Saturday, May 16, Astor Ballroom, 2:00 PM
Theme I: Sympathetic Nervous System
Role of the Renin Angiotensin System and the Sympathetic Nervous System in the Heart
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Elevated levels of renin-angiotensin and/or catecholamines, whether due to endogenous stimulation or exogenous administration, cause ischemic heart damage via acute vasoconstriction or chronic myocardial and vascular wall hypertrophy. Both angiotensin (Ang) and norepinephrine (NE) produce widespread myocardial necrotic lesions. Ang II causes preferentially coronary constriction, further potentiated under concurrent adrenoreceptor blockade and partly counteracted by endogenous kinins. Both Ang and NE exhibit also trophic, arrhythmogenic, and thrombogenic properties with effects exerted directly or via interaction (mediated or attenuated) by locally generated kinins, endothelin, NO, etc. In chronic congestive heart failure (CHF) elevated peripheral resistance is maintained in part via stimulation of Ang, NE and vasopressin (AVP), as shown by the hemodynamic amelioration following blockade of these hormones. While Ang blockade is now standard therapy in CHF, sympathetic blockade has produced mixed results in the past. We have recently reintroduced central sympathetic suppression with clonidine in short-term and long-term pilot clinical studies. Our data indicate both immediate and sustained hemodynamic and functional improvement with antiarrhythmic effect on clonidine alone, and synergistic benefits when combined with Ang blockade.

Key Words: Coronary constriction, arrhythmia, hypertrophy, myocardial damage, congestive heart failure, hormonal suppression.

Saturday, May 16, Broadway Ballroom South, 2:00 PM
Theme II: The Clinical Course of Renal Disease in Hypertension
RENAL PROTECTION BY ANGIIPTENSIVE DRUGS: WHAT ARE THE ISSUES FOR THE NEW MILLENNIUM?
Norman K. Hallenberg, M.D., Ph.D., Brigham and Women's Hosp., & Harvard Medical School, Boston, MA.
As the twentieth century draws to a close, only the most rigorous and ultra orthodox physiologists would deny that control of hypertension is crucial to protection of renal function in the patient with hypertension. Few physicians would argue that ACE inhibitors have found a special role in the treatment of patients with Type I diabetes mellitus who are at risk of nephropathy, and probably patients with Type II diabetes mellitus. Credibility is not strained by extending that to most forms of renal disease that predispose to end stage renal disease (ESRD), and by mechanisms that go beyond blood pressure control. Evidence favoring calcium channel blocking agents suggests differences within the subclasses, and is far less rigorous. Questions that may soon have an answer include: What level of blood pressure should be the goal of treatment in patients at risk of ESRD? What dose of ACE inhibitor, or analogous agent is optimal for renal protection? What combination of drugs with an ACE inhibitor provides optimal protection? Do the Ang II antagonists provide an alternative to ACE inhibition, with greater potential? Does genotype predict not only risk of ESRD, but also the likelihood that a specific class of agent will prove helpful? The next ten years should provide answers to these questions, for which partial answers are already available.

Saturday, May 16, Broadway Ballroom North, 2:00 PM
Theme III: Clinical Trials? What's New and What Does it Mean?
The HOT Study
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The Hypertension Optimal Treatment (HOT) Study is a prospective, randomized multicenter trial conducted in 26 countries. Its main aim was to evaluate the relationship between three levels of target diastolic blood pressure (90, 85 or <80 mm Hg) and cardiovascular morbidity and mortality in hypertensive patients. The effects on these endpoints of a low dose, 75 mg daily, of acetylsalicylic acid (ASA, aspirin) or placebo were also investigated.
Antihypertensive treatment was initiated with felodipine at a dose of 5 mg daily. If target blood pressure was not reached, additional therapy according to a strict schedule was added. 18,790 patients were studied for an average of 3.5 years, providing about 72,000 patient-years. The average initial diastolic blood pressure was 105 mm Hg and this was reduced by 21-24 mm Hg in the three target groups.
The HOT Study was stopped on August 31, 1997 and a clean file will be available by the end of January 1998. The final results should be available for presentation by mid-1998.

Key Words: Antihypertensive Treatment, Intervention Trial, Target Blood Pressure, Calcium Antagonist, Felodipine, Aspirin.