Books review

Adult Congenital Heart Disease. Oxford Specialist Handbook

Edited by Sara Thorne and Sarah Bowater. Oxford University Press, United Kingdom; 2017: 260 pages, 11 tables and 61 figures. Second edition. ISBN: 9780198759959.

It is always good to hear that a new book has been published on congenital heart disease, especially in adults. This publication is particularly timely given the unique characteristics of this population and the huge increase in the number of patients that will reach adulthood in the coming years. Of the different types of congenital heart disease, we know that neonatal malformations are the most common, being found in around 1% of live newborns. Until a few decades ago, less than 20% of children born with congenital heart disease survived to adult life, while today it is estimated that the survival is close to 90%, thanks to the continuing improvement in diagnostic investigations, surgical techniques and general pediatric care.[1] This explains why the number of adult patients has increased exponentially and currently outnumbers the pediatric population. In addition, this increase has occurred principally in moderate- and high-complexity heart disease, which confers an added difficulty to the anatomical and functional concepts for the adult cardiologist, who may not be used to such patients.

The wide variety of types of congenital heart disease and their specific complications always pose an enormous challenge for the authors of a publication on this subject. The main characteristic of this pocket handbook is that it is summarized and concise, and therefore should not be evaluated as an in-depth study manual on the subject, but as a practical tool that allows rapid access to information. The handbook, in its second edition, is edited by Sara Thorne and Sarah Bowater, physicians with broad experience in the treatment of adult congenital heart disease, who work at the Queen Elizabeth Hospital in Birmingham, UK. This publication features an updated format, with more illustrations and diagrams. Regarding the content, this new edition provides detailed information on specific defects; the chapters on general considerations have been retained, with the addition of some new, highly-relevant topics that include epidemiology, heart failure, device therapy, and transition and transfer of care.

The handbook contains 260 pages and is divided into three separate parts.

In the first, by way of introduction, the authors outline some updated information on general points. There is a chapter devoted to epidemiology, in which they summarize the causes of the significant increase in the number and complexity of patients. The second chapter is highly practical, and contains a pathophysiological classification of congenital heart disease and a segmented/sequential analysis of these anomalies, which is particularly useful in more complex heart diseases. The third and fourth chapters focus on the various noninvasive diagnostic methods (imaging studies and functional tests). Echocardiography remains the most important diagnostic tool, but there is very little information provided on this topic. This is an aspect that could be improved in a future edition. The next section is devoted exclusively to cardiac catheterization, including the indications, prior care, and interventional procedures. The tables containing the normal hemodynamic values and the different formulae to calculate them are very useful. The last chapters concentrate on the concepts of pulmonary vascular circulation and cyanotic patients. Of particular interest are the recommendations on the most appropriate treatment for patients with symptoms of hyperviscosity based on their hematocrit and iron concentrations.

The second part is the longest and focuses on a description of the main types of congenital heart disease. The authors have classified the different lesions to form 10 chapters, based on the anatomical and functional abnormalities: valve and outflow tract lesions, septal defects, Eisenmenger syndrome, aortic lesions, transposition complexes, tetralogy of Fallot and pulmonary atresia with ventricular septal defect, univentricular hearts and Fontan circulation, pulmonary hypertension, and, lastly, a chapter dedicated to coronary anomalies and sinus of Valsalva aneurysm. Each chapter has a brief general introduction to the condition, and then goes on to an analysis of each specific lesion. This analysis comprises the definition and incidence of the lesion, the most common associations, the presentation, and the natural history. In addition, the authors indicate the key points for diagnosis and treatment, updated according to current guidelines, as well as guidelines for follow-up.

The third part encompasses a series of chapters on the treatment of these patients in different situations. It begins with a very practical section on emergencies, which focuses on arrhythmias and emergencies in cyanotic patients. In the next section, this new edition contains some interesting updates. One of these is the chapter on heart failure and the indications for transplant (not irrelevant—this is the most common cause of death in this group of patients). Another is the section on the different devices, in which the authors look at situations that are unique to these patients (previous surgery such as bidirectional cavopulmonary bypass, atrial switch, or anatomical variants of dextrocardia). The next chapter is devoted to contraceptive methods and preconception advice, in which the authors describe the maternal and fetal risk associated with the different types of heart disease and medical care during pregnancy and post-partum. The final chapters provide information on endocarditis prophylaxis, exercise recommendations, and advice on insurance and travel.

One of the parts I would most like to mention is the glossary and appendices at the end of the book. In these sections you can find an overview of the most common operations, types of valves and conduits, and a list of syndromes and their main associations.

In summary, this book could be very useful for clinical cardiologists and medical residents, as it has managed to condense

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a vast amount of information on adult congenital heart disease, while maintaining the practical sense of a pocketbook.

REFERENCE

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