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## Preface

*Urological Emergencies* summarizes the optimal management of urgent and emergent urological conditions so that state of the art management of acute urological problems can be easily accessible in one volume. Since the publication of the first edition, evolution in areas of molecular testing, imaging quality, and guideline development has enhanced the ability to solve urological problems at the point of care. As with all medical advances, such progress is accompanied by the additional considerations of cost and potential harm from overdiagnosis and overtreatment.

The number one cause of death in young persons less than 44 years of age is accidental injury. The worldwide burden of disease due to trauma will increase immensely by 2020 as a result of wartime injuries and road traffic accidents in all parts of the globe. New chapters have been added to provide an overview of shock and resuscitation on the one hand, and a framework for addressing the growing problem through injury prevention on the other. Few nations have trauma systems in place that can rival our own. Thus mortality and disability due to trauma in nations with suddenly expanded vehicular traffic will be far higher than in North America, where such systems that have been shown to reduce cost and mortality. Severe renal injuries are immediately life threatening, and proper recognition of these requires application of appropriate criteria for staging and accurate imaging. Importantly, most of these injuries can be successfully managed through nonoperative trauma care. Lower urinary tract trauma, if unrecognized or mismanaged, can lead to early complications as well as permanent disability and dysfunction from disruption of essential neural, anatomical, and vascular structures of the pelvis. In all cases, the few remaining patients requiring emergent operative intervention will have severe and complex injuries.

Obstructive uropathy, kidney stones, and urosepsis are major sources of morbidity and mortality in the developing world. Mortality from acute infection is rare in the developed world yet the aging of the adult population and epidemic of obesity and type 2 diabetes mellitus will cause a dramatic increase in infectious, vascular, and obstructive urological emergencies in the United States. Differentiating between acute pyelonephritis and infection due to an obstructed ureter is essential for proper triage and successful treatment. Complicating such decisions are worldwide changing patterns of infection and the emergence of drug-resistant microorganisms. Accurate identification of urolithiasis and proper stratification to medical or surgical therapy based on CT now is possible. However, overuse of imaging with its

risk of ionizing radiation and secondary malignancies requires both individual and population level solutions.

Surgical error remains an irreducible feature of urological practice. Electronic health records, simulation and systems based approaches hold the promise to reduce complication rates. However, iatrogenic injuries remain an important cause of ureteral, bladder, and urethral problems. Lessons from trauma management and innovations in endoscopic techniques have allowed urologists to provide minimally invasive solutions in many cases. The appropriate supportive and medical care must be understood by those in direct contact with urological patients with stents, artificial sphincters, and indwelling catheters.

Congenital anomalies of the genitourinary tract carry a disproportionate risk of coexisting organ system abnormalities that require a highly multidisciplinary team approach to avoid death, permanent disfigurement, or irreversible cosmetic consequences. Despite prenatal sonography, many lower urinary tract anomalies are discovered only at birth. New concepts in the assignment of gender and the basis of gender, along with expanded genetic testing options, mean that the landscape for cases of ambiguous genitalia will continue to be complex and evolutionary.

*Urological Emergencies* is organized by pathophysiology rather than organ system, allowing the reader to develop approaches to the care of patients with acute urological conditions based on mechanism of disease. Nationally and internationally recognized experts have provided up-to-date, evidence-based descriptions of the appropriate diagnostic and therapeutic considerations on topics of traumatic, infectious, obstructive, hemorrhagic, iatrogenic, vascular, and congenital urological emergencies. Relevant disease mechanisms and epidemiology are reviewed, necessary diagnostic testing recommended, and detailed medical, surgical, and endourological management approaches have been provided. It is hoped that the new edition of this text will continue to serve as a bedside resource for Urology residents, practicing Urologists, Emergency Medicine trainees and practitioners, and primary care providers without immediate access to urological consultation.

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