magnetic Resonance Imaging
- Aug 2000 - Jul 2003 Children's Hospital, Columbus, OH
Pediatric Cardiology Fellowship
- Sep 2001 - Dec 2001 Children's Hospital Boston, Boston, MA
Cardiac MRI elective training
- Jul 1997 - Jul 2000 Johns Hopkins Hospital, Baltimore, MD
Categorical Pediatric Residency
- Oct 1998 Indian Health Service, Tuba City, AZ
Pediatric elective rotation providing outpatient primary care for the local Native American population
- Sep 1998 All India Institute of Medical Sciences, New Delhi, India
Pediatric elective rotation emphasizing tropical medicine and infectious diseases through both inpatient and outpatient clinical experience

EDUCATION

- 1993-1997 The Medical College of Pennsylvania, Philadelphia, PA
Degree Awarded: M.D.
- 1991-1993 Lehigh University, Bethlehem, PA
Degree Awarded: B.A., Premedical Sciences
Graduated with Highest Honors

HONORS AND AWARDS

- 2002 Cardiology Fellows Forum of Excellence Grant to the American Heart Association Scientific Sessions
- 2001 Wyeth-Ayerst Travel Grant Award to the American Heart Association Scientific Sessions
- 1997 Janet M. Glasgow Memorial Achievement Citation for Academic Excellence, American Medical Women's Association
- 1997 Merit Scholarship, Medical College of Pennsylvania

1996 Alpha Omega Alpha
1994 Pathology Honor Society
1992 Phi Beta Kappa Honor Society

LICENSURE

Oct 2016 State of Arizona, active
July 2012 State of California, active
Dec 2005 State of Florida, expired
June 2005 State of Colorado, expired
Jun 2000 State of Ohio, expired
May 2002 State of Massachusetts, limited license, expired
Jul 2000 State of Maryland, expired

SPECIALTY CERTIFICATION

Aug 2004 The American Board of Pediatrics, SubBoard of Pediatric Cardiology
Sep 2000 The American Board of Pediatrics
May 1998 U.S. Medical Licensure Exam, Part III: Score 233, (92nd percentile)
Sep 1996 U.S. Medical Licensure Exam, Part II: Score 247, (92nd percentile)
Jun 1995 U.S. Medical Licensure Exam, Part I: Score 229, (90th percentile)

PROFESSIONAL AFFILIATIONS

2012-Present Fellow of the American Society of Echocardiography
2010-Present Fellow of the American College of Cardiology
2013-Present American Academy of Pediatrics
2012-Present Los Angeles Society of Echocardiography
2012-Present Adult Congenital Heart Association
2008-Present American Society of Echocardiography
2002-Present Society for Cardiovascular Magnetic Resonance
1997-2000 American Academy of Pediatrics

PROFESSIONAL DEVELOPMENT AND COMMUNITY SERVICE

2015-Present Vice-President, Los Angeles Society of Echocardiography
2015-2016 SCMR 2016 Scientific Sessions, Program planning committee for the congenital heart syllabus
2014-Present Parent Volunteer, Canyon Charter Elementary School
2010-2012 Identified as a formal mentor to 1 cardiology fellow and 1 pediatric resident
2010-2012 Coordination of a monthly lecture series between Cleveland Clinic and Miami Children's Hospital faculty
2010-2012 Credentialing Committee, Miami Children's Hospital
2007-2009 Graduate Medical Education Committee, Miami Children's Hospital
2004-2005 Invitation to participate in The Children's Hospital-based Leadership Course, endorsed by the American Academy of Pediatrics.
2005 Physician Advisory Council, The Children's Hospital, Denver, for the implementation of a hospital-wide electronic medical record.
1997-2000 Resident Representative to Curriculum Committee
 Johns Hopkins Hospital
1997-2000 Pediatric Advocacy Committee
 Johns Hopkins Hospital

ABSTRACTS

1. Kessler Y, Davis M, **Garg R**, Sheth S. "Test of change for a sedation process for pediatric echocardiography. Cedars Nursing Research Conference. June 2016.
2. Davis M, Kessler Y, **Garg R**, Sheth S. "Implementation of an Intranasal Sedation Protocol for Pediatric Transthoracic Echocardiography. Western Society of Pediatric Cardiology. May 2016.
3. Zahn E, Peck D, **Garg R**, McRae M, Phillip N, Basaker K, Phillips A, Simmons C. "Transcatheter Closure of Patent Ductus Arteriosus in Severely Premature Neonates: A New Technique for a Vexing Problem." Poster, Western Society for Pediatric Research. Jan 2016
4. **Garg R**, Sevilla A, Garberich R, Fleishman CE. "Remote delivery of congenital cardiac magnetic resonance imaging services: A unique telemedicine model." Poster, Society for Cardiovascular Magnetic Resonance Imaging, 2015.
5. Phillips, A; Olshove V; Sheth, S; **Garg R**; Zahn E.: "Hybrid Approach to the Treatment of Adult Congenital Heart Disease." Poster Presentation, Cardiology 2014: 17th Annual Update on Pediatric and Congenital Cardiovascular Disease, February 2014.
6. **Garg, Ruchira**, C Rosental and Juan C. Muniz. "Comparison of systolic and diastolic 3D SSFP for arterial dimensions and coronary artery origins in patients with congenital heart disease." Poster, Society for Cardiovascular Magnetic Resonance Imaging, 2012.
7. **Garg, Ruchira**, E Welch, A Khoram, D Berman, and Evan Zahn. "Intracardiac Echocardiographic Evaluation of the Melody Transcatheter Pulmonary Valve." Poster, Society for Cardiovascular and Catheter Intervention, 2011.
8. Prakash, Ashwin, **Ruchira Garg**, T Geva and Andrew Powell. "Faster Flow Quantification Using Sensitivity-Encoded Phase Contrast Magnetic Resonance Imaging." Poster, American Heart Association, 2004.
9. **Garg, Ruchira**, S Raman and Curt Daniels. "Are ANP and BNP Useful Markers for Function in Systemic RV?" Supplement II Circulation. Vol 106(19), 2002. Oral Abstract Presentation.
10. **Garg, Ruchira** and Christoph U Lehmann. "Retinopathy of Prematurity and Elevated Glucose in Neonates." Poster presentation, May 2001 at the Society for Pediatric Research.

PUBLICATIONS

1. Zahn EM, Peck DP, Phillips A, Nevin P, Basaker K, Simmons C, McRae ME, Early T, **Garg R**. "Transcatheter closure of patent ductus arteriosus in extremely premature newborns: Early results and midterm follow-up." JACC: Cardiovascular Interventions. 2016: Vol 9, No. 23.
2. Phillips AB, Nevin P, Shah A, Olshove V, **Garg R**, Zahn EM. "Development of a novel hybrid strategy for transcatheter pulmonary valve placement in patients following transannular patch repair of tetralogy of Fallot." Catheter Cardiovascular Interventions. 2015: Nov 3
3. Zahn E, Nevin P, Simmons C, **Garg R**. "A Novel technique for transcatheter patent ductus arteriosus closure in extremely preterm infants using commercially available technology." Catheter Cardiovascular Interventions. 2015: Feb 1.
4. **Garg R**, Sevilla A, Garberich R, Fleishman CE. "Remote delivery of congenital cardiac magnetic resonance imaging services: A unique telemedicine model." Pediatric Cardiology. 2014: Aug 7.

5. Zahn EM, **Garg R**, Phillips, AB. "Trans-Catheter Closure of Patent Ductus Arteriosus (PDA) in Extremely Low Birth Weight (ELBW) Premature Infants: A New Treatment Option for an At-Risk Population." Congenital Cardiology Today. June 2014. Vol 12, Issue 6.
6. Nunlist E, Garcia J, **Garg R**. "Are you calling me fat? An extreme case of cardiac lipomatosis masquerading as hypertrophic cardiomyopathy." Circulation Cardiovascular Imaging. 2014;7:563-565.
7. **Garg R**, Garcia R, Cubeddu RJ. "Gerbode defect misinterpreted as pulmonary hypertension." Journal of Cardiology Cases. Oct 2012.
8. Aregullin EO, **Garg R**, Berman D. "Takotsubo Cardiomyopathy After Transcatheter Edwards Sapien Pulmonary Valve Placement in a Patient with Tetralogy of Fallot." Pediatric Cardiology. Sept 2012.
9. Johnson J, Ragheb J, **Garg R**, Patten W, Sandberg DI, Bhatia S. "Neurogenic stunned myocardium after acute hydrocephalus Report of 2 cases." Journal of Neurosurgery: Pediatrics. May 2010.
10. Argueta-Morales R, **Garg R**, DeCampli W. "Congenital Right Pulmonary Venous Atresia: Diagnosis and management of a patient." Cardiology in the Young. Dec 2009.
11. Roach CL, Husain N, Zabinsky J, Welch E, **Garg R**. "Moderate Sedation for Echocardiography of Preschoolers." Pediatric Cardiology. Dec 2009.
12. **Garg R**, Raman SV, Hoffman TM, Hayes J, Daniels CJ. "Serum Markers of Systemic Right Ventricular Function and Exercise Performance." Pediatric Cardiology. Jan 2008.
13. Samyn M, Powell AJ, **Garg R**, Sena L, Geva T. "Range of Ventricular Dimensions and Function by Steady State Free Precession Cine MRI in Repaired Tetralogy of Fallot: Right Ventricular Outflow Tract Patch versus Conduit Repair." Journal of Magnetic Resonance Imaging. 26 (4): 934-40, Oct 2007.
14. Lopez, L, Ventura R, Ray T, Welch E, **Garg R**. "Echocardiographic Evaluation of Double Outlet Right Ventricles" Pediatric Ultrasound Today. 12 (1): 1-28, 2007.
15. Prakash A, **Garg R**, Marcus EN, Reynolds G, Geva T, Powell AJ. "Faster flow quantification using sensitivity encoded phase velocity magnetic resonance imaging: in vitro and in vivo." Journal of Magnetic Resonance Imaging. 24 (3): 676-82, Sept 2006
16. Hunter KS, Lanning CJ, Chen SY, Zhang Y, **Garg R**, Ivy DD, Shandas R. "Simulations of Congenital Septal Defect Closure and Reactivity Testing in Patient-Specific Models of the Pediatric Pulmonary Vasculature: A 3D Numerical Study with Fluid-Structure Interaction." J Biomech Eng. 128(4):564-72, Aug 2006.
17. **Garg R**, Powell AJ, Sena L, Marshall AC, Geva T. "Effects of metallic implants on magnetic resonance imaging evaluation of Fontan Palliation." Am J Cardiol. 1:95(5):688-91, Mar 2005.
18. **Garg R**, Agthe AG, Donohue PK, Lehmann, CU. "Hyperglycemia and Retinopathy of Prematurity in Very Low Birthweight Infants." J Perinatol. 23(3): 186-94, 2003.
19. **Garg R**, Waltz WF, Allen, HD. "Mitral Valve Prolapse—A Clinical Diagnosis." Pediatric Directions. (Fall 2001) 6-9.
20. **Garg R**, Sard B. "A Spotless diagnosis." Pediatric Puzzler case, Contemporary Pediatrics, April, 2000.

21. **Garg R.** The Lehigh Review. "Ayurvedic Medicine." Vol 2: 133-144, Fall 1993.

INVITED LECTURES

Blood Conservation Seminar. Cedars-Sinai. "Fetal cardiology." Los Angeles, CA. November 2016

Case conference/Grand Rounds. Cedars Sinai. "Kawasaki Disease." Los Angeles, CA. July 2016.

Obstetric Grand Rounds. White Memorial Hospital. "Update in Fetal Cardiology." Los Angeles, CA. July 2016.

The American Society of Echocardiography Scientific Sessions. "Aortic Dissection." Seattle, WA June 2016.

Pediatric State of the Art Symposium. "Cardiology Update 2016." Cedars-Sinai, June 2016.

Obstetric and Gynecological Assembly of Southern California, 71st Annual. "Update in Fetal Cardiology." Marina Del Rey, May 2016

The Society for Cardiovascular Magnetic Resonance 18th Annual Scientific Sessions. Moderator and Congenital Heart Section Program Co-Chair. Los Angeles, CA Feb 2016

The American Society of Echocardiography Scientific Sessions. "Double outlet Right Ventricle." Boston, MA June 2015.

Hot Topics in Venous Thromboembolism and Pulmonary Vascular Disease Symposium, "The Adult with Congenital Heart Disease and Pulmonary Hypertension." Los Angeles, 2015

The Society for Cardiovascular Magnetic Resonance 17th Annual Scientific Sessions. San Francisco, CA February 2015. Moderator.

Controversies and Advances in the Treatment of Cardiovascular Disease, The 14th in the Series. "What do I look for in my patient with Repaired Congenital Heart Disease?" Beverly Hills, CA November 2014.

Pediatrics State of the Art Symposium. "Anticipatory Guidance: The Pediatric Model guiding care for Congenital heart Patients into 2014." Los Angeles, CA June 2014.

Obstetric Grand Rounds, Cedars-Sinai Medical Center, "Fetal Cardiology in 2014." Los Angeles, CA May 2014.

Controversies and Advances in the Treatment of Cardiovascular Disease, The 13th in the Series. "What Defines a Failing Right Ventricle, and When Should We Intervene?" Beverly Hills, CA November 2013.

Pediatrics State of the Art Symposium. "An Update in Pediatric Cardiology." Los Angeles, CA June 2013.

The Society for Cardiovascular Magnetic Resonance 15th Annual Scientific Sessions. "Congenital Cases: Not Another tetralogy..." San Francisco, CA February 2013.

Pediatric Case Conference, "Neonatal Tachycardias." Cedars-Sinai Medical Center, Los Angeles, CA January 2013.

Pediatric Grand Rounds, "An Update in Pediatric Cardiology." Cedars-Sinai Medical Center, Los Angeles, CA January 2013.

Pediatric Grand Rounds, "An Update in Pediatric Cardiology." Santa Barbara Cottage Hospital, Santa Barbara, CA December 2012.

Cardiology Grand Rounds, Cedars-Sinai Medical Center, "Congenital Heart Disease Never Looked So Good." Los Angeles, CA October 2012.

8th Annual Bakersfield Symposium. "An Update in Pediatric Cardiology." Bakersfield, CA September 2012.

The Society for Cardiovascular Magnetic Resonance 15th Annual Scientific Sessions. Orlando, FL February 2012.

The Society for Cardiovascular Magnetic Resonance 14th Annual Scientific Sessions. Nice, France February 2011.

"Cardiac embryology and Nomenclature." Cleveland Clinic at Weston. 2010 and 2011.

Grand Rounds, Miami Children's Hospital, November 2010.

The Society for Cardiovascular Magnetic Resonance 13th Annual Scientific Sessions. Phoenix, AZ February 2010.

Pediatric Postgraduate Course, Miami Children's Hospital. Miami, FL March 2009.

The Society for Cardiovascular Magnetic Resonance 12th Annual Scientific Sessions. Orlando, FL February 2009.

Grand Rounds, Miami Children's Hospital 2006.

2nd MAGNETOM World Pediatrics User Meeting, Philadelphia, PA February 2006.

"Ventricular Volumes and Mass Measurements in Congenital Heart Disease." The Society for Cardiovascular Magnetic Resonance 9th Annual Scientific Sessions. Miami, FL January 2006.

"MRI Assessment of Conotruncal Lesions." The 10th Vail Symposium on Pediatric Cardiac Diseases. Vail, CO March 2005.

"Cardiovascular MRI: The future of diagnostic Imaging." National Institute of Standards and Technology. Boulder, CO April 2005.

"Cardiovascular MRI: The future of diagnostic Imaging." Pediatric Heart Lung Center Clinical Research Conference, Denver, CO, April 2005.

"Cardiovascular MRI: The future of diagnostic imaging." The Children's Hospital Heart Institute Foundation, Denver, CO, September 2004

GRANT SUPPORT/FUNDED RESEARCH

February 2002 Children's Research Institute Internal Grant, \$9,080.00 for project: "Serum markers of ventricular failure in patients with systemic right ventricle." **Completed.**

November 2002 Children's Research Institute Internal Grant, \$21,723.45 for project: "Non-invasive screening for coronary atherosclerotic changes in patients who were treated for Hodgkin's disease as children." **Completed.**