



New Themes in Hypertension: Introduction

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The London Hypertension Society provides a forum for basic scientists, clinical researchers, epidemiologists and public health experts to present and discuss results of their research into cardiovascular disease prevention and treatment. The Society holds evening scientific meetings at the Medical Society of London five times a year during academic terms with speakers on research from throughout the United Kingdom as well as visiting international speakers. In addition, annual symposia and theme workshops on aspects of hypertension research have been held by the Society since 1990 and their proceedings published.^{1–6} The papers and abstracts published in this issue of the *Journal of Human Hypertension* are based on invited lectures and the 24 peer review poster presentations from the Eighth Annual Symposium of the London Hypertension Society held at the Royal College of Surgeons on 13 May 1997. At this meeting eight invited lecturers discussed progress in basic research and in the prevention and management of hypertension and its complications.

Professor Mark Cannell (London) discussed the application of confocal microscopy to study the local control of excitation–contraction coupling in cardiac myocytes. His work using these techniques has shown that the whole cell calcium transient is made up of the summations in time and space of a large number of microscopic calcium release events called calcium 'sparks'. In the spontaneous hypertensive rat (SHR) model of hypertension the relationship between calcium channel activity and calcium release from internal stores is altered in a way that reduces the strength of contraction. These and related studies point the way to new drugs which could 're-tune' activity of surface membrane calcium channels to maximise the efficiency of calcium-activated calcium release in heart muscle cells. Professor Martin Paul (Berlin) discussed the application of recent advances in molecular genetics and transgenic technology which allow the addition or deletion of specific genes in animals to improve our understanding of the pathophysiology of gene expression and function in hypertension. There are many candidate genes for hypertension and its com-

plications. He described how the role of a candidate gene for hypertension or its complications can be tested by introducing predefined changes into the genome of experimental animals to find out whether this leads to the predicted phenotype.

Professor Nicholas Carter (London) discussed the genetics of stroke. He reviewed advances in gene-mapping which have made possible scanning for stroke-associated mutations in man. He described results from recent studies of the stroke-prone hypertensive rat which have identified quantitative trait loci associated with susceptibility for stroke, one of which mapped to a region including natriuretic peptide loci. Such studies may provide a new focus for research into related abnormal genes in man. Professor Tim Higenbottam (Sheffield) discussed the influence of genetic and environmental factors on development and severity of pulmonary hypertension. He focused on new insights into primary pulmonary hypertension (PPH) from study of mechanisms explaining why treatment with the anorectic agent dexfenfluramine causes PPH as well as studies implicating an inherited storage defect of serotonin in an animal model of hypoxia-induced pulmonary hypertension.

Dr Francesco Cappuccio (London) discussed factors which may account for the variation in risk of premature cardiovascular disease within different ethnic groups. He focused on studies in people of African ancestry and South Asian origin. Factors of particular interest include the high prevalence and inadequate treatment of hypertension in people of black African origin in the United Kingdom. A further focus of concern is the much higher coronary heart disease mortality in association with non-insulin dependent diabetes mellitus in communities of South Asian origin compared to those of African–Caribbean origin. Professor Neil Poulter (London) contrasted the high relative but very low absolute risk of cardiovascular complications from newer vs older forms of oral contraception compared with the high rate of cardiovascular and other complications of unplanned pregnancy, based on the findings of recently completed WHO-funded studies. Professor Rory Collins (Oxford) discussed the impact of reduc-

ing cholesterol by diet and drugs in the context of other approaches to lowering cardiovascular risk. Professor Derek Denton (Melbourne) discussed whether hypertension can be prevented. His major focus was on the evidence from his own studies in chimpanzees, and from controlled trial and population-based studies in man, identifying dietary salt as a major reversible factor for development and progression of hypertension. He emphasised the importance of effective long-term public health policy, involvement of the food industry and clear messages from physicians to ensure effective reduction in dietary salt intake along with other dietary measures to reduce the prevalence of hypertension as a major way to reduce cardiac and cerebral vascular disease.

The Web pages of the London Hypertension Society (<http://www.sm.ic.ac.uk/lhs/home.htm>) include information on evening meetings, on future workshops and on the 9th Annual Symposium of the London Hypertension Society to be held in the Spring of 1998, along with details of how to become a member.

Acknowledgements

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References

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