

BOOK REVIEW

The Clinical Anatomy of the Coronary Arteries: An Anatomical Study on 100 Human Heart Dissections by Horia Muresian, Editura Enciclopedica, Bucharest, Romania, 2009 (Hard Cover), 191 p.

The American Association of Clinical Anatomy has been blessed with several members who have published outstanding papers over a number of years in the area of cardiac anatomy, including those of Michael von Ledinghausen's in *Clinical Anatomy* and his monograph entitled *The Clinical Anatomy of the Coronary Arteries* (2003), the recent special issue on cardiac anatomy in *Clinical Anatomy* 22:1–160 (2009) edited by Tubbs, Anderson and Loukas, and now the recent publication by Dr. Hori Muresian.

Dr. Muresian is an MD, PhD with extensive training in cardiovascular surgery in his home country of Romania, including fellowships in Italy and the United States. Over a period of years he has collected a number of hearts that he has dissected and photographed to produce a remarkable atlas of coronary artery anatomy. There are over 85 figures of exceptionally well dissected hearts illustrating the branches of the right and left coronary arteries and 25 drawings illustrating the variable origins of the arteries. The latter are particularly well conceived and provide a rapid understanding of the variations.

Chapter 1 presents the anatomical terminology of the heart in tabular form covering nine pages. He states it is based on the *Nomina Anatomica Internationalis*, citing the publication of His in 1895, and Sakai, "Historical evolution of anatomical terminology from ancient to modern" in *Anat. Sci. Int.* 82:65–81 (2007). There is no mention of *Terminologia Anatomica* (TA) (1998), although comparing his tables side by side with those of TA, one finds they are essentially identical. However, unlike the TA, Dr. Muresian includes in his tables an extra column for comments on each term that I find both helpful and interesting.

As the title implies, the major thrust of this book is the anatomy of the coronary arteries. In Chapter 3, Dr. Muresian demonstrates the branching pattern of the left and right coronaries in a series of excellent photographs of exquisitely dissected hearts. Chapters 4 and 5 deal with collateral connections of the arteries and discussions in

diagrammatic form of the physiology of the microcirculatory networks.

In Chapter 6, the author illustrates a series of 25 coronary anomalies and variations in diagrams that were cleverly designed for brevity and clarity. In the diagrams, one notes the use of the term "non-facing" in reference to the posterior and anterior cusps of the aortic and pulmonary valves. This terminology is based on the Leiden Convention; the basis for this is the embryological position and the attitude of the heart in the embryo rather than in the adult. Resolution of this difference in terminology will need to be resolved with the Federative Committee on Terminology (for a detailed discussion of this topic see Robert H. Anderson and Marios Loukas "The importance of attitudinally appropriate description of cardiac anatomy" *Clinical Anatomy* 22:47–51 (2009)). This chapter ends with an interesting discussion of the pathophysiologic consequences and clinical and surgical implications of these patterns.

In Chapter 7, there are a number of dissections illustrating myocardial bridges as well as a few angiographic representations of this phenomenon. The primary emphasis of this book is on the dissections, so the use of angiograms was limited to this chapter, two in Chapter 8, and a few in the last chapter on the discussion of right-left coronary dominance.

There is an unusually detailed discussion in Chapter 8 on the regional blood supply to the interventricular septum illustrated with dissections of the major branches and dissection of their individual septal branches. Regional dissection is emphasized again in Chapter 9 with dissections to illustrate regional coronary supply to the atria, SA and AV nodes, pulmonary infundibulum, and the aortic root.

All of the chapters are well referenced and the book is a valuable resource not only for clinicians but also for anatomists. The dissections and photographs are professional and beautifully done.

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Received 18 August 2009; Accepted 18 August 2009

Published online 5 October 2009 in Wiley InterScience (www.interscience.wiley.com). DOI 10.1002/ca.20868