Schwartz's Principles of Surgery

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As a surgeon’s manual for the world, Schwartz's Principles of Surgery is divided into two interesting parts: Part I Basic Considerations and Part II Specific Considerations. Part I contains 15 groups of surgical history including articles and training programs on the topics. The topics include the general information on injury and metabolic support, fluid and electrolyte management, circulatory depression, surgical bleeding, blood transfusion, shock, surgical infection, trauma, burns, wound treatment, cancer, organ transplant, patient safety, monitoring of surgical patients, robotic surgery, laparoscopic surgery, and molecular genomic surgery.

Part I of this book (chapters 1-15) provides well-specified information to the surgeon about mandatory surgical skills, time management, and surgical leadership. Having information on surgical leadership has encouraged our school, the Mongolian National University of Medical Sciences, to incorporate this topic into our residency and postgraduate curricula. Additionally, the information on time management is excellent since surgeons need to balance planning and performing the operation so that they will not only operate correctly, but also time-effectively in order to save lives.

Several components of Part I are presented very well. The chapter on shock excellently outlines shock pathogenesis and treatment tactics for the surgeon, which are defined within modern theory and physiological changes of the individual. In my entire 34 years experiences as a surgeon, I have participated in numerous lectures on shock, presented by different scientists and professors every year and have never seen such complex information about shock. As for wound infection, not only is mechanical microbial infection well described, but also blood coagulation disorder and pathophysiology. The chapter on wound infection makes a negative pressure suction of the infection as a global standard treatment method. The trauma chapter details clearly with emergency care, treatment management, post-traumatic complication, complication of the treatment and describes thorough clinical skill for the readers. For example, even though the primary cause of high abdominal pressure is trauma, the secondary causes are huge fluid
resuscitation and resuscitation. The burn chapter is brief, yet well-detailed, including burn treatment, skin transplantation, usage of skin substitute products, and techniques of procedure. Finally, medical ethics of individuals and hospitals and ethical issues specific to surgeons are described. These concepts are essential, informative, and easily understood by those reading this book.

One chapter that is too difficult to understand for non-native English speakers is the chapter on molecular genomic surgery. However, overall, this book is very useful for medical students, residents, trainee doctors, and teachers, since it provides modern theoretical knowledge. The information contained therein is essential for surgeon’s knowledge, therefore it is especially useful in preparing clinical manuals and test examinations for surgeons at all stages of their careers.

Part II of this book (chapters 16-49) gives specific information about the surgical diseases to help surgeons be skilled in handling these diseases. The chapters include anatomical and histological structures, physiology and pathophysiology, clinical signs and symptoms, and management of the following organ systems: skin and subcutaneous soft tissue; composition and structure of the breast; head and neck disorders; chest wall and the lungs, mediastinum and pleura; congenital heart disease; acquired heart disease; chest, aortic angioneurosis; aortic repair; arterial diseases; venous and lymphatic diseases; esophagus and diaphragmatic hernia; stomach; surgical management of obesity; small intestine; colon, rectum, anus; appendix; liver; bile cavity and bile channels outside of the liver; pancreas; spleen; abdominal cavity, mesentery, retroperitoneal cavity; soft tissue sarcomas; groin hernia; thyroid, thymus, and adrenal glands. Additionally, the following surgical procedures are explained: children’s surgery; urology; gynecological procedures; neurosurgery; orthopaedic surgery; claw surgery; plastic and reconstructive surgery; patient anesthesia; practical surgery for the elderly; and palliative care.

Two chapters that are written especially well are on breast disorder and anesthesia. Breast disorder recently has become a major issue to be addressed. Treatment of breast disease demands scrupulous contributions from surgeons and oncologists. During the last century, the knowledge of surgeons about breast-related illnesses was limited to mammogramm hard cyst inflammation, cancer diagnosis, breast ulcers and mastitis. This book provides a comprehensive overview on the breast’s anatomical, physiological and pathophysiological structure; performing MRI and genetic analysis; breast diseases and cancer genes; the genetic relationship and blue protective methods; cancer and benign diseases; regulation endocrine and hormones; as well as services and operations. The chapter on anesthesia for surgical doctors is well outlined. This means that the book is highly appealing to anesthesiologists because of its separate discussion on treatment techniques and surgical equipment.

A few chapters of the book could use improvement. Although the urology chapter is brief and succinct for the urologists, this format makes it hard to understand for other general surgeons and readers. Also, for non-native English speakers, the urology chapter has complex text and long sentences that are difficult to follow. Additionally, the chapter on gynaecology is presented in an exhaustive manner including many remarks and suggestions that are unnecessary.

Schwartz’s Principles of Surgery has been used not only within the United States of America, but also in the majority of developed countries. It has served as a primary textbook for resident doctors. The 10th edition was published in 2015 and this textbook has now been translated into Mongolian language. This is helping Mongolian medical students, residents, teachers, and surgeons attain the global standard for diagnosis and treatment in surgery. Surely it can be a very useful tool for many other developing countries as well.