

Renovascular Hypertension: Pathophysiology, Diagnosis, and Treatment

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Renovascular hypertension can result from renal artery lesions involving the main renal artery, or its branches. It is generally felt that the elevation of blood pressure results from excessive systemic vasoconstriction secondary to enhanced renin secretion by one or part of one kidney. Renin secretion is enhanced because of constriction of the renal artery and resultant intrarenal ischemia. Clinically patients cannot be distinguished from those with essential hypertension and diagnosis must be made with arteriography although urography and isotope renography may suggest the diagnosis. Surgical cure can be predicted if differential renal vein renin ratios lateralize but a non-lateralizing study does not necessarily mean that surgery will fail. In properly selected patients, surgical results are excellent.

Renovascular hypertension is most commonly recognized in patients with stenosis of a main renal artery, but stenosis or obstruction of renal artery branches, extrinsic masses which compress the kidney, and renal parenchymal lesions that result in ischemia can also cause renovascular hypertension. One or both kidneys may be involved. Since renal artery stenosis may be present in patients without hypertension and since repair of a stenotic renal artery does not always cure hypertension, surgical cure is the only definite criterion for establishing a causal relationship between an anatomic renal abnormality and hypertension [1].

The first surgical cure of hypertension was reported in 1937 [2], shortly after Goldblatt and co-workers demonstrated that dogs could be made hypertensive by constricting one renal artery and removing the contralateral kidney [3]. The concept of surgical therapy for hypertension was appealing, since effective antihypertensive drug therapy was not available. However, a summary in 1956 of results of approximately 2,000 nephrectomy operations in hypertensive patients revealed that only 20 percent were normotensive one year after operation [4]. Since then, much investigative effort has been directed at improving diagnostic procedures to distinguish patients with surgically curable hypertension from those in whom surgery would be futile. During these two decades safe, inexpensive, and effective drug regimens have developed as well, offering an alternative to surgery and making it more important to carefully select patients for operation.

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Renovascular Hypertension Nicola Glorioso, John H. Laragh, Alessandro Rappelli, 1987 **Kidney Disease and Nephrology Index**, 1977 *Renovascular and Renal Parenchymatous Hypertension* Thomas Luescher, Norman M. Kaplan, 2012-12-06 This monograph provides a timely update on the pathophysiology diagnosis and therapy of renovascular and renal parenchymatous hypertension The underlying causes of the most common forms of hypertension are discussed in separate chapters Special emphasis is laid on newer pathophysiological aspects of the disease in particular the vascular wall renin angiotensin system Furthermore there is in depth discussion of all the new techniques that are currently available for use in the diagnosis of renal hypertension e g ultrasound and Doppler techniques magnetic resonance imaging and nuclear renography These techniques are discussed by internationally renowned experts in the field The book also covers topics such as the value of medical therapy surgical techniques and percutaneous transluminal angioplasty with special reference to the treatment of renal hypertension *Laragh's Lessons in Renin System Pathophysiology for Treating Hypertension and Its Fatal Cardiovascular Consequences* John H. Laragh, 2002 Here s an essential reference for anyone needing an advanced understanding of the nature and treatment of hypertension Dr Laragh a pioneering clinician and scientist demonstrates the central role of an overactive renin system for causing most hypertension In his new book Dr Laragh discusses his research and its relevance to caring for everything from asymptomatic patients to hypertensive emergencies And he provides visit by visit details of his new pathophysiologically and biochemically guided treatment The result of his work is a specific approach that makes it possible to more effectively prevent arrest and treat hypertension and its consequences including congestive heart failure myocardial infarction kidney failure and stroke *Clinical Nephrology: Immunologic Considerations, Invasive Techniques and Dialytic Strategies* G. D'Amico, G. Colasanti, 1989-04-04 Hypertension Henry R. Black, William Elliott, 2006-12-28 Clinical hypertension is one of the most serious long term problems associated with heart disease This companion to Braunwald s Heart Disease focuses in depth on this key area of cardiovascular medicine Complete with practical clinical tools for management it helps you manage the chronic problems of your hypertensive patients It covers everything from epidemiology and pathophysiology through diagnosis risk stratification treatment outcome studies concomitant diseases special populations and special situations and future treatments Addresses management of all special populations with chronic hypertensive disease Includes Clinical Pearls for reducing complications of hypertension Discusses hypertension and concomitant disease Provides information on the practical management of hypertension and its role in complex diseases Emphasizes prevention of hypertensive diseases Covers behavior management as an integral part of treatment plan for hypertensives and pre hypertensives Assesses drugs and other forms of treatment Presents current clinical guidelines for the U S Canada and Europe Encourages aggressive patient management to ensure minimal risk of further cardiovascular problems **Suki and Massry's Therapy of Renal Diseases and Related Disorders** Wadi N.

Suki,Shaul G. Massry,2013-06-29 The field of renal disease has witnessed a huge increase in new knowledge in the 1990s Advances in our understanding of the pathogenesis and treatment of this complex group of disorders have been escalating rapidly This is a third edition of this book which is intended to provide the physician with a clear comprehensive text on the management of the diverse array of disorders of fluids and electrolytes of acid base and mineral metabolism and of renal structure and function **Medicine Update 2024 (Two Volumes) and Progress in Medicine 2024** Milind Y Nadkar,Jyotirmoy Pal,2024-02-13 Hypertension Henry Richard Black,William J. Elliott (M.D.),2007-01-01 Effectively manage the chronic problems of your hypertensive patients with the practical clinical tools inside Hypertension 2nd Edition A Companion to Braunwald s Heart Disease This respected cardiology reference covers everything you need to know from epidemiology and pathophysiology through diagnosis risk stratification treatment outcome studies concomitant diseases special populations and special situations and future treatments Confidently meet the needs of special populations with chronic hypertensive disease as well as hypertension and concomitant disease Learn new methods of aggressive patient management and disease prevention to help ensure minimal risk of further cardiovascular problems Benefit from the authors Clinical Pearls to reduce complications of hypertension Use new combination drug therapies and other forms of treatment to their greatest advantage in the management of chronic complications of hypertension Successfully employ behavior management as a vital part of the treatment plan for hypertensives and pre hypertensives Access the complete contents online and download images at www.expertconsult.com The clinical tools you need to manage hypertension in patients from the Braunwald family you trust **Comprehensive Hypertension E-Book** Gregory Y. H. Lip,John E. Hall,2007-06-28 Here is today s most in depth reference for any cardiologist internist or nephrologist interested in hypertension Drawing from international experience in cardiology physiology and nephrology Drs Lip and Hall have assembled a group of section editors and contributors second to none You ll find the long term effects of primary and secondary hypertension and a lengthy section on hypertensions for special populations featured prominently Prevention and treatment of hypertension are covered in detail from lifestyle and diet issues to drug choice and delivery and the section on comparison of guidelines is unique to this book Find comprehensive coverage of hypertension including pathogenesis prevention and treatment all in one practical volume See the complete systemic problems of hypertension at a glance with detailed full color illustrations of cellular and clinical manifestations Simplify navigating the complexities of hypertension using algorithms for clinical exam and diagnosis Get specific insight into prevention and treatment of hypertension in special populations Go global with a comprehensive section on worldwide guidelines and the application of clinical material to local standards of practice **Cumulated Index Medicus** ,1977 *Cardiology for the Primary Care Physician* Joseph S. Alpert,2012-12-06 A variety of cardiovascular illnesses are now being encountered with surprising frequency in many general adult medical practices With contributions from 70 top experts Cardiology for the Primary Care Physician provides complete coverage of the appropriate diagnostic and

therapeutic approaches to patients with cardiovascular diseases in one easy to use source In 46 chapters the primary care physician can find information on all types of cardiovascular illnesses such as infectious myocarditis cardiac arrhythmias pheochromocytoma and hypertrophic cardiomyopathy The many charts tables and diagrams as well as a special color plates section enhance understanding and bring the text to life Key points at the beginning of each chapter together with extensive references and recommended reading lists make this text an ideal work companion

Essential Hypertension and Its Causes Paul I. Korner, 2007-05-11 This new account of the pathogenesis of essential hypertension EH represents a detailed analysis of the main components of the circulatory control system The latter's properties resemble those of man made adaptive control systems in which regulatory parameters are altered when operating conditions exceed certain limits often through neural mechanisms Inheritance of EH depends on both genes and environment The high blood pressure BP genes have not yet been definitively identified whilst the main environmental causes are mental stress high dietary salt intake and obesity EH occurs as two major syndromes each initiated by chronic stress 1 Stress and salt related EH and 2 Hypertensive obesity Stress is perceived by the cortex from which increased dopaminergic DA neuron activity stimulates the hypothalamic defense area raising sympathetic neural activity SNA and BP Normally these subside quickly when the stress is over but in those susceptible to EH the DA synapses become sensitized so that the defense response is evoked by ever lower levels of stress Sensitization is common in memory circuits but not in autonomic neurons so that this property in EH may be genetically determined Stress related hypertension increases hypothalamic responsiveness to high salt resulting in further rises in SNA and BP Later non neural functional changes e.g reduction in nitric oxide and the structural remodeling of resistance vessels further enhance the vasoconstriction In contrast in those developing hypertensive obesity food consumption is excessive which transiently alleviates stress related anxiety The brain ignores the leptin mediated signals that normally curb appetite contrasting with normal energy regulation in SSR EH In hypertensive obesity the SNA pattern is similar to that in SSR EH but vasoconstriction is masked by vasodilatation and fluid retention due to hyperinsulinemia This syndrome is a volume overload hypertension where high cardiac output renal impairment and other non neural factors contribute to the elevation of BP Other topics include the role of various transmitters in autonomic regulation the place of baroreflexes in the intact organism why exercise training lowers resting BP obstructive sleep apnea non pharmacological and drug treatment of EH the role of the kidney in EH and in different types of renal hypertension and the pathogenesis of the Japanese spontaneously hypertensive rat which provides a valuable animal model for EH The work suggests that physiological systems analysis in a complex disorder like EH is a valuable tool for using the great advances in molecular biology to best advantage

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International Yearbook of Nephrology 1990 Leon F. Fine, 2012-12-06 After the great success of the first issue of the series the International Yearbook of Nephrology 1989 we were encouraged to proceed in our editorial venture to update

nephrologists yearly on all rapidly changing areas of nephrology Thus we have chosen new topics and appointed experts in the field asking them to give an objective review of the topic up dating the readers on the world wide literature and providing them with a complete accurate and up to date list of important recent references We have decided to maintain the successful format of the International Yearbook of Nephrology 1989 Thus each annual issue will be divided into sections each section will have a different primary focus every year depending upon what area is of greatest interest at the time In other words the Yearbook will remain different from the numerous books which appear every year covering all aspects of nephrology In the Yearbooks you will find topics usually unavailable in nephrology textbooks In this issue we have improved the printing quality of the book with a more uniform format throughout the volume despite the use of camera ready manuscripts for direct photo offset reproduction a procedure mandatory for a rapid publication **EL DONANTE DE ORGANOS Y TEJIDO, S A.**

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Molecular and Genetic Basis of Renal Disease David B. Mount,Martin R. Pollak,2008-01-01 This companion to Brenner and Rector's The Kidney offers a state of the art summary of the most recent advances in renal genetics Molecular and Genetic Basis for Renal Disease provides the nephrologist with a comprehensive look at modern investigative tools in nephrology research today and reviews the molecular pathophysiology of the nephron as well as the most common genetic and acquired renal diseases A comprehensive clinical review of Medelian renal disease is also included Detailed review of the molecular anatomy and pathophysiology of the nephron that provides relevant basic science to consider when diagnosing and managing patients with these disorders **Textbook of Uroradiology** Reed Dunnick,Carl Sandler,Jeffrey Newhouse,2012-10-16 This 5th Edition of Textbook of Uroradiology focuses on subject matter that will provide critical learning to radiology and urology residents preparing for their board examinations as well as practicing radiologists Chapter opener outlines and text boxes highlighting key points and differential diagnoses make this introductory textbook very user friendly The Suggested Readings at the end of each chapter are a valuable reference tool for those who desire additional information about a particular topic **SPECIAL FEATURES** Integrates all aspects of adult uroradiology including additional discussion on incidental findings and how to handle them More than 1 000 illustrations More Hybrid imaging including PET CT and SPECT CT More MR imaging including MR urography and MR angiography More material on CT dose reduction and 3D CT imaging

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