

MEDICAL RADIOLOGY

Diagnostic Imaging and Radiation Oncology

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Radiology of the Upper Urinary Tract

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Foreword

The advent in recent years of several new imaging modalities for the application in diagnosis and patient management has had an unprecedented impact on patient care. By permitting the acquisition of information without intervention, these new modalities have made the diagnostic process more humane. They have also made possible the treatment of many disorders of the upper and lower urinary tract by means of interventional techniques, replacing a number of surgical procedures.

The editor of this volume has engaged international experts in radiology to describe the state of the art of radiology of the upper urinary tract. Local and regional abnormalities are covered, but so too is the involvement of urinary structures in systemic disease. The radiologic approach and interpretation are combined with the presentation of pertinent clinical observations and important pathophysiologic concepts. The text is concise and the illustrations are appropriate. Up-to-date international bibliographies are provided. Both the text and the illustrations will serve as sources of information for the radiologists, urologists, nephrologists, gynecologists, and oncologists. Most importantly, the material is presented in such a way that practicing specialists dealing with urologic disorders, as well as physicians in training will benefit. We feel that it is timely to publish a present day treatise on urinary tract radiology in order to convey the contributions made by various newer imaging modalities to the diagnosis of urinary disorders. The contributions cover very well the opportunities for noninvasive evaluation as well as for cost containment in recommending diagnostic pathways and the selection of the most appropriate techniques to alleviate the patient's problem.

Volumes dealing with the lower urinary and genitourinary tracts will follow shortly, using the same approach of presentation as the current volume of the upper urinary tract.

Baltimore/Stuttgart, May 1991

M. W. DONNER · F. HEUCK

Preface

The past two decades have witnessed an unprecedented growth in the subspecialty of uroradiology. The advent of new imaging modalities, such as magnetic resonance imaging, computed tomography, transrectal ultrasonography, Doppler ultrasound, real-time ultrasonography, and digital angiography, has, in conjunction with technical advances in nuclear medicine scanning such as SPEC scanning, reoriented the diagnostic approach to problems of the genitourinary tract. New concepts and algorithms for diagnostic evaluation have evolved, in line with the cost-conscious approach dictated by a rapidly changing environment in health insurance coverage. Definitive diagnostic assessment on an outpatient basis is often obligatory and can be achieved by appropriate deployment of the now available diagnostic examinations. In addition to the remarkable advances in diagnostic techniques, innumerable interventional and therapeutic uroradiology procedures have been introduced. The marriage of diagnostic modalities with techniques developed for angiography has made possible nonsurgical management of complex conditions that in the past mandated major surgical interventions with attendant prolonged hospitalization. Percutaneous nephrostomy, antegrade placement of ureteral stents, dilatation of strictures of the ureter or ureteropelvic junction, embolotherapy of both benign and malignant renal neoplasms, superselective chemotherapy to neoplasms, embolotherapy of anomalous veins in the management of male impotence, sclerotherapy in the management of varicoceles, percutaneous transluminal recanalization of the fallopian tubes, percutaneous lithotripsy and stone removal, and a plethora of ultrasound- or CT-guided biopsies for diagnostic purposes as well as ultrasound- and CT-guided drainage procedures for abscesses, urinomas, lymphoceles, hygromas, and hematomas are but a few pertinent examples indicative of the trend in respect to interventional uroradiologic procedures.

Our goal has been to provide a work that comprehensively covers the field of uroradiology in its broadest context. The orientation of this work is from a radiologic point of view; however, pertinent clinical observations, important pathophysiologic concepts, and key urologic surgical considerations have been included. A detailed text complemented by appropriate illustrations and an up-to-date bibliography will serve as a source of information for radiologists, urologists, nephrologists, gynecologists, and oncologists in particular. However, physicians of other specialty interest such as pediatricians, surgeons, obstetricians, and generalists will also find information needed in their practice. Moreover, this book should be useful to physicians in training and specialists alike as a reference source during preparation for certifying examinations and in-house conferences. The bibliography should readily satisfy the needs of radiologists, urologists, gynecologists, and oncologists as regards both daily practice and research.

To ensure that the information provided is completely up-to-date, the publishers, the contributors, and the editor have made a special effort to assemble and print the material as rapidly as possible, while simultaneously ensuring that the end product is of the required high quality. Two subsequent volumes on the lower urinary tract and the female pelvic organs will follow in the near future.

The editor has carefully respected the opinions of each contributor and editorial changes have been made only to enhance readability. The idiosyncracies of individual contributors, and often differing points of view with regard to the same problem, have been respected and maintained. This is reflected in a variable writing style and some de-

gree of repetition. In the editor's opinion the comprehensiveness that this approach ensures more than justifies the resulting minimal redundancy.

Acknowledgments pose a vexing problem, since a many have played a large role in the creation of the final product. I would like to acknowledge the dedication and understanding of each contributor and I thank all of them sincerely. Ms. Tammy Garner, my secretary, has played a major role in the final assembly and transmission of material to the publishers. Last but not least, I would like to acknowledge the special understanding, tolerance, and support that my wife has provided during the busy and stressful time spent compiling these volumes.

New Orleans, May 1991

ERICH K. LANG

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