

CURRICULUM VITAE
Dr C F SHAKESPEARE MD

NAME: SHAKESPEARE, Carl Frederic
DATE OF BIRTH: 28 May 1960
NATIONALITY: British

SECONDARY SCHOOL: Salesian Italian School, Beirut, Lebanon.
St John's College, Portsmouth, Hants
-A levels June 1977

UNIVERSITY EDUCATION: Universite de Grenoble, Isère, France
-Sciences Politique
-Diplôme de Français June 1978

MEDICAL EDUCATION:
University of London,
Kings College: Oct 1978 - June 1980 2 nd MB
Sept 1980- June 1981 intercalated BSc
-BSc Physiology Honours 2:2

Westminster Medical School: MB BS June 1984
Royal College of Physicians MRCP February 1987
University of London MD December 1993

PRIZES Syntex Cardiac Research Prize 1991

CURRENT POSITION:
Consultant Cardiologist, Greenwich District Hospital as from 20 November 1995
Cardiac Department
Vanbrugh Hill
London SE10 9HE

PREVIOUS CLINICAL POSTS:

Houseman:

Aug 1984 - Jan 1985 St. Stephen's Hospital
Feb 1985 - July 1985 Maidstone Hospital

Professor A F Lant
Mr P Jones

SHO: Westminster Medical Rotation
Aug 1985 - Jan 1986 St Stephen's Hospital:
Cardiology
Diabetes
Haematology

Dr R Sutton
Dr E Coomes
Dr C Costello

Feb 1986 - July 1986 Westminster Hospital:
Nephrology

Dr L W Loughridge

Aug 1986 - Jan 1987 Westminster Hospital:
Oncology

Dr R H Phillips

Cardiology SHO:

Feb 1987 - Aug 1987: National Heart Hospital

Dr A F Rickards
Dr R Emmanuel
Dr J Somerville
Dr R Donaldson
Professor P Poole-Wilson
Professor P Harris

Medical Registrar St. Thomas' Rotation
Nov 1987-Oct 1988: Medway Hospital
Gillingham, Kent.
Cardiology
Chest
Gastroenterology

Dr D S Thompson
Dr I O'Brien and Dr C Shee
Dr R Day

Cardiology Registrar

Nov 1988-Oct 1989: St Thomas' Hospital
Cardiac Dept.

Dr M M Webb-Peploe
Dr D J Coltart
Dr B S Jenkins

Honorary Cardiology Registrar

Nov 1989-Jan 1992 St Thomas' Hospital
Cardiac Dept.

Dr M M Webb-Peploe
Dr D J Coltart
Dr B S Jenkins

Honorary Cardiology Registrar

Feb 1992-Jan 1993 Cardiological Sciences
St. Georges Hospital
Medical School

Professor A J Camm
Dr W McKenna
Dr E Rowlands

Senior Registrar in Cardiology and General Medicine

Feb 1993 - Oct 1995 The Royal London Hospital NHS Trust

Dr P Mills, Dr R Dawson, Dr A McDonald, Dr M Rothman (Cardiology) (Feb 1993 - Nov 1995)

Professor. D Vere, Professor R Cohen (Medicine) (Feb 1993 - Aug 1995)

CONSULTANT POST

As of the 20 November 1995 I will be a consultant cardiologist at Greenwich Hospital. My commitments include the running of the Coronary Care and Intensive Care Units. I will supervise echocardiography and provide a transoesophageal echocardiography service. I will also provide a permanent pacemaker and cardiac catheterisation service. In addition, I will participate in the General Medical rota. I am also interested in developing a program in primary and secondary prevention of heart disease.

PREVIOUS SENIOR REGISTRAR POST

At the Royal London Hospital my cardiological commitments included one cardiac clinic and two consultant ward rounds a week. I was on call 1:5 (non-resident) for cardiological referrals and emergencies. There is an excellent working relationship with the cardiac surgeons, the intensive care and trauma units. I had two cardiac catheter / angioplasty sessions. I implanted two to three pacemakers a week. My major interest was in transoesophageal echocardiography, and had one major list a week, but also provided a rapid service for medical inpatients.

I was responsible for the day to day running of the 14 bedded Coronary Care Unit. Patients are admitted by the duty general physicians. I performed daily early morning ward rounds, advised on management, and selected patients for further investigation. This provided a rapid interface between general medical and cardiological care.

I was responsible for devising the Chest Pain Policy and the Coronary Care Guidelines for the Royal London Hospital. I set up a database of CCU patients. This provides rapidly accessible patient data including information on risk factor stratification, thrombolysis data (e.g. door-to-needle times), and clinical outcome.

I had set up a Post Myocardial Infarction Clinic which is due to start in November. This is designed to provide a cardiac multidisciplinary assessment of patients after myocardial infarction who have been under the care of the general physicians. It is intended to link up with the CCU database to determine clinical outcome in patients post myocardial infarction. As a senior registrar I was on take for general medicine 1:7, and personally assessed and treated acute medical referrals. For the first two years, the specialist interest of the firm was

Clinical Pharmacology. I attended two general medical clinics a week. I then rotated to the Academic Medical unit where I attended one general medical and metabolic clinic and one diabetic clinic per week. We consulted over complex metabolic problems e.g. diabetic pregnancy.

GENERAL MEDICAL EXPERIENCE

As an SHO I gained experience in chemotherapy and oncological emergencies. As an SHO in general medicine on call 1:3 for one year, with registrar supervision for the first six months. As a Renal SHO I was involved in renal clinics and gained expertise in peritoneal dialysis. I was a Chest Medicine registrar in a very busy district with a strong history of industrial lung disease (especially asbestosis) and performed 25 bronchoscopies. I gained an enormous experience in that year dealing with general medical referrals on our 1:3 on call. As a Gastrointestinal registrar I gained a broad experience in the management of inflammatory bowel disease.

INTENSIVE CARE MEDICINE

I gained a broad experience in an intensive care unit run by physicians at the Medway Hospital. I developed expertise in the management of the unconscious patient, haemodynamically unstable patients, status asthmaticus, Guillame-Barre disease, haemofiltration and ventilation.

CARDIOLOGICAL EXPERIENCE

Cardiac Ultrasound: I have an extensive experience in M mode, two dimensional, Doppler and transoesophageal echocardiography. I have developed a special interest in transoesophageal echo-cardiography and have performed over 150. Recently I have devised the guidelines for the echocardiographic evaluation of stroke patients at the Royal London Hospital.

Permanent cardiac pacing: I have implanted 250 VVI and 50 dual chamber systems. I was involved in setting up a pacing service at St. Thomas' Hospital. At St. George's I was involved in the pacemaker clinic and was available for trouble shooting pacemaker problems. I also audited the regional pacing services provided by St. George's Hospital in 1992.

Cardiac catheterisation and angioplasty: I have performed over 2000 cardiac catheters as first operator in the last five and a half years. I have also been involved in the teaching of catheterization to junior registrars. I am experienced in the femoral and brachial artery approaches, and have expertise in trans-septal techniques, haemodynamic studies and left and right ventricular biopsies. I have performed 20 angioplasties as first operator.

Electrophysiology: I went to St. George's Hospital to gain experience in arrhythmias. I participated in the Complex Arrhythmia clinic, and have performed 100 invasive electrophysiological studies. I have assisted in 20 ablations of accessory pathways and AV nodes.

M.D. THESIS

My thesis was supported by a British Heart Foundation Junior Research Fellowship and awarded in February 1994 and was supervised by Dr M.M. Webb-Peploe. The research was carried out in the Cardiac Department at St Thomas' Hospital.

The thesis was entitled: *'Autonomic Nerve Function in Ischaemic Heart Disease: a study of patients with silent and symptomatic myocardial ischaemia'*

Objective:

The object was to determine whether there is any evidence of autonomic nerve dysfunction in patients with silent myocardial ischaemia. The initial premise was that anginal pain is thought to be conveyed by autonomic afferents (sensory) from the heart. I performed autonomic function tests in patients with exercise and Holter evidence of silent or symptomatic ischaemia to determine whether there was any difference in autonomic function that could account for the lack of symptoms in silent myocardial ischaemia. As there is no known autonomic test to demonstrate sympathetic afferent function, I investigated ways of stimulating cardiac sympathetic afferents using contrast injection in the coronary arteries and elective balloon angioplasty. Metaiodobenzylguanidine (MIBG) is a noradrenaline analogue taken up by sympathetic nerve terminals. I employed MIBG scintigraphy to determine the sympathetic innervation of the heart, and determine whether there is any difference in innervation in silent ischaemia. It is thought that the anterior wall of the left ventricle has a predominantly sympathetic innervation, and the inferior wall a predominantly parasympathetic innervation.

Results:

I showed that patients with mixed silent and symptomatic ischaemia had an increased propensity to vasodilate in response to isometric hand grip. This suggests that reactive vasodilation may limit ischaemia and render it sub-symptomatic. Patients with pure silent ischaemia had evidence of impaired sympathetic activity. Using the angioplasty and MIBG techniques, it would appear that the inferior surface of the heart has a predominantly vagal innervation and the anterior surface a sympathetic innervation. MIBG imaging of the heart in silent and symptomatic determined that the regional sympathetic innervation of the heart was located primarily in the mid-ventricle and apex of the anterior wall of the left ventricle.

CURRENT RESEARCH INTERESTS

The following research projects are in progress:

1. To determine whether exercise induced ischaemia causes myocardial damage
2. The electrocardiographic changes during raised intrabiliary pressure
3. Determination of the value of troponins in acute coronary syndromes

TEACHING EXPERIENCE

Throughout my training I have been involved in and enjoyed medical teaching. I previously organised the SE Thames Region MRCP Cardiology Course, which was voted the most informative course in the region two years running. I have responsibility for both junior and senior medical student firms. I have regular students attached to me specifically for a final year teaching allocation in "CCU medicine". I was responsible for the junior students clinical course for our superfirm of four consultants. I was a London Hospital Medical College personal tutor to a 3rd year firm and a clinical tutor to a final year revision group. In addition I taught junior doctors for MRCP part two.

MEDICAL AUDIT

I audited the implantation and follow up of pacemakers for the SE Thames Region in 1992. I run a continuous audit of the Coronary care Unit. I supervised an audit on patient medication compliance after hospital discharge.

MANAGEMENT

I have attended the University of Keele Senior Registrars Management Course in March 1994. I was directly responsible for the management of the CCU. This involved regular meetings with staff to ensure smooth running of the unit. It also involved meetings with the Computer division of the Hospital to further develop the computer facilities. In June 1994 and 1995 I personally co-ordinated and supervised the MBBS Finals Medicine clinical Examination at the London Hospital at Mile End.

I was a member of the following committees:

- Medical Education Committee: Junior Doctor Hospital Representative,
- Trust Medicines Committee: Junior Representative, regulation of hospital drugs
- London Hospital Club Committee: Junior Representative, student welfare.

PUBLICATIONS

Papers:

1. Shakespeare CF, Page C, O' Doherty M, Nunan T, Cooper IC, Coltart DJ, Webb-Peploe MM. Metaiodobenzylguanidine imaging to determine the regional sympathetic innervation of the heart. *American Heart Journal* 1993. 125:1614-1621
2. Shakespeare CF, Crowther A, Cooper IC, Katritsis D, Coltart DJ, Webb-Peploe MM. Differences in autonomic nerve function in patients with silent and symptomatic myocardial ischaemia. *British Heart Journal* 1994. 71: 22-30
3. Shakespeare CF, Crowther A, Cooper IC, Katritsis D, Coltart DJ, Webb-Peploe MM. The mechanism of autonomic reflexes induced during coronary angiography. *Coronary Artery Disease* 1992. 3:1177-1182
4. Shakespeare CF, Crowther A, Cooper IC, Katritsis D, Coltart DJ, Webb-Peploe MM. Autonomic reflexes stimulated by elective coronary balloon angioplasty: regional differences in afferent population. *Circulation* 1995 (in press)
5. Katritsis D, Shakespeare CF, Byrne C, Watkins H, Coltart DJ, Webb-Peploe MM. Is angiographic ventriculography necessary for the assessment of ischaemic patients? *Clinical Cardiology* 1992. 15:728 -732
6. Shakespeare CF, Kaski J C, Gavrielides S, Mure P, Tousoulis D, Burton P. Clinical significance of prolonged ST segment depression after exercise testing in patients with chronic stable angina. *Circulation* [submitted]
7. Shakespeare CF, Kaski J C, Gavrielides S, Mure P, Tousoulis D, Burton P. Clinical prognosis of patients with prolonged ST segment depression after exercise testing. *Circulation* [submitted]
8. Shakespeare CF, Coltart DJ, Webb-Peploe MM. Cardiac Parasympathetic afferent activity after myocardial infarction 1994: *American Heart Journal* (to be submitted)

Reviews:

1. Shakespeare CF, Coltart DJ. Latest advances in cardiology. *The Postgraduate Medical Journal*. 1992. 68: 327-337.
2. Shakespeare CF, Anderson MA, Camm AJ Pathophysiology of supraventricular tachycardia. *European Heart Journal*. 1993 14:2-8.

3. Shakespeare CF, Keeling PJ, Slade WJ, McKenna WJ. Le myocardiopathie hypertrophique et farthymie. *Arch Mal Coeur et Vaisseaux* 1992; 85:31-36
4. Shakespeare CF, Camm AJ. The benefits of improvements in pacemaker technology. *Clinical Cardiology* 1992. 15: 601-606
5. Shakespeare CF, Keeling PJ, Slade A, McKenna W. Developpements en cardiomyopathie hypertrophie. *Realites Cardiologiques* 1992. 38:12-17
6. Katritsis D, Shakespeare CF, Camm AJ. Adaptive rate pacing: new and combined sensors. *Clinical Cardiology* 1993 16:240-248
7. Shakespeare CF, Slade A, Keeling PJ, McKenna WJ. Risk stratification in hypertrophic cardiomyopathy. *Cardiomyopathy Update* 5 1995 (in press)
8. Shakespeare CF, Coltart DJ. Cardiological complications of travel. *Travel Medicine International*. 1992. 34: 57-60
9. Shakespeare CF, Rowland E. Efficacy of antiarrhythmic drugs. *Drug and Ther Bull.* 1995 (in press)

Abstracts:

1. Bayliss J, Shakespeare CF, Lincoln C, Sutton R. Does invasive cardiology require the presence of cardiac surgery? *British Heart Journal* 1987 57 : 79
2. Shakespeare CF, Crowther A, Cooper IC, Coltart DJ, Webb - Peploe MM. Autonomic function in silent myocardial ischaemia. *British Heart Journal* 1991 66 : 83-84
3. Shakespeare CF, Katritsis D, Byrne C, Watkins H, Coltart DJ, Webb - Peploe MM. Is left ventriculography mandatory in the assessment of patients with ischaemic heart disease? *Eur Heart Journal* 1991 12: 327
4. Shakespeare CF, Crowther A, Cooper IC, Webb-Peploe MM. Autonomic reflexes stimulated by coronary balloon inflation. *Eur Heart Journal* 1991 12: 418
5. Cooper IC, Shakespeare CF, Thompson DS, et al. Six month angiographic follow up in patients undergoing excimer laser coronary angioplasty. *Eur Heart Journal* 1991 12: 393
6. Shakespeare CF, Crowther A, Cooper IC, Webb-Peploe MM. Differences in autonomic function in patients with silent myocardial ischaemia. *Circulation*. 1991 84: 11-100

7. **Shakespeare CF, Crowther A, Cooper IC, Katritsis D, Coltart DJ, Webb-Peploe MM.** Autonomic reflexes initiated by balloon angioplasty. *Circulation* 1991 84: 11-268
8. **Shakespeare CF, Page C, O' Doherty M, Nunan T, Cooper IC, Coltart DJ, Webb-Peploe MM.** Regional differences in autonomic innervation of the heart using metaiodo-benzylguanidine imaging. *British Nuclear Medicine Society Annual Scientific Meeting* 1992
9. **Shakespeare CF, Crowther A, Cooper IC, Coltart DJ, Webb-Peploe MM.** Autonomic reflexes stimulated by elective coronary balloon angioplasty: regional differences in afferent population. *British Heart J* 1992 68: 120
10. **Shakespeare CF, Page C, O' Doherty M, Nunan T, Cooper IC, Coltart DJ, Webb-Peploe MM.** Differences in regional autonomic innervation of the heart using metaiodo-benzylguanidine imaging. *British Heart J* 1992 68: 152
11. **Shakespeare CF, Crowther A, Cooper IC, Katritsis D, Coltart DJ, Webb-Peploe MM.** The mechanism of autonomic reflexes induced by routine angiography. *European Heart Journal* 1992 13: 78
12. **Hossein-Nia M, Brown P, Shakespeare CF, Macrae C, O'Donahue A, Holt DW.** Subclinical myocardial damage revealed by CK-MB2 isoform release in hypertrophic cardiomyopathy. *Circulation* 1992 supp 1 86:1-592
13. **Slade A, Keeling PJ, Shakespeare CF, Counihan PJ, McKenna WJ.** Chronotropic incompetence in hypertrophic cardiomyopathy and its association with impaired exercise capacity. *J Am Coll Cardiol* 1993 21: 353
14. **Lu Fei, Anderson M, Katritsis D, Shakespeare CF, Camm A.J.** evidence of unbalanced autonomic activity by hourly analysis of heart rate variability in sudden cardiac death survivors. *J Am Coll Cardiol.* 1993 21: 92

Case Reports

1. **Shakespeare CF.** Valvular aortic stenosis. *Cardiology in Practice.* Sept 1989
2. **Shakespeare CF.** Pseudoaneurysms. *Cardiology in Practice.* May 1990

MEMBERSHIP OF ORGANISATIONS

British Society of Echocardiography
 British Pacing and Electrophysiology Group
 London Electrophysiology Group

OUTSIDE INTERESTS

Languages: French,
Spanish
Arabic (spoken)

Middle East Affairs

Modern Art

South American culture

REFEREES

Dr. P Mills

Cardiac Department

London Chest Hospital

Bonner Rd,

London E2 9JX

Dr. J.R. Dawson

Cardiac Department

St Bartholemews Hospital

90 Bartholemews Close

London EC1 7BE

Professor R. D. Cohen

The Medical Unit

5 floor Alexandra Wing

Royal London Hospital

Whitechapel

London E1 1BB

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