

Perspectives on cardiology in Northern Ireland

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Pioneering mobile coronary care

The very first medically manned mobile coronary care unit was established in Belfast in 1966 by the late Professor Frank Pantridge. Thereafter, he introduced the first defibrillator to be used outside hospitals. Interestingly, this defibrillator was powered by two large car batteries attached to electrodes. Subsequent to this, he was instrumental in the development of the modern, portable defibrillators, which are used extensively worldwide by healthcare professionals, and are also to be found in many public places such as airports, aircrafts and shopping centres.

This development revolutionised the management of acute myocardial infarction (MI), as the mobile coronary care unit was now able to attend to patients in their homes. This service had an immediate impact on mortality and morbidity, as it had been documented that a majority of deaths in acute MI occurred as a result of fatal ventricular arrhythmias prior to the arrival of medical care. The provision of this service rectified this life-threatening problem.

Today, there are mobile coronary care units serving the entire population of Northern Ireland; anyone who gets chest pain can contact the mobile unit in their area. Just taking Enniskillen as an example, from onset of chest pain, door to needle time to thrombolysis is less than 60 minutes and the Erne Hospital is the only hospital in a 30-mile radius in a rural area fulfilling the internationally recognised guidelines with regards to the administration of thrombolytics.

The Erne Hospital was the very first unit in Europe to administer thrombolytics in the home as early as 20 years ago. At that time, thrombolysis was not being administered by the majority of hospitals in Ireland. The first hospital to use thrombolysis for the management of acute MI in Ireland was the Belfast City Hospital; the Erne Hospital subsequently followed suit in 1984 and, thereafter, in 1986, we were the first hospital in Europe to administer thrombolytics in the home. In 2002, the Erne Hospital was the first unit in the British Isles to use nurse manned mobile coronary care units and to administer thrombolytics to acute MI patients in the home.

Notable cardiologists

The most distinguished and world-renowned cardiologist that Northern Ireland has produced was the late Professor Frank Pantridge. He revolutionised the management of acute MI via the use of mobile coronary care units and portable defibrillators.

Professor Jennifer Adgey has continued the work of Professor Pantridge and is a recognised international authority on acute coronary care. She has received many academic awards from prestigious institutions around the world.

Dr M Khan has developed and patented a new percutaneous coronary intervention (PCI) catheter, which is in extensive use today.

In the area of cardiac epidemiology, Professor Alun Evans has pioneered the work of the MONICA Project, which is an international project on the prevention of heart disease.

I pioneered the use of thrombolysis in the home and its use by coronary care nurses. In 1984, before lipids were fashionable, we established one of the first public screening programmes in Northern Ireland to measure the risk factor profile of patients who came to our mobile screening unit on market days. This programme was carried out in a bus that had been converted into a clinical area, which was called the Fermanagh Heart Bus. This project was sponsored by Northern Ireland Chest Heart and Stroke, which is a sister organisation of the Irish Heart Foundation. We ran this project for 10 years, where we screened and treated people with high cholesterol and high blood pressure.

Links with the Republic and Britain

The Irish Cardiac Society has an all Ireland membership and its President alternates between Northern Ireland and the Republic, with the annual general meeting also taking place on both sides of the border. For the past 22 years, I have been organising an annual all-Ireland cardiology symposium in Enniskillen, with national and international speakers. This is a satellite meeting of the Irish Cardiac Society and is only second to the annual general meeting of the Irish Cardiac Society with regards to academic content.

The Irish Cardiac Society has endorsed the various guidelines laid down by the European Society of Cardiology for the management of various cardiac conditions. As Northern Ireland cardiologists are part of the Irish Cardiac Society, these guidelines are also used in Northern Ireland.

The British Cardiovascular Society is currently looking at primary PCI for the management of acute MI rather than thrombolysis and we are currently investigating this. Northern Ireland funding comes from the NHS in Britain and, therefore, in Northern Ireland, we have to look at the recommendations for this service that are going to be made by the NHS and the British Cardiovascular Society.

Co-operation

My feeling is that Ireland is small enough for co-operation amongst cardiologists right across the island of Ireland to provide a PCI service. For example, someone in Inishowen is closer to Belfast than they are to Galway, so if we had an all-Ireland helicopter service, which disregarded the border, but which took the primacy of patient care as its objective, a person who got an MI on the Inishowen peninsula could be taken to

his nearest PCI centre, which is Belfast, rather than to Galway or all the way to Dublin. We are all part of the European Union, so even though our healthcare systems are different, I see no reason why this shouldn't be the ultimate goal. If a patient has a major cardiac problem, he/she should be dealt with at the nearest point where that service can be provided, be it north or south of the border.

Future developments

Primary PCI will be one of the major developments in Ireland in the future. It has been shown that this is the best treatment for acute MI. We are a small country and it's not beyond the realms of capability to have some form of helicopter service strategically placed in two or three sites in Ireland to take people to a centre where they can be treated.

There is also a lot of work being done at the moment on ablation for atrial fibrillation, both in Dublin and in Belfast. The importance and success of implantable defibrillators is being more and more recognised and these are now being implanted across Ireland in greater numbers. Gene therapy is also now coming to the fore and this may be the future direction that cardiology will take.