

Book Review

Congenital Heart Defects – Decision Making for Surgery 2: Less Common Defects

Antonio F. Corno

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THIS IS THE SECOND OF THE BOOKS WRITTEN BY Antonio Corno as an introduction to the mysteries of paediatric cardiac surgery. The first volume, devoted to the common defects, was plagued by problems with the copyright of some of the illustrations used [see review in *Cardiology in the Young*, 2003, Volume 13(6), page 587]. Thankfully, this second part, concerned with the less frequent malformations, is devoid of such problems. Indeed, Antonio is fulsome in his acknowledgements, and is kind enough to thank me for encouraging him in this venture. It is unfortunate, therefore, having now had the opportunity to see the finished product, to find that he has produced the proverbial Curate's egg. Parts of the book are excellent, and are illustrated by outstanding pictures taken in the operating room. Other parts, however, most notably the anatomical introductions, leave very much to be desired. This is indicative, perhaps, of the old aphorism that the cobbler should stick to his last. When I read the remainder of Antonio's preface, then as a professional cardiac anatomist, I must seriously question his judgement. Thus, he argues that his approach to cardiac morphology has been transformed by his discovery of Torrent Guasp's "ventricular myocardial band". In making this judgement, he ignores the fact that, whilst the artist or the sculptor can do what he or she wishes with the medium in which they work, the anatomist is constrained by the morphological realities of the structures they dissect. It is certainly true that Torrent Guasp is able to create wonderful and intricate patterns of myocardial fibres from the ventricular myocardium. If the pathways he purports to demonstrate were real anatomic entities, then they would be enclosed in fibrous sheaths that would be revealed by histological sections, as are the fibrous sheaths that delimit the skeletal muscles in the rest of the body. Anatomists who have studied the heart over

the centuries, however, recognise that it is a modified blood vessel, and that the myocardial fibres are not arranged in the fashion of skeletal muscle, with tracts or distinct pathways of fibres enclosed in sheaths of connective tissue that permit them to be traced from an origin to an insertion. I have tried to explain this to Antonio, and provided him with evidence of the syncytial nature of the ventricular myocardium, but he is apparently seduced by the legerdemain of Torrent Guasp. That, of course, is his privilege. His lack of anatomical expertise, however, now becomes evident throughout this second part of his work. Thus, although Figure 2.2.3, a superb cross-sectional echocardiogram provided by Michael Rigby, shows the true anatomy underscoring the essence of the classical variant of tricuspid atresia, in Figure 2.2.1 Corno depicts the entity as existing because of the presence of a barrier between the inlet and the apical trabecular component of the right ventricle. And then, to compound the felony, in Figure 2.2.2 he claims to show a specimen with discordant ventriculo-arterial connections, whereas it seems that both arterial trunks arise from the dominant left ventricle, in absence of the muscular outlet septum, and with an extensive muscular infundibulum interposed between the leaflets of the mitral and pulmonary valves. Worse is to come. Figure 2.3.1 is purported to show the structure of double inlet ventricle, yet seems to illustrate a large muscular ventricular septal defect. And Figure 2.3.3a, held to demonstrate a dominant left ventricle, and clearly possessing fine criss-crossing apical ventricular trabeculations, is labelled to show the "right ventricular sinus", whatever that is supposed to be. Perhaps the most egregious errors, however, are to be found in the chapters concerned with common arterial trunk and double outlet right ventricle. Figure 2.5.2a seems to show a rare variant with the common trunk

connected exclusively to the left ventricle, although this is not mentioned in the legend. Figure 2.5.2b, however, is incorrectly printed in mirror-image format, unless the specimen comes from a patient with so-called "situs inversus". This mistake then seems to be repeated for Figure 2.5.3. In the legend to Figure 2.11.1, he states that the specimen shows "double outlet with ventriculo-arterial concordance", an obvious impossibility since he has correctly diagnosed double outlet for what it is, an abnormal ventriculo-arterial connection. He repeats this mistake in the legends to Figures 2.11.2, 2.11.3, and 2.11.4, wrongly labelling the left ventricle as the right ventricle in panel c of the last figure. He then suggests that Figure 2.11.5 shows the right ventricle, whereas in reality it shows the left ventricle in a specimen with straddling of the tricuspid valve, showing the mitral valve exclusively connected to the left ventricle, along with the overriding part of

the tricuspid valve. This figure is then repeated on p 174, but again with incorrect labelling and description. In the light of mistakes of this magnitude, one can almost forgive him for describing "atrial isomerism", rather than isomerism of the atrial appendages. The gross anatomical deficiencies are a pity, because the surgical part of the book seems to be well written, is beautifully illustrated, and the chapters are well referenced. But should we trust the judgement of a man who thinks that the ventricular mass is arranged in the form of a skeletal muscle, and chooses to ignore the manifold publications over the last century illustrating in unequivocal fashion the intricate three-dimensional arrangement of the myocardial fibres set within a supporting matrix of connective tissue?

Robert H. Anderson
Editor-in-Chief