THE BLOOD PRESSURE UNIT

Beaumont Hospital

ANNUAL REPORT, PUBLICATIONS

AND

SCIENTIFIC PRESENTATIONS

1998
Contents

Introduction 3
Blood Pressure Unit Staff 5
Scientific Publications for 1998 6
General and educational publications for 1998 9
Scientific and educational communications for 1998 11
Current Research and Collaborative Centres 1998 14
Editorial Boards and Committee membership 17
Introduction

The Blood Pressure Unit was founded in 1978 in the Charitable Infirmary, Jervis Street, with support provided by the Charitable Infirmary and the Royal College of Surgeons in Ireland. From the outset the Unit has concentrated on research into the pharmacology of blood pressure lowering drugs, particularly in the elderly, and on the development of blood pressure measuring techniques, especially techniques of ambulatory blood pressure measurement. To-date some 400 publications on these research areas have been produced by the Unit.

In 1998 the Blood Pressure Unit continued to contribute to hypertension research, publishing 17 scientific papers, and delivering research presentations at home, in the UK, Italy, Holland, Portugal, Germany, the United States, Egypt and South Africa.

The Out-patient service continued to grow with nearly 3,500 patients attending the Blood Pressure, Lipid, Cardiac and the newly established ADAPT (Arterial Disease Assessment Prevention and Treatment) Clinics. I am joined in the provision of these services by Professor Desmond Fitzgerald, Dr. Joseph Duggan and Professor David Bouchier-Hayes. The value of the ADAPT Clinic was given international recognition in the *Lancet*, with publication of an article outlining the role of the Clinic in the management of cardiovascular disease.

The Unit continued to participate in a number of important international collaborative studies, which included the Syst-Eur, OvA, TOHP, HYVET and PROGRESS studies. The Unit participated in collaborative research with a number of institutions and universities abroad; these included the University of Louvain, the University of Gent, the Hammersmith Hospital, Glasgow University, the University of Auckland, Aberdeen University and Cornell Hospital in New York.

The Unit began participation in its largest international research endeavour when the first of 1000 patients was recruited for the Anglo-Scandinavian Cardiovascular Outcome Trial (ASCOT) in July. ASCOT will recruit a total of 18,000 patients at high risk from cardiovascular complications of hypertension to determine which blood pressure lowering or cholesterol lowering drug is most beneficial in preventing stroke and heart attack. It was a pleasure to welcome Dr. Alice Stanton back from St. Mary’s Hospital to direct and co-ordinate the ASCOT programme. She was joined on the ASCOT team by Dr. Charlotte Cribben, Nurse Elizabeth Kinsella, Nurse Alan Hobbs, and Ms Ann Grady. I am a member of the ASCOT Steering Committee and Chairman of the ASCOT Sub-study Committee, which will supervise some 20 sub-studies, and Professor Desmond Fitzgerald is a member of the Genetics Committee. All the biochemistry for the ASCOT Study and genetic analyses will be carried by newly created facilities in the Royal College of Surgeons.
I continued to act during the year as Chairman of the working parties on blood pressure measurement of the British Hypertension Society, of the British Standards Institution, and of the European Society of Hypertension. I am also Chairman of the Irish Heart Foundation Council on High Blood Pressure and a member of the EU Standards Committee on Blood Pressure Measurement.

As well as continuing basic pharmacological research on blood pressure lowering drugs, the Unit continued to evaluate the accuracy and reliability of systems of ambulatory blood pressure measurement and in this capacity acts as adviser to many governmental and standards institutions.

The service work and research in hypertension outlined in this report was facilitated by continuing support from the Charitable Infirmary Charitable Trust, the Research Committee of the Royal College of Surgeons, the Irish Heart Foundation and Beaumont Hospital, each of which provided the much needed facilities and support for staff, without which the achievements listed in this report would not have been possible. I would like to pay tribute to the diligence and loyalty of all the staff in the Unit, characteristics which facilitate the team approach so necessary in scientific research. I would like to acknowledge with gratitude the support of our colleagues, both clinical and administrative, and I also wish to acknowledge the importance of the facility provided for our research work in the Clinical Investigation Area of the Hospital, without which it would not have been possible to conduct much of the work outlined in this report.

In closing let me invite you to visit our Web page at http://www.iol.ie/~bpu/ for further details relating to facilities for patients, and our research activities.

Eoin O'Brien
Director
31/12/1998
The Blood Pressure Unit

Staff 1998

Medical

Professor Eoin O'Brien
Professor Desmond Fitzgerald
Dr. Joseph Duggan
Dr. Alice Stanton
Dr. Charlotte Cribben
Dr. Paddy Owens
Dr. Liam Norton
Dr. Cianán O'Sullivan
Dr. Sineal Gupta

Nursing

Sister Fáinsía Mee
Nurse Caroline Wilson
Nurse Cora McKiernan
Nurse Geraldine McCarthy
Nurse Ruth Nallon
Nurse Dáire Ryan
Nurse Lee Ann Clavin
Nurse Elizabeth Kinsella
Nurse Alan Hobbs

Technical

Mr. Simon Lyons
*Echocardiographer*
Mr. Neil Atkins
*Computer Analyst*
Ms Una Mulligan
*Dietician*

Secretarial

Ms Valerie Hughes
Ms Catherine Cooney
Ms Kathleen Kelly
Ms Ann Grady
Original papers


**Editorials**

1. O’Brien E. Will the millimetre of mercury be replaced by the kilopascal. *J Hypertens* 1998;16:259-261


**Letters**


**Books and booklets**


**Abstracts**


5. Atkins N, O’Malley, S, Duggan J, O’Brien E. Comparison of the diagnosis and management of hypertension when blood pressure is measured in the clinic, home or by ambulatory blood pressure. J Hypertens 1998;16(Suppl 2):S273


General and Educational

1. Owens P. New research on hypertension. Ir Medical News 1998;Jan 19th


8. Owens P. Case histories in hypertension. *Ir Medical News* 1998; 21


**Exhibitions**


**CD-ROM**

O’Brien, E. Clinical applications of 34-hour ambulatory blood pressure measurement and the importance of 24-hour blood pressure control.

- O’Brien E. Is there a need for a common validation protocol?

- O’Brien E. Chairman
- O’Brien E. The results of the APTH Trial.

- O’Brien E. Chairman
- O’Brien E. Ambulatory blood pressure measurement: importance of 24-hour control.

- O’Brien E. A University of Diversity

Department of Medicine. University of Pretoria. South Africa.
- O’Brien E. Ambulatory blood pressure measurement: importance of 24-hour control.
- O’Brien E. The PROGRESS Study

- Owens P, Lyons S, O’Brien E. Ambulatory blood pressure in the hypertensive population: patterns and prevalence of hypertensive sub-forms
- Fennesy F, Fitzgerald D, Bouchier-Hayes D, O’Brien E. A new approach to arterial disease management: the ADAPT Clinic

- O’Brien E. Chairman.

Debate: The house believes white coat hypertension is an important cause of unnecessary treatment
- O’Brien E and Haegerty T v Ramsay L and McInnes G

- O’Brien E. Chairman: Clinical value of ambulatory and exercise blood pressure monitoring.
- O’Brien E. Chairman: Ambulatory Blood Pressure Monitoring. Poster Presentations
- Rodriguez SA, Owens P, Lyons S, Kroon AA, de Leeuw PW, O’Brien ET. Nocturnal blood pressure decline as a predictor for cardiac and renal damage in hypertension.
- Dahlof B, Sever PS, Poulter N, Wedel H on behalf of the ASCOT Steering Committee. The Anglo-Scandinavian Cardiac outcomes Trial (ASCOT).
Scientific Communications 1998

International Congress on Holter and Non-invasive Electrocardiology. Ulm, Germany. 21-22nd May 1998
• O’Brien E. State of the art: Ambulatory blood pressure monitoring.
• O’Brien E. Chairman: Ambulatory Blood Pressure Monitoring.

• O’Brien E. Refinements of the BHS Protocol.

• O’Brien E. Chairman. Clinical value of Ambulatory and Exercise Blood pressure Monitoring
• O’Brien E. Chairman. Blood Pressure Measurement and Debate: White coat hypertension: How clinically relevant is it?

Poster Presentations
• Rodriguez, S, Kroon AA, Atkins N, Owens P, de Leeuw PW, O’Brien ET. Family history of hypertension is not associated with increased blood pressure variability.
• Rodriguez, S, Kroon AA, Lyons S, Owens P, de Leeuw PW, O’Brien ET. Value of ambulatory blood pressure monitoring to ascertain treatment-resistant hypertension.
• Atkins N, O’Brien E. DABL97 – A computer program for the assessment of blood pressure, risk factors and cardiovascular target organ involvement in hypertension.
• Owens P, Lyons S, O’Brien E. Ambulatory blood pressure in the hypertensive population: patterns and prevalence of hypertensive sub-forms.
• Atkins N, O’Malley S, Duggan J, O’Brien E. Comparison of the diagnosis and management of hypertension when blood pressure is measured in the clinic, home or by ambulatory blood pressure.

Xxth Congress of the European Society of Cardiology, Vienna, Austria. 22nd August, 1998

• Atkins N, Keary L, O’Brien E. Terminal digit preference and heaping in blood pressure measurement.
• Owens P, Lyons S, O’Brien E. Ambulatory blood pressure hypertensive sub-forms predict differential outcomes for left ventricular mass.
• Wingfield D, Bulpitt C, Fletcher A, Thijs L, Staessen J. The reduction of terminal digit preference with quality control visits in the SYST-EUR trial.

• O’Sullivan C, Duggan J, O’Brien E. Do the very elderly tolerate high blood pressure?
• O’Sullivan C, Duggan J, Lyons S, O’Brien E. Do the very elderly tolerate high blood pressure?

Cairo University, Cairo, Egypt. 17th November 1998
• O’Brien E. When is high blood pressure hypertension?

• O’Brien E. Chairman: Which drugs for first line therapy? The case for and against....
CURRENT RESEARCH PROJECTS & COLLABORATIVE CENTRES

I. BLOOD PRESSURE MEASUREMENT

**Project title:** TOPH Study. Home Pressure and Treatment of Hypertension.
**Investigators:** E. O’Brien and J. Staessen,
**Collaborating centres:** Catholic University of Leuven, BELGIUM.
Zeneca Ltd., IRELAND.

**Project title:** Production of CD-ROM on BHS ‘Recommendations for Blood Pressure Measurement’
**Investigators:** E. O’Brien and J. Petrie.
**Collaborating centres:** CAL Unit, University of Aberdeen, Scotland, UK
British Hypertension Society
British Medical Journal

**Project title:** Intra-arm differences in blood pressure
**Investigators:** G. Mansfield, P. Owens, N. Atkins, E. O’Brien
**Collaborating centres:** Irish Heart Foundation, Dublin, IRELAND

**Project title:** Assessment of mortality in relation to risk in the BPU data base
**Investigators:** E. O’Brien, P. Owens, N. Atkins, K. Hinedi
**Collaborating centres:** Registrar for Births and Deaths, IRELAND

**Project title:** Assessment of Korotkoff Sounds
**Investigators:** E. O’Brien, P. Owens, N. Atkins, P. Healy.
**Collaborating centres:** Kevin Street College of Technology, IRELAND
Royal College of Surgeons, IRELAND

**Project title:** Comparison of arterial tonometry and pulse wave velocity
**Investigators:** P. Owens, S. Lyons, D. Ryan, E. O’Brien, B. Williams, M. O’Rourke
**Collaborating centres:** Leicester University, UK
St. Vincent’s Hospital, Sydney

**Project title:** Comparison of MRI and renal angiography in renal artery stenosis
**Investigators:** M. Lee, J. O’Callaghan, M. Wlashe, P. Owens, E.O’Brien
**Collaborating centres:** Department of Radiology, Beaumont Hospital, IRELAND

**Project title:** Device validations according to BHS/AAMI standards
**Investigators:** E.O’Brien, F. Mee, N. Atkins

**Project title:** Recommendations for banning of mercury.
**Investigators:** E. O’Brien and members of the British Hypertension Society and the Working Group on Blood Pressure Measurement of the European Society of Hypertension.

**Project title:** Recommendations on Blood Pressure Measurement
**Investigators:** E. O’Brien and others
**Collaborating centres:** British Hypertension Society, UK
British Standards Institute, UK
DHSS, UK
EU Standards Committee, GERMANY
European Society of Hypertension, HOLLAND
II. AMBULATORY BLOOD PRESSURE MEASUREMENT

Project title: **AIB Study, Phase II: Ambulatory blood pressure and end-organ changes** *
Collaborating centres: Allied Irish Bank, Ballsbridge, DUBLIN
Catholic University of Leuven, BELGIUM
Cornell University, New York, USA
Royal College of Surgeons, IRELAND
Charitable Infirmary Charitable Trust, IRELAND
Irish Heart Foundation, IRELAND

Project title: **OvA Study: Office versus A BPM in management of hypertension.**
Investigators: E. O’Brien and D. Clement.
Collaborating centres: University of Gent, BELGIUM.

Project title: **Recommendations for Ambulatory Blood Pressure Measurement.**

Project title: **Hypotension and autonomic status:**
Collaborating centres: Department of Nephrology, Beaumont Hospital, IRELAND

Project title: **Analysis of Blood Pressure Unit database.**
Collaborating centres: University of Maastricht, THE NETHERLANDS

Project title: **Ambulatory blood pressure and mortality.**
Collaborating centres: Registrar of Deaths, Joyce House, Dublin, IRELAND

Project title: **The NEAR Study. New approaches to neural alterations.**
Investigators: E. O’Brien, A. Zanchetti, G. Parati
Collaborating centres: University of Milan, ITALY

III. HYPERTENSION IN THE ELDERLY

Project title: **Isolated Systolic Hypertension in the Elderly: The SYST-EUR Phase II Study**
Collaborating centres: Catholic University of Leuven, BELGIUM.

Project title: **The HYPET Study. Hypertension in the Very Elderly**
Investigators: J. Duggan, E. O’Brien and C Bulpitt
Collaborating centres: Hammersmith Hospital, London., UK.
Current Research and Collaborative Centres 1998

Project title: *Target organ status in elderly patients with hypertension.*
Collaborating centres: James Connolly Memorial Hospital

Project title: *The PROGRESS (Perindopril Protection Against Recurrent Stroke) Study.*
Collaborating centres: Western Infirmary, Glasgow, UK
University of Auckland, NEW ZEALAND

Project title: *Blood Pressure in elderly patients in different health states.*
Collaborating centres: James Connolly Memorial Hospital, IRELAND
Royal College of Surgeons, IRELAND

IV. DRUG TREATMENT OF HYPERTENSION

Project title: *Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT).*
Main Study
Collaborating centres: St. Mary’s Hospital, London, UK
Imperial College, London, UK
University of Göteborg, SWEDEN.
Royal College of Surgeons, IRELAND

Project title: *Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT).*
Sub-study: ABPM in ASCOT
Collaborating centres: St. Mary’s Hospital, London, UK
Western Infirmary, Glasgow, UK

Project title: *Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT).*
Sub-study: Tonometry in ASCOT
Collaborating centres: Leicester University, UK

Project title: *Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT).*
Genetic/Phenotyping Sub-study
Collaborating centres: St. Mary’s Hospital, London, UK
Imperial College, London, UK
Royal College of Surgeons, IRELAND

Project title: *Perindopril/indapamide study on arterial Tonometry and pulse wave velocity.*
Collaborating centres: University of Grenoble, FRANCE
Servier Laboratories, FRANCE and IRELAND
V. COMPUTERISED SYSTEMS FOR OUT-PATIENT MANAGEMENT

Project title: Development of Computerised systems for Out-patient Management – the DABL and ADAPT Programmes


Collaborating centres: Department of Surgery, Royal College of Surgeons, IRELAND
EDITORIAL BOARD MEMBERSHIP

Journal of Human Hypertension: E. O'Brien
Journal of Hypertension: E. O'Brien
High Blood Pressure and Cardiovascular Prevention: E. O'Brien
Blood Pressure: K. O'Malley & E. O'Brien
Blood Pressure Monitoring: E. O'Brien
The Recorder: E. O'Brien

COMMITTEE MEMBERSHIP


HCC/10 Committee for the revision of standards for mercury and aneroid sphygmomanometers. British Standards Institute. E. O'Brien. Chairman

CEN/TC205 EEC Committee for Non-active medical devices. E. O'Brien

Steering Committee. European Study of Systolic Hypertension in the Elderly (Syst-Eur). E. O'Brien

Side-project on Ambulatory Measurement. European Study of Systolic Hypertension in the Elderly (Syst-Eur). E. O'Brien

Steering Committee. European Study of Ambulatory Blood Pressure Measurement. E. O'Brien

Irish Medicines Board. D. Fitzgerald.

Steering Committee. British Hypertension in the Very Elderly Trial (BHET). J. Duggan

Council on High Blood Pressure. Professor E. O'Brien, Chairman.

Nurses Hypertension Association. F. Mee.

Nurses Cardiovascular Association. F. Mee. Chairman.

Steering Committee. TOPH (Home Pressure and Treatment of Hypertension) Study. E. O’Brien.

Steering Committee Anglo-Scandinavian Cardiac Outcomes Trial (ASCOT): E. O’Brien
