THE BLOOD PRESSURE UNIT

Beaumont Hospital

ANNUAL REPORT, PUBLICATIONS

AND

SCIENTIFIC PRESENTATIONS

1997
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Blood Pressure Unit Staff</td>
<td>6</td>
</tr>
<tr>
<td>Scientific Publications for 1997</td>
<td>7</td>
</tr>
<tr>
<td>General and educational publications for 1997</td>
<td>9</td>
</tr>
<tr>
<td>Scientific and educational communications for 1997</td>
<td>10</td>
</tr>
<tr>
<td>Collaborative Projects</td>
<td>12</td>
</tr>
<tr>
<td>Editorial Board and Committee membership</td>
<td>14</td>
</tr>
</tbody>
</table>
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 450 publications on these research areas have been produced by the Unit.

In 1997 the Blood Pressure Unit continued its research interests, publishing 13 scientific papers, 2 chapters in books, 3 books and booklets, 6 letters in journals, and 7 papers of general educational and cultural interest. The Unit enters 1998 with many research projects underway.

Members of the Unit delivered scientific presentations at home and in 6 countries abroad.

On the service level the Shared Care Programme was updated and there was a continuing increase in the number of patients seen at out-patients but the waiting list for new referrals has been maintained at a maximum of six to eight weeks. This year the Unit established new techniques for assessing arterial target organ damage, namely tonometry and pulse wave velocity techniques.

The day case facility for the exclusion of secondary hypertension continued to investigate one patient weekly with a surprisingly high 30% detection rate for a cause for hypertension, which was curable in many instances. The numbers attending the weekly Lipid Clinic, under the direction of Professor Fitzgerald, continued to grow mainly due to the increasing demand for expert advice in the use of lipid lowering drugs in managing the dyslipidaemias. The elderly with hypertension, who have always been a special concern of the Unit, had their special needs attended to by Dr. J. Duggan who holds a weekly clinic for older patients. The ADAPT (Arterial Disease Assessment Prevention and Treatment) Clinic was established in collaboration with Professor D. Bouchier-Hayes. The rationale for this unique clinic is to ensure that all patients with cardiovascular disease receive the most comprehensive risk factor assessment with appropriate life-style modification and treatment directed at the arterial organ, which is central to all cardiovascular disease.

The results of two important studies in which the Blood Pressure Unit at Beaumont Hospital played a major part, were published in the Lancet and the Journal of the American Medical Association. Two clear messages emerged from these studies: firstly, that isolated systolic hypertension in the elderly should be treated and that doing so reduces stroke by over 40 % and cardiac events by over 30%, and secondly, that assessing blood pressure with ABPM rather than office BP results in less drug prescribing with a better quality of life for hypertensive patients.
The Unit continued to participate in a number of important international collaborative studies. First, the Unit played a co-ordinating role in the European multicentre Syst-Eur II trial (with the University of Louvain). The Office versus Ambulatory (OvA) Study (with the University of Gent) has now been in progress for a decade and the preliminary results have just been analysed. The TOHP Study (with the University of Louvain) is designed in the same manner as the successful APTH Study, but examines the effect of prescribing blood pressure lowering drugs according to self (home) blood pressure measurement, rather than according to conventional blood pressure measurement. Other international studies in progress include the HYVET (with the Hammersmith Hospital) to determine the benefits of treating very elderly patients with hypertension, and the PROGRESS study (with Glasgow University and the University of Auckland), which is studying the possible benefit of ACE inhibition in patients with stroke. Phase II of the Allied Irish Bank Study in collaboration with the University of Louvain and Cornell University in New York, in which 800 employees who had had ambulatory blood pressure measured 7 years ago are being recalled for repeat measurement and a detailed cardiovascular assessment including echocardiography, is continuing. The Unit is playing a major role in the Anglo-Scandinavian Cardiovascular Outcome Trial (ASCOT) which aims to recruit 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. I am a member of the Steering Committee and Chairman of the Sub-study Committee for this important trial.

I continued to act during the year as Chairman of both the Working Party on Blood Pressure Measurement of the British Hypertension Society and of the Committee for Revision of the Standards for Mercury and Aneroid Sphygmomanometers of the British Standards Institution. I am also a member of the European Standards Committee in Berlin which has the responsibility of drafting a Directive for standards of blood pressure measuring devices, the first two parts of which were published in 1996 with the final part being due for publication in 1997. I was elected Chairman of the an international Working Group on Blood Pressure Measurement which is affiliated to the European Society of Hypertension and the International Society of Hypertension.

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 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.

Eoin O'Brien
Director
31/12/1997
The Blood Pressure Unit

Staff 1997

Medical

Professor Eoin O'Brien       Dr. Paddy Owens
Professor Desmond Fitzgerald  Dr. Louis Keary
Dr. Joseph Duggan            Dr. Ronan Ryan
Professor Kevin O'Malley     Dr. Cianán O'Sullivan

Nursing

Sister Fáinsía Mee           Nurse Ruth Nallon
Sister Teresa Sexton         Nurse Dáire Ryan
Nurse Allison Sexton         Nurse Lee Ann Clavin

Technical and secretarial

Mr. Neil Atkins Computer Analyst Ms Giselle Estridge Secretarial
Mr. Simon Lyons Echocardiographer Ms Valerie Hughes Secretarial
Ms Marie Gorman Dietician
Original papers


Editorials

1. O’Brien E. Blood pressure measurement at the turn of the century. *Current Medical Literature; Nephrology and Hypertension* 1997;3:3-6

2. O’Brien E. Blood pressure measurement at the turn of the century. *Current Medical Literature; Cardiology* 1997;16:35-38

Scientific Publications 1997

Letters


Books and Booklets


Book chapters


Abstracts


**General and educational**

1. O’Brien E. Nocturnal blood pressure may be more important than blood pressure during the day. *Journal by Fax* 1997: 17.3.97.


Workshops on ABPM for UK General Practitioners.


Workshop on 24-hour ambulatory blood pressure measurement in general practice.
Beaumont Hospital. 16th April 1997.
Chairman: E. O’Brien

O’Brien E. Invited Chairman of session: Ambulatory Blood pressure
Clement D, De Buyzere M, Missault L on behalf of the OvA investigators. Value of 1, 2, 3 hour segments of ambulatory blood pressure patterns in essential hypertension. Abstract.

O’Brien E. Validation of home blood pressure measurement devices.

Staessen J on behalf of the Syst-Eur Investigators. The Systolic Hypertension in Europe Trial (Syst-Eur). Principal results.
Bulpitt CJ, Connor M, Fletcher AE, on behalf of the HYVET investigators. Orthostatic fall in blood pressure in the very elderly hypertensive (pilot trial results from the Hypertension in the Very Elderly Trial, HYVET)
Seux MI, Thijs L, Forette on behalf of the Syst-Eur Investigators. Isolated systolic hypertension in elderly and cognitive functions: experience of SYST-EUR.
Chalmers JP for PROGRESS Management Committee. PROGRESS - patient characteristics at baseline and status in June 1996.
Introduction of T-channel Blockers. Royal Hospital, Kilmainham, Dublin. 11th September 1997.
O’Brien E. Ambulatory blood pressure measurement in Clinical Practice.

Owens P, Rodriguez SA, Lyons S, de Leeuw PW, O’Brien ET. White coat hypertension and end-organ damage: does isolated elevation of clinic blood pressure predict hypertension related end-organ damage?

Lectures to General Practice on 24-hour Ambulatory Blood Pressure Measurement: “When is high blood pressure hypertension?”

Castletroy Park Hotel. Limerick. 24th September 1997
Beaufield Mews. Dublin. 15th October 1997
Grand Hotel, Malahide, Dublin. 19th November 1997.

Killiney, Dublin
O’Sullivan C, Duggan J, O’Brien E. on behalf of the PROGRESS Investigators. PROGRESS - Patient characteristics and blood pressure differences

MSD University Program. Dublin. 10th October 1997.
O’Brien E. 24-hour blood pressure monitoring.

Annual Lecturer; O’Brien E. The role of ambulatory blood pressure measurement in clinical practice.
COLLABORATIVE PROJECTS

UNITED KINGDOM

Imperial College, St. Mary's Hospital, London
Blood Pressure Unit, Dublin. Co-ordinating Centre for Ambulatory Measurement Sub-Project.
Anglo-Scandavonian Cardiac Outcomes Trial (ASCOT). Factorial Study of the Prevention of Coronary Heart Diseases and Vascular Events by Blood Pressure Lowering (comparing β-blocker based with amlodipine based therapy) and by Blood Cholesterol Lowering (comparing Atorvastatin with placebo) in 18,000 patients. Professor Peter Sever

University of Aberdeen, Scotland
1. Shared Care Programme for out-patient management of hypertension. Professor James Petrie
2. Production of CD-ROM on BHS Recommendations for Blood Pressure Measurement. Professor James Petrie

Hammersmith Hospital, London.
The HYVET Study. Hypertension in the Very Elderly. Professor Christopher Bulpitt

Gardiner Institute, Western Infirmary, University of Glasgow.
The “Progress” Study into Prevention of Stroke. Professor John Reid.

British Standards Institute, London
Revision of standards for sphygmomanometers. Chairman: Professor E. O'Brien

GERMANY

PTB, Berlin

ITALY

University of Milan, Milan
2. Organisation of 5th Consensus Meeting on 24-hour ambulatory measurement. Professor Giuseppe Mancia

3. PIUMA database analysis. Dr. Paulo Verdecchia

BELGIUM

Catholic University of Leuven
2. APTH Study: Ambulatory blood pressure in the treatment of hypertension. Dr. Jan Staessen and Professor Robert Fagard
3. **TOPH** *Home Pressure and Treatment of Hypertension.* Dr. Jan Staessen and Professor Robert Fagard

**University of Gent**
*Office versus ambulatory blood pressure in the management of hypertension* - Professor Denis Clement

**U.S.A.**

**New York University and Cornell Hospital**
AIB Study, Phase II: *Ambulatory blood pressure and end-organ changes* - Professor Dick Devereux

**Food and Drug Administration. US.**
Peak-to-trough analysis in Syst-Eur Study. Dr. Raymons Lipicky, Professor Willem Birkenhager, Dr. Jan Stassen and E. O’Brien.

**HOLLAND**

**T.M.O Amsterdam**
*Validation of the Finapres.* Professor Gert Van Montfrans and Dr. Karel Wesseling

**University of Maastricht**
Analysis of BPU data base. Professor Peter De Leeuw, and Sergio Rodriguiz

**SWITZERLAND**

**University of Lausanne**
1. Profilomat development. Professor Hans Brunner and Dr. Bernard Waeger.
2. Development of data base for Inhibace Study. Dr. T. Bart

**FRANCE**

**Universities of Grenoble and Paris**
Perindopril/indapamide study on arterial tonometry and pulse wave velocity. Professor Michel Safar and Professor Jean-Michel Mallion

**SWEDEN**

**University of Gothenburg**
*Blood Pressure Unit, Dublin. Co-ordinating Centre for Ambulatory Measurement Sub-Project.*
Anglo-Scandanavian Cardiac Outcomes Trial (ASCOT). Factorial Study of the Prevention of Coronary Heart Diseases and Vascular Events by Blood Pressure Lowering (comparing β-blocker based with amlodipine based therapy) and by Blood Cholesterol Lowering (comparing Atorvastatin with placebo) in 18,000 patients. Professor Björn Dahlöf

**AUSTRALIA**

**St. Vincent's Hospital, Sydney**
*Pulse wave form as an end organ in hypertension.* Professor Michael O'Rourke

**NEW ZEALAND**

**University of Auckland, Auckland**
The “Progress” Study into Prevention of Stroke. Dr. Stephen MacMahon
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

**Executive Committee.** *British Hypertension Society.* K. O'Malley

**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 for High Blood Pressure.** Professor E. O'Brien, Chairman.

**Nurses Hypertension Association.** F. Mee.

**Nurses Cardiovascular Association.** F. Mee. Chairman.

**New York Academy of Sciences.** E. O’Brien

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

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

**Sub-study Committee.** Anglo-Scandanavian Cardiac Outcomes Trial (ASCOT): E. O’Brien. Chairman