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<p>In the 1980s geriatric nephrology was introduced as a subspecialty in anticipation of the increased number of elderly and very elderly people during the 21st century. There has been more clinical research dedicated to geriatric nephrology, education on the subspecialty has been implemented at national and university level, and funds for career development have been instituted over the past two decades. Our treatment of the elderly and very elderly patients seems to be more focused on their biologic age rather than chronological age; they undergo diagnostic tests such as kidney biopsies and are candidates for kidney transplant. Although great strides have been made in the assimilation of geriatrics into nephrology more has to be done. This article examines the areas of research that encompass geriatric nephrology and clinic observations applicable to the care of the geriatric population.</p>	
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progressive decline in renal function, and the clinical syndromes associated with poor renal function are key topics for individuals working across many medical disciplines. This review addresses some of the important aspects of chronic kidney disease, and summarizes some of the clinical and laboratory features associated with progressive disease.

Diabetic Nephropathy in the Elderly

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Anthony J. Joseph and Eli A. Friedman

Although diabetes is clearly linked to macro- and microvasculopathy in multiple organs resulting in cardiovascular and cerebrovascular catastrophic diseases, blindness, and limb amputations, it is the relentless progression of diabetic nephropathy toward becoming the major cause of end-stage renal disease (ESRD) that now challenges budgets and treatment facilities providing hemodialysis, peritoneal dialysis, and kidney transplantation. Nephrology, as a specialty, is now dominated by the necessity to address geriatrics and endocrinology to cope with the tidal wave of elderly ESRD patients suffering from uremia caused by diabetes. On the brighter side, emergence of effective renoprotective regimens now slow the incidence rate of ESRD in those with diagnosed diabetes. There is bona fide reason to hope that within a decade, kidney failure attributable to diabetes will be transformed into a preventable complication of a disease that has dominated and directed our heritage.

Hypertension in the Elderly

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Maria Czarina Acelajado and Suzanne Oparil

Hypertension is an important risk factor for cardiovascular morbidity and mortality, particularly in the elderly. Blood pressure elevation in the elderly is due to structural and functional changes that occur with aging. Treatment of hypertension reduces the risk of stroke, heart failure, myocardial infarction, all-cause mortality, cognitive impairment, and dementia in elderly patients with hypertension. A healthy lifestyle helps hypertension management, with benefits extending beyond lowering of blood pressure. Several classes of antihypertensive drugs are effective in preventing cardiovascular events. Treatment decisions should be guided by the presence of compelling indications such as diabetes or heart failure and by the tolerability of individual drugs or drug combinations in individual patients. The concomitant intake of certain medications that counter the effects of antihypertensive drugs and the frequent occurrence of orthostatic hypotension complicate treatment in older patients and drive down blood pressure control rates.

Glomerular Disease in the Elderly

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Richard J. Glasscock

Chronic glomerular disease is a common cause of disability and mortality in the elderly. The underlying cause of the glomerular disease in this population is diverse but can generally be divided into those that affect the kidneys primarily (primary glomerular disease) and those in which the kidney damage is a part of a systemwide process (secondary glomerular disease).

This article briefly outlines the common presentations of glomerular disease in the elderly and discusses the clinical features, prognosis, and management of the primary and secondary glomerular diseases in this population of patients.

Urinary Tract Infections in the Elderly 423

L.E. Nicolle

Urinary infection is the most common infection in elderly populations. There is a high prevalence of asymptomatic bacteriuria, but this is benign and does not require treatment. A urine specimen for culture should be obtained before initiating antimicrobial therapy for symptomatic infection. Antimicrobial treatment regimens in the elderly are similar to other populations. Chronic indwelling catheters are associated with increased morbidity from urinary tract infection.

Obstructive Uropathy 437

Timothy Y. Tseng and Marshall L. Stoller

Obstructive uropathy is a relatively common condition in which an anatomic or functional problem causes obstruction to normal urinary flow. Obstructive uropathy becomes more prevalent with increasing age and is most frequent as a result of benign prostatic hyperplasia or neurogenic bladder. The clinical manifestations of obstructive uropathy range from little or no symptoms to acute renal failure. Because its prevalence increases with increasing age, the diagnosis and management of obstructive uropathy is particularly relevant to the geriatric population.

Urinary Incontinence in the Elderly 445

Tomas L. Griebling

Urinary incontinence is a common clinical problem in the elderly population, and can affect men and women. Chronic incontinence can lead to impairments in overall functional status and is associated with significant negative effects on both overall and health-related quality of life. Careful clinical evaluation can be useful to differentiate among the various types of urinary incontinence, and can help to identify the potential cause of the condition. A wide variety of behavioral, pharmacologic, and surgical therapies are available to treat urinary incontinence, and these may be used alone or in combination. Treatment can help to improve or eliminate symptoms for many patients, leading to enhanced quality of life and improved functional status.

Drug Dosing in the Elderly Patients with Chronic Kidney Disease 459

Ali J. Olyaei and William M. Bennett

Chronic kidney disease is a common disorder that affects many patients with a prevalence approaching 19 million people in the United States. Kidney failure and renal impairment is a common occurrence in the geriatric

population. Most types of kidney diseases are chronic conditions and frequently manifest at the late stages of life. Epidemiologic studies suggest that older patients are at a greater risk for renal failure if the kidney experiences insults from ischemia or exposure to pharmacologic and diagnostic nephrotoxins. Pharmacologic management of most common diseases in elderly individuals is a difficult task, particularly in older individuals with chronic kidney disease. Thus, primary care providers must proceed with caution when prescribing drugs for elderly patients with kidney disease.

Renal Replacement Therapy in the Elderly

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Xiaoyi Ye, Anjay Rastogi, and Allen R. Nissenson

Rates of chronic kidney disease and end-stage renal disease are increasing as the United States population ages. The elderly with chronic kidney disease or end-stage renal disease face specific challenges with regard to medical care. Being of elderly age should not be a contraindication for initiation of renal replacement therapy. As the United States population ages, physicians will have to face many challenges associated with aging, whether medical, psychosocial, or ethical. This article discusses issues specific to the geriatric dialysis population.

Ethical Issues in the Elderly with Renal Disease

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Lucia Del Vecchio and Francesco Locatelli

Despite the many technical advances in medical care and dialysis delivery, mortality and morbidity remain high in patients with end-stage renal disease. This is particularly true in older patients, who often have a great number of coexisting diseases. In this population, life expectancy and quality of life may be rather poor, raising a number of ethical issues about the decision of starting start or withdrawing renal replacement therapy. Unfortunately, clear behavior guidelines on these critical issues are still insufficient. Reasons for not starting dialysis include old age, neurologic impairment, end-stage organ failure other than the kidneys, metastatic cancer, multiple comorbidities, and patient or family refusal. Similar reasons often underlie dialysis withdrawal of dialysis. Often these difficult decisions are left to care givers and family members or surrogates, since only a minority of patients with severe medical conditions discuss end-of-life care before becoming mentally impaired. The final shared decision should be the result of weighing beneficence (to maximise maximize good) with non-maleficence (to not cause harm); in the presence of severe medical conditions and/or mental impairment, dialysis may represent a prolongation of death rather than life.