

Editorial

Cite this article: Stellin G, Tchervenkov CI, Jonas RA, and Jacobs ML (2021) In Memoriam: Aldo R. Castañeda, July 17, 1930–April 30, 2021. *Cardiology in the Young* **31**: 1189–1192. doi: [10.1017/S1047951121002687](https://doi.org/10.1017/S1047951121002687)

Keywords:

Congenital heart disease (CHD); Pediatric; Adult Congenital Heart Disease; Cardiology

Author for correspondence:

Giovanni Stellin, MD, Pediatric and Congenital Cardiac Surgery Unit, Department of Cardiac, Thoracic, Vascular Sciences and Public Health, University of Padua, Via Giustiniani, 2-35128 Padua, Italy. Tel: +39 3298324838; Fax: +39 049 8217822. E-mail: giovanni.stellin@unipd.it

This article has been copublished in the *World Journal for Pediatric and Congenital Heart Surgery* and in *Cardiology in the Young*.

¹Pediatric and Congenital Cardiac Surgery Unit, University of Padova, Padova, Italy; ²Division of Cardiovascular Surgery, The Montreal Children's Hospital of the McGill University Health Centre, Montreal, Quebec, Canada; ³Cardiac Surgery, Center for Neuroscience Research, Children's National Hospital, Washington, DC, USA and ⁴Johns Hopkins School of Medicine, Baltimore, Maryland, USA

An “Apollonian Surgeon” is how Robert Sade apostrophized our mentor in his article,¹ paraphrasing the title of Dr. Castañeda's memorable presidential address to the American Association for Thoracic Surgery (AATS): “The making of a Cardiothoracic Surgeon: An Apollonian Quest”.²

Robert Sade and Dominique Metras were the first two residents to benefit from the great opportunity of training at the Boston Children's Hospital (BCH) upon Aldo's arrival there in 1972. This same privilege was subsequently afforded to many of us. As young pediatric cardiac surgeons, we were drawn to Boston from all over the United States and from literally every continent. It was the magnetism of Aldo's persona and the lure of his mentorship that drew us there. Aldo's happiness and satisfaction were readily apparent when he would speak about the many surgeons who underwent training with him in Boston, and later at the Unidad de Cirugia Cardiovascular de Guatemala (UNICAR). With considerable pride, he often told us that among the residents he trained around the world, over 40 of them had become chief of a Pediatric Cardiac Surgery program.

Aldo Ricardo Castañeda Heuberger was born on July 17, 1930 in Nervi (Italy), a charming little town with colorful houses and a romantic marina harbor located in the Italian Riviera, between Genoa and Portofino. He spent the first five years of his life in Italy where he attended a pre-elementary school, before moving with his family to Munich where his father studied medicine. During his years in Germany, while a teenager, he experienced the horrors of Nazism during World War II, which had a profound effect on him throughout his life. He started primary school in Munich and then he continued his education at the Landschulheim, Bavaria (Germany). He completed his academic requirements at the “Institut auf dem Rosenberg” in St. Gallen, Switzerland, where he graduated in 1950, also obtaining at the same time the Oxford School Certificate.³

In 1951, Aldo moved to Guatemala. Whilst studying medicine at the University of San Carlos, in Guatemala City, he was at an Italian social club when he met Arcely Rey-Rosa who, like him, had spent several years of her youth in Torino, Italy and returned to Guatemala at the end of the war. Aldo and Arcely were married in 1956. Arcely remained at his side, a devoted wife and mother of their three children, Silvana, Claudia, and Aldo Jr. In addition to being a loving and devoted partner, Arcely was also a great adviser to Aldo throughout their life together.

Much has already been written on how, soon after his graduation from medical school in Guatemala, Dr. Castañeda moved to the United States to undertake experimental work involving the new heart and lung machine in the animal laboratory at the University of Minnesota.

Due to his remarkable surgical skill and his profound interest in research and in teaching, his surgical training was followed by appointment to the faculty of the same university, and he progressed rapidly through academic ranks, being promoted to Professor in 1970.

In 1972 the Boston Children's Hospital, after a wide international search, appointed Dr. Castañeda as Cardiac Surgeon-in-Chief and Professor of Surgery at Harvard Medical School at the age of 42, to replace a pioneer and giant of cardiac surgery, Dr. Robert Gross. Dr. Alexander Nadas, born and educated in Budapest, who was Chief of the Cardiology Department at Boston Children's Hospital, was eager to develop an “integrated congenital cardiac program” with cardiologists, cardiac surgeons, radiologists, anesthesiologists, cardiac critical care specialists, nurses, and cardiac pathologists working together in the treatment of children with congenital heart disease. In 1975 Dr. Castañeda was appointed William E. Ladd Professor of Surgery and in 1981 he became Surgeon-in-Chief of the Boston Children's Hospital.

Since that time, his magical collaboration with Alexander Nadas, Richard and Stella Van Praagh, Ken Fellows, and soon afterwards with Bill Norwood and many others proved to be an explosive “workshop” for developing the modern multi-disciplinary approach to management of children with congenital heart diseases. The Boston Children's Hospital became the

“Mecca” in attracting many pediatric cardiac surgeons for visiting and training, from all over the planet. Needless to say, the charismatic young polyglot Dr. Castañeda, with his sparkling and gentle personality, was inspiring everyone who approached him; he was able to diffuse, with great interest, his novel treatment for children with congenital heart diseases, fascinating everyone coming from all over the world. The magical atmosphere of science and discipline which we were able to breathe in the classroom of Division 35, during the gathering of the whole “integrated cardiac team” led by Nadas and Castañeda for case-discussion, is still memorable to us all!

This was the inspiration for a few of us to establish the “Society of Pediatric Cardiovascular Surgery Aldo R. Castañeda” in Boston in 1979. Aldo’s pupils and admirers, after having had the great opportunity of training/visiting the Boston Children’s Hospital, were eager to perpetuate such a tradition of exchanging knowledge in a setting of warm fellowship. The meetings took place biannually at the BCH and included the contribution of several lectures from the whole “integrated cardiac team.” In addition, in turn we were allowed to visit the operating room in order to keep us updated on any novel surgical developments. Aldo was happy to endorse our Society, though he often appealed to us, for the sake of its continuity, to remove his name!

In 2006, building upon a foundation of the spirit of the so-called “Castañeda Society,” the World Society for Pediatric and Congenital Heart Surgery (WSPCHS) was born.⁴ The WSPCHS established the “Aldo Castañeda Lecture.” The first lecture was given by Dr. Castañeda himself at the Inaugural Scientific Meeting of the World Society in Washington, DC in 2007. On July 15–17, 2010, at Casa Santo Domingo in Antigua, Guatemala in honor of his 80th birthday, the WSPCHS with the participation of several other societies organized a special Joint Meeting dedicated to our mentor.⁴ On his birthday, July 17, 2010, during the Final Presidential Address, the “Castañeda Society” was officially dissolved, and its symbolic heart was transferred to the World Society.

It is also important to mention that Aldo Castañeda together with another 14 eminent pioneer pediatric cardiac surgeons of North America, in 1973 founded the Congenital Heart Surgeon’s Society (CHSS). In addition, two of Aldo’s European pupils, having had the great opportunity of training at the BCH and coasting on the wave from Aldo’s positive influence, on their return to their respective homelands (Germany and Italy) established the European Congenital Heart Surgeons Foundation, which soon became the European Congenital Heart Surgeons Association (ECHSA). In 2020, at the quadrennial joint meeting of the Congenital Heart Surgeon’s Society and the European Congenital Heart Surgeons Association, the CHSS inaugurated the “Aldo Castañeda Mentorship Award.” Appropriately, and not surprisingly, the first recipient of this recurring honor was Dr. Castañeda himself. This will undoubtedly amplify the significance of this award to future recipients.

Aldo Castañeda has profoundly influenced the careers of many cardiac surgeons and cardiologists. His vision of early primary correction of many congenital cardiac defects in newborns and infants is a crowning legacy of his surgical career.⁵ His visionary contribution has also been acknowledged by another giant in our discipline, Dr. John W. Kirklin.⁵ The intellectual and organizational substrate that Aldo created in his department led to many important innovations, not only by himself, but also by his younger colleagues.

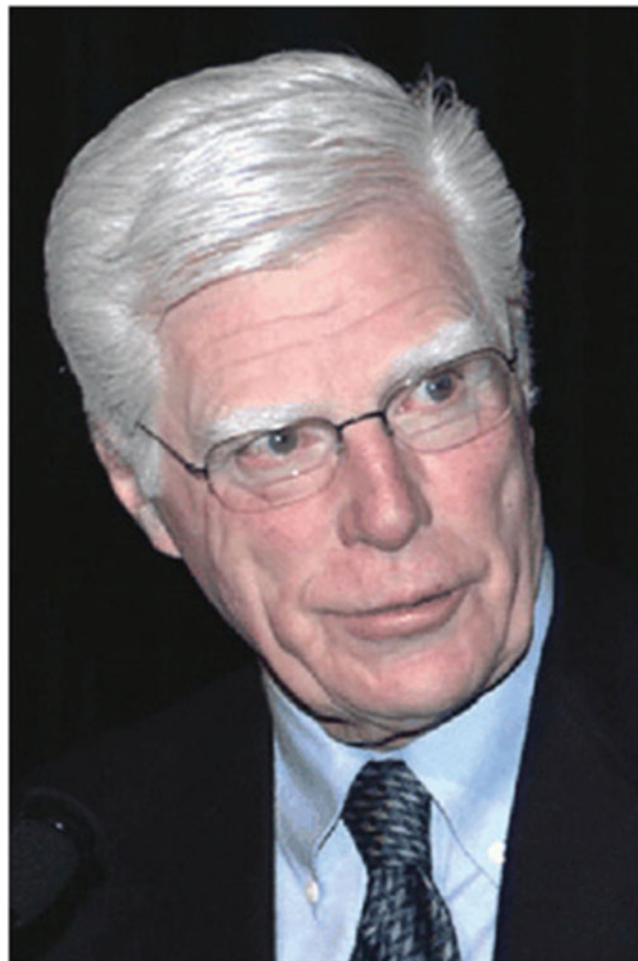


Figure 1. Professor Aldo R. Castañeda (with permission⁵).

Among the most important to remember are the landmark work of Bill Norwood in the surgical management of hypoplastic left heart syndrome and the development of interventional cardiology, by Jim Lock. But a key element of Aldo’s legacy is the development of a cohesive cardiac program that thrived upon a spirit of collaboration and mutual respect between surgeons, cardiologists, nurses, and related professionals. The rapid progress in neonatal cardiac surgery took place at the same time in which the fields of interventional cardiology, pediatric electrophysiology, and pediatric cardiac intensive care were becoming established.⁶

Following his outstanding career at the Boston Children’s Hospital, Dr. Castañeda was eager to return to Europe and share his new approach to early repair of congenital heart anomalies, still not totally embraced in the “Old Continent” at that time. In 1994 at the age of 64 years, together with Bill Norwood, Stephen Sanders, John Murphy, and other younger cardiac surgeons, he established a new Pediatric Cardiac Surgery program in Genolier, Switzerland. Several years later, he returned to Guatemala where with the energy and enthusiasm of a young man, he built a “home grown” center for Pediatric Cardiac Surgery with the aim of providing clinical care for all children with heart diseases; a much-needed life-sustaining service which was previously unavailable in this developing



Figure 2. Dr. Aldo R. Castañeda is seated among patients and staff at Unidad de Cirugía Cardiovascular Pediátrica de Guatemala (UNICAR).

country. At the UNICAR Pediatric Cardiac Unit (Unidad de Cirugía Cardiovascular Pediátrica de Guatemala) in Guatemala City, he created one of the first organized surgical units to treat children with congenital heart defects in Central America. He kept meticulous records of the outcomes, comparing the results with those of the best units in the United States, to establish benchmarks for quality assessment and quality improvement.³ In addition, he continued to train the next generation of pediatric cardiac surgeons, not only ensuring the future of the unit he had created in Guatemala, but also continuing to inspire and teach young surgeons from throughout Latin America and Europe. In addition to serving the children of Guatemala, UNICAR has grown to become a referral center for children from El Salvador, Honduras, Nicaragua, Belize, Dominican Republic, and Haiti.

Dr. Castañeda will always remain in our memories as the father of neonatal reparative surgery, having ushered in a new era of primary correction of complex cardiac defects rather than palliation.³ Most importantly, Aldo inspired all of us to appreciate the importance of surgical education, ethical concern, medical leadership, teamwork, and professional demands. Through his example, we came to appreciate the value of a sincere and honest attitude of “self-criticism” in any discussion of patients’ outcomes or any dispute with colleagues. His balanced interest in the science and art of surgery, in addition to his pursuit of clinical excellence and his deep appreciation of the human side of medicine and science, remained the major motivating factors throughout his outstanding career and have always been a guiding light for us.¹

Even after his passing, Aldo’s legacy will continue to inspire present and future pediatric cardiac surgeons as we, Aldo’s pupils, commit to pass on his remarkable clinical contributions and high ethical standards to future generations (Figs 1 and 2).

Apollo was the god of the intellect, the arts, and of healing. The term of “Apollonian” also implies harmony, balance, rationality, loyalty, and discipline, all desirable characteristics for cardiothoracic surgeons. Clearly our specialty is not merely an applied science and a technical discipline. It also includes an important aesthetic component, juxtaposing art and science, and demanding, in addition, honesty, courage, judgement, vision, erudition, compassion, and a consuming commitment to the pursuit of excellence and of high ethical standards.

From: Aldo R. Castañeda, Presidential Address at the 74th AATS meeting, 1994.²

Awards and other honors

Member of 42 international scientific societies, 20 as honorary member

74TH AATS President, 1994

American College of Cardiology: Lifetime Achievement Award

Awarded by “Order of Quetzal” (twice), and “Order of Atanacio Tzul”, Guatemala

World Heart Foundation Humanitarian Award, 2004

World Society for Pediatric and Congenital Heart Surgery “Aldo Castañeda Lecture”

Congenital Heart Surgeons’ Society “Aldo Castañeda Mentorship Award”

American Association for Thoracic Surgery “Aldo R. Castañeda Fellowship”

Laureae Honoris Causa (honorary degrees)

1987 University of Graz, Austria

1989 University of Bordeaux, France

1990 University of Semmelweis, Hungary

2000 University Del Valle, Guatemala

2006 University of Marseille, France

2008 University of Padua, Italy

References

1. Sade RM, Aldo R. Castañeda: Apollonian surgeon. *Ann Thorac Surg* 1995; 60 (Suppl): S490–S493.
2. Castañeda AR. The making of a Cardiothoracic Surgeon: an Apollonian quest. *J Thorac Cardiovasc Surg* 1994; 108: 806–812.
3. del Nido PJ. Aldo R. Castañeda, MD, PhD: Recipient of Lifetime Achievement Award and 74th president of The American Association for Thoracic Surgery. *J Thorac Cardiovasc Surg* 2018; 155: 847–849.
4. Jacobs JP, Tchervenkov CI, Stellin G, et al. History of the World Society for Pediatric and Congenital Heart Surgery: the first decade. *World J Pediatr Congenit Heart Surg* 2018; 9: 392–406.
5. Jacobs ML. On being multidisciplinary: a tribute to a teacher. *World J Pediatr Congenit Heart Surg*. 2010; 1: 159–160.
6. Vida VL, Sade RM, Stellin G. Hall of Fame: Aldo R. Castañeda. *Cardiol Young* 2006; 16: 221–228.