

Book Review

Near Misses in Cardiac Surgery

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By Myles Edwin Lee, MD

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It is a pleasure to review *Near Misses in Cardiac Surgery*. Dr. Lee masterfully compiles this unprecedented collection of 40 true cases whereby quick and decisive action on the part of the cardiac surgical team prevents certain calamity and disaster. This human account, based on Lee's enormous wealth of knowledge and experience, delivers over and over one singular tone: teamwork and communication are the keys to effective cardiovascular surgical care.

The format for each case report is simple yet effective. A scenario is presented by first introducing a patient, situation and/or ongoing surgical procedure. Next, clues, hints and otherwise playful inklings are described to suggest something has gone awry or is out of the ordinary. The information presented is complete and pertinent, but not exhaustive. On occasion, Lee tastefully sprinkles in jovial and anecdotal commentary such as, "Benumbed, you slink out of the theater to the harsh luminescence of a telephone booth where you learn that your patient's blood pressure has suddenly crashed," or, "You grip the seat of your chair, praying to all the deities of human skill and technology that the cardiologists get through this one without a catastrophe." At this point, the reader is charged with analyzing and correcting the situation. Lee next defines the exact problem and describes his chosen solution to ward off the grim reaper and save the patient. Finally, Lee summarizes the scenario with a discussion section that provides even further information on the problem. A brief reference section is also included.

With few exceptions, every case report offers valuable

insights to the perfusionist. Chapter 1 describes the classic undiagnosed aortic dissection during cannulation for cardiopulmonary bypass. One clue given by Lee is the perfusionist's complaint that high arterial line pressure prohibits a flow rate greater than 1.8 L/min/m². Chapter 3 highlights in detail the shuddering experience of massive air embolism, and Chapter 4 elucidates a quirkish occurrence of rapid potassium administration post-CPB by the anesthesiologist resulting in cardioplegia. Chapter 10 expounds on antegrade and retrograde cardioplegic techniques for aortic insufficiency, and Chapter 17 discusses the various causes of poor venous return to the oxygenator. Chapter 20 asks the reader to troubleshoot an intra-aortic balloon pump connected to an intra-aortic balloon unknowingly placed in the femoral vein, and Chapter 33 outlines the procedure to diagnose and remove a pesky IAB perforated by a jagged arteriosclerotic plaque. From cover to cover, this book unearths new and unique problems and experiences, and revisits the not uncommon but equally horrifying incidents too often reported in the literature. Chapters 22 and 29 are especially intriguing reports as they involve problems with the cardiopulmonary bypass circuit.

This text is easily read in one sitting. It's that good. But to appreciate to the fullest what Lee offers is to heed his solemn, underlying message: cardiac surgery is a team endeavor, not several departments hovering over an open chest. All perfusionists—students and veterans alike—will benefit from this masterpiece. I recommend it highly.

—Kelly D. Hedlund, MS, CCP
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