Cardiology in Cyprus is undergoing significant changes as the country now produces its own cardiologists and faces the challenges of a Western lifestyle. With a population of 767,000, Cyprus has around 115 cardiologists. Of these, 12 (11.3%) are women. The slightly older generation of cardiologists in Cyprus trained abroad in England, the United States, and Greece, then returned as specialists, but for the past 8 to 10 years formal training for cardiologists has existed in Cyprus. The system is not typical of other European countries.

Although there is a university in Cyprus, there is no medical school. Students from Cyprus therefore attend medical school overseas. They can then stay abroad for the examination in cardiology within the host nation, or they can return to Cyprus for cardiology training.

The cardiologists who train in Cyprus are supervised by the Greek university authorities, and the final exams have to be taken in the Greek language at a Greek university. Dr Fessas says that this system is likely to change following the accession of Cyprus into the European Union (EU) in May 2004. “The EU wants to harmonise training for the benefit of trainees and patients,” he said. The European Diploma of Cardiology means doctors are accepted as European cardiologists through their national credentials. This system was introduced in 2001 and represents an equalising of qualifications and a common denominator in training.

Dr Fessas says the process was difficult, but he remembers a meeting in Paris when he was putting the application forward. He recalled, “I met with the president of the Turkish Society of Cardiology, and he was very supportive.” He feels this represented a dilution of the bitter taste left after the Turkish invasion in 1974.

“Thy unify the training in one particular nation.” He added, “The isolation here is not geographical, but due to communication difficulties and the absence of a medical school.”

But the gap created by the lack of a medical school is being filled by the intense activity of the Cyprus Society of Cardiology and other societies whose members attend international conferences and stay connected to the scientific world through electronic means. “We are very active in the scientific forum, so we do not feel the geographical isolation and the lack of a medical school. This is one of the benefits of being in the European Union,” said Dr Fessas. “I am very positive about being a member of the EU. Its entire body of laws, the acquis communautaire, is of great benefit to anyone who joins. Politicians everywhere are the same — they talk a lot, but do a little,” continued Dr Fessas. “But everyone recognises the benefits of being part of the EU. Now we are not threatened by other countries.”

Cardiology in Cyprus has made great strides since Dr Fessas helped found the Cyprus Society of Cardiology in 1977, when there were just 10 cardiologists in the country. “This was a significant landmark for the development of cardiology in Cyprus,” he said. The next big event was in 1980, when the society joined the European Society of Cardiology, and about 20 Cypriot cardiologists are now fellows.

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Despite attempts at conformity, medical qualifications and the way they are achieved differ across Europe, both with regard to basic degrees and in specialist areas. In this occasional series, Circulation: European Perspectives in Cardiology hopes to offer some clarification. In the experience of Stephen Holmberg, MB, BChir, MD, FRCP, secretary of the British Cardiovascular Society, programme director for cardiology training in the Southeast Thames Region, UK, and consultant cardiologist at the Royal Sussex County Hospital, Brighton, United Kingdom, even the most eminent European cardiologists have been known to confuse qualifications earned by arduous study with those that are honorary.

Some British universities, including Oxford and Cambridge, award a nonmedical first degree to all medical students after 3 years of study, but most only do so if students spend an extra year studying for what is called an intercalated degree. First degrees are styled Bachelor of Arts (BA) or Bachelor of Science (BSc).
The first medical degree is awarded after 5 years of study, or 6 years if a first degree has been gained en route. It formally has 2 parts, namely Bachelor of Medicine (BM or MB) and Bachelor of Surgery (BS, or BChir, BCh, or ChB, from the Latin chirurgia), but they have no separate meaning and are both awarded at the same time. This arrangement is a relic of the time when separate degrees were awarded by the colleges of physicians and surgeons.

Some qualified doctors opt for a research degree by study and thesis, either a PhD (DPhil at Oxford) or an MD (also called DM). Dr Holmberg commented, “In the UK, an MD is equivalent to a PhD but may be awarded after only 2 years, rather than the 3 years required for the PhD. An MD can also be obtained by submitting published papers, but this is rarely done. Some people prefer to do a PhD rather than an MD, but in the long run it’s the quality of the work that matters. In preference, the UK’s Medical Research Council would wish to fund a PhD.”

All cardiologists will have obtained, by written and practical examination, Membership of the Royal College of Physicians, designated MRCP (UK), from one of the 3 royal colleges in the United Kingdom. These are in London, Edinburgh, and Glasgow. This higher degree, often simply referred to as “membership,” is usually obtained during the first 2 years as a senior house officer, explained Dr Holmberg. Trainee cardiothoracic surgeons proceed by a similar route via membership (MRCs) of one of the Royal Colleges of Surgeons.

The description “Royal” indicates the formal endorsement of the college by royal charter from the monarch, who is the head of state. There is also an entirely independent Royal College of Physicians of Ireland, and a Royal College of Surgeons of Ireland, based in Dublin, the Republic of Ireland. They date back to before 1922, when Ireland gained its independence. The Irish colleges award memberships, MRCP(I), and MRCs(I), in a similar way.

A key credential for UK cardiologists is the National Training Number (NTN), given by the regional deanery (the organisation that oversees postgraduate training in a given area) at the start of specialist training, following a competitive selection process. Dr Holmberg commented, “A training number in cardiology is highly competitive, and successful applicants will usually have a first degree, the MRCP, and sometimes even an MD or PhD before they are awarded their NTN.”

After at least 6 years of successful specialist training, physicians and surgeons receive a Certificate of Completion of Training (formerly called the Certificate of Completion of Specialist Training) from the Postgraduate Medical Education and Training Board (PMETB). This certificate is issued on the basis of a satisfactory record of training assessed annually (often inappropriately called a logbook). The PMETB is also the statutory body that approves non-British doctors to practise as specialists. The recent so-called Article 14 legislation (part of the new legislation that allows doctors who have not completed a UK specialist training programme to apply for a statement of eligibility for the General Medical Council's Specialist Register) takes into account doctors’ knowledge and experience, wherever gained, and is intended to make it easier for European doctors to gain accreditation in the United Kingdom. Further details are available on the PMETB Website, www.pmetb.org.uk.

The Fellowship of the Royal College of Physicians (FRCP) is an honorary award, (though this may change), usually given to consultants between 3 and 5 years after their appointment, following nomination by a local representative of the RCP.

Steven Hunter, FRCS, FRCS(CTh), cardiothoracic dean of the Society for Cardiothoracic Surgery in Great Britain and Ireland, and consultant surgeon at the James Cook Hospital, Middlesbrough, United Kingdom, explained that in contrast, Fellowship of the Royal College of Surgeons (FRCS) is gained by a rigorous written examination, clinical tests, and interview (viva voce). The FRCS awarded to modern trainees represents a much higher level of training than it did previously, according to Dr Hunter (who in the United Kingdom would normally be referred to as Mr Hunter—see the following paragraph). “Until relatively recently, the FRCS was equivalent to the modern MRCs in general surgery, and a second fellowship was gained in a specialty, such as the FRCS(CTh) for cardiothoracic surgeons. Now the FRCS indicates completion of specialist training.”

That Dr Hunter would be called Mr Hunter in the United Kingdom is a quirk of British medical etiquette, in that surgeons are addressed as Mr, Miss, Ms, or Mrs. This is a relic of an era when, unlike physicians, they did not gain a degree from a university, but were instead apprenticed to barber surgeons. Dr Hunter commented, “It’s historical inverted snobbery, from a time when it was regarded as ungodlike to soil one’s hands (see Figure), and surgeons were subsequently refused membership of the RCP.” Consequently, as a group, surgeons became so proud of being distinguished from physicians that the title of Mr became a badge of honour, a tradition that is still retained today.

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History of Cardiology: Sir Thomas Brunton, MD

Sir Thomas Brunton was one of the first physicians to describe and effectively treat angina pectoris. Diana Berry describes his life and his most important discovery.

Thomas Lauder Brunton (later Sir Thomas) was born in Roxburghshire, Scotland, in 1844, and was privately educated before commencing his medical studies in 1862 at the University of Edinburgh, Scotland. He graduated MB in 1866, having received many honours as an undergraduate. The following year he worked as a house physician at Edinburgh Royal Infirmary under John Hughes Bennett, MD, the physician who first described leukaemia. During this time, Dr Brunton investigated the effects of digitals on blood pressure in animals, which he recorded with a mercury column. He also undertook self-experimentation in which he used a sphygmograph to record the results that were presented in his 1868 thesis Digitalis with Some Observations on the Urine, for which he was awarded his MD with a gold medal. It was Dr Brunton’s practised and skilful use of the sphygmograph that led him to discover the elevation of blood pressure that occurs in cases of angina pectoris.

In addition to his research in Edinburgh, Dr Brunton also spent time studying at some of the leading European medical centres. He studied pharmacology in Berlin and Vienna, and physiological chemistry with Willy Kühne, MD, professor of physiology at the University of Amsterdam. Dr Brunton then moved on to Leipzig, where he worked in the laboratory of the renowned professor of physiology, Carl Ludwig, MD. This experience provided the main inspiration for his future work in medicine and science, and its importance in Dr Brunton’s life is evident in his opinion that “more than to anyone else since the time of Harvey do we owe our present knowledge of the circulation to Carl Ludwig.” Dr Brunton’s work in Dr Ludwig’s laboratory included studying the independent contraction of arterioles and capillaries, and experiments on the effects of amyl nitrite and sodium nitrite.

In 1870, on his return to Britain, Dr Brunton pursued his desire to achieve a teaching post in a famous medical school, and the following year he became joint lecturer in materia medica and therapeutics at St Bartholomew’s Hospital, London. Believing that his role demanded more than the successful delivery of lectures, and in line with the spread of pharmacological laboratories in Germany, Dr Brunton “secured as his first laboratory, the only space available, a hospital scullery measuring 12ft by 6ft.” He was an innovative lecturer who used physiology as the foundation for his teaching, and derived results from experiments upon himself, willing pupils, and animals.

It was in 1867 as a newly qualified house surgeon at Edinburgh Royal Infirmary that Dr Brunton first encountered the crippling pain associated with angina pectoris. He said, “Few things [are] more distressing to a physician than to stand beside a suffering patient who is anxiously looking to him for that relief from pain which he feels himself utterly unable to afford.” While attempting to treat a particular patient experiencing severe pain, Dr Brunton discovered that he could relieve the symptoms by bloodletting, using cupping or venesection, and he realised that it was the lowering of arterial blood pressure that was beneficial.

Such procedures were inconvenient for regular use, and Dr Brunton had witnessed the successful lowering of blood pressure achieved by his friend Arthur Gamgee, MD, professor of physiology and comparative anatomy at The Royal Institution of Great Britain, London, when administering the vapours of amyl nitrite in one of his animal experiments. So Dr Brunton decided to try out the procedure on a patient. He “impregnated a cloth with amyl nitrite for his patient to inhale and observed that within seconds the agonising chest pain had diminished.”

After further successful trials with other patients, Dr Brunton reported his results in The Lancet in a paper entitled, “On the Use of Nitrite of Amyl in Angina Pectoris.” He divided the “paroxysmal neurosis” of angina pectoris into 2 classes. “In the first and most typical there is severe pain in the precordial region, often shooting up the neck and down the arms, accompanied by dyspnoea and a most distressing sense of impending dissolution.” He found that the attack usually lasted for only a few minutes and that both its onset and departure were sudden. The second and more important class tended to have a more gradual onset and departure, but had symptoms of equal intensity that would last from a few minutes to more than an hour. He considered that, with the tendency of such patients to become plethoric, thus requiring greater relaxation of the vessels to lower tension, it was necessary to continue bloodletting of an ounce or two every few weeks.

Dr Brunton’s contributions to medical literature were numerous, and many of these were of a pharmaceutical nature. His most important work was his Textbook of Pharmacology, Therapeutics and Materia Medica published in 1885. He was honoured with a knighthood in 1900. Dr Brunton’s lifetime ambition was “to leave therapeutics if possible as a science instead of merely an art as he found it,” and his abiding place in the history of medicine must, in some part, bear testimony to the fulfilment of his wish.

Diana Berry is a medical historian and freelance writer.

References