

# Preface

Because of the wide variety of anomalies encountered in congenital heart surgery, a broad understanding of the pathologic anatomy of defects is vitally important to the surgeon. More than in many other fields of surgery, a feel for three-dimensional spatial relationships of anomalies is helpful in allowing the operating surgeon to improvise technical details of a procedure. Precisely shaping and sizing an intraventricular baffle or patch, or correctly placing a long intra-atrial suture can make the difference between a successful and an unsuccessful surgical outcome.

The congenital heart surgeon is a student during his or her entire career because he or she encounters so many different anomalies. Learning from the experience of others should always be part of the clinician's education; this is best done by personally observing an operation performed by another. Otherwise, the best record of a procedure is a good operative photograph.

For over 35 years it has been my practice to photograph most operations. These illustrations comprise a valuable part of each patient's record and are informative as a review of previous surgery and observed anatomy if future surgery is planned. The illustrations also serve to inform the referring doctor of details of surgery and this may also improve patient care.

The photographs have been an invaluable teaching aid for lectures, journal publications, and this book. I hope this atlas will be of interest to full-time or part-time congenital heart surgeons, pediatric and adult cardiologists, intensivists, pediatricians, internists, and all other students of congenital heart disease.

In this second edition, I have added many new sections, deleted a few obsolete sections, and in some areas changed the format. For example, the atrial switch operation has been moved to Chapter 16, l-Transposition of the Great Arteries (l-TGA). It is no longer used in the repair of d-transposition of the great arteries (d-TGA), but is applicable for the double-switch operation for l-TGA.

Photographs were taken with a Nikon F camera, usually using a Nikon 55-mm macro lens (Figure P-1). For some close-up pictures of the right and left ventricular outflow tracts, a Nikon 100-mm medical lens was used (Figure P-2). Pictures were taken at f8 to f11 at a distance of 9 to 12 inches from the field.

Lighting for most photographs was augmented with a side-mounted Honeywell Strobolar flash with a wide-angle neutral density filter (Figures P-1, P-2). Using a side-mounted flash, rather than a more traditional ring light (surrounding the lens), has resulted in some shadows in each picture, which improves the perception of depth of field. More recently, I have used a ring light mounted on the front of the lens. No special effort has been made to use the operating room lights or to move them out of the field.



**FIGURE P-1.** Nikon camera viewer from above. A 5-mm macro lens is attached, and the light source is positioned to the side of the lens. A waist-level viewer is attached for taking pictures from the head of the operating table.



**FIGURE P-2.** Nikon camera with 100-mm macro lens attached for close-up views. A sports viewer is used, and the position of the light source is at the side of the lens.

Photographs were taken from behind the patient when surgery was performed through a lateral thoracotomy and from the head of the operating room table for a median sternotomy.

For orientation, pictures in this atlas are marked with *arrows* to indicate *R*, right side of patient; *L*, left side of patient; *Cep*, cephalad; *Caud*, caudad; *Ant*, anterior; and *Post*, posterior.

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<http://www.springer.com/978-0-387-35415-6>

Color Atlas of Congenital Heart Surgery

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2007, XVI, 479 p., Hardcover

ISBN: 978-0-387-35415-6