What's new in cardiovascular disease: report from the PCCS Annual Meeting and AGM

'New' was the operative word at this year's Primary Care Cardiovascular Society annual meeting, held in Dublin from 3rd–4th October 2003. Delegates heard about the 'new' GP contract, the 'new' science of pharmacogenetics, the 'new' breed of healthcare professionals (with special interests) and a 'new' diploma in cardiovascular disease. Medical writer Dr Ola Soyinka reports.

Introduction

The PCCS moved out of the UK and into Europe for the first time for its 2003 annual meeting. It felt very European as the Dublin weather was warm and sunny and we were spending the Euro. Although the UK remains apart from the rest of Europe in monetary terms, the progress report from the National Director for Heart Disease, Roger Boyle, suggests that, on the cardiovascular front, England is moving rapidly towards convergence, thanks to the work done implementing the National Service Framework for Coronary Heart Disease.

Attentive delegates at the Dublin PCCS meeting

An overview of the ESC

Apart from the currency, the European influence was also evident with plenty of cardiovascular news from the 2003 European Society of Cardiology (ESC) meeting, held in Vienna, Austria, this September. Even the trials had gone continental – EUROPA (European Trial on Reduction of Cardiac Events with Perindopril in Stable Coronary Artery Disease) being the most obvious. Dr John Pittard, a Staines general practitioner and PCCS board member, gave delegates an overview of this study and CHARM (Candesartan in Heart failure: Assessment of Reduction in Mortality and morbidity), the two major trials which announced results at the ESC meeting.

The EUROPA trial, he explained, examined the benefits of ACE inhibition in patients with established coronary artery disease but no evidence of cardiac failure. Patients remained on their usual care such as aspirin, beta blockers and statins. The trial, run over five years, provided conclusive evidence that perindopril can benefit these lower-risk patients, showing a 20% relative risk reduction in the combined end point of cardiovascular death, myocardial infarction and resuscitated cardiac arrest. The average 5/2 mmHg reduction in blood pressure (BP) achieved in the trial does not explain all the benefit seen. "BP is part of the story but not the whole story," he said.

Moving on to the CHARM study in heart failure, Dr Pittard explained that this was a three-armed study, which investigated the use of the angiotensin receptor blocker (ARB) candesartan in different populations.

The CHARM-Alternative arm studied patients with established heart failure who could not tolerate angiotensin-converting enzyme (ACE) inhibitors. "The study really gave an idea of what an ARB would do in the non-ACE environment," Dr Pittard said. The drug dosage was quite high, with a mean dose of 18 mg. The primary outcome measure was cardiovascular death or hospitalisation for chronic heart failure and the results showed a 7% total risk reduction for patients on candesartan. The study shows "unequivocally", he said, "that candesartan is a good drug to use in ACE-intolerant heart failure patients".

In CHARM-Added, patients continued with existing ACE inhibitor treatment. "If you are blocking the renin-angiotensin system with an ACE inhibitor, the idea behind adding an ARB is that you might be able to show some benefit from blocking the bits that are

'Perindopril can benefit lower-risk patients'

John Pittard

left", Dr Pittard explained. Although small, the trial demonstrated a risk reduction of 15% – a significant benefit in reducing deaths or hospitalisation.

The third arm, CHARM-Preserved, which enrolled patients with symptoms of heart failure but who had preserved left ventricular function, showed only a small, non-significant, trend towards benefit. Overall, taking the three arms together, the trial showed a 9% reduction in all-cause deaths, a 12% reduction in cardiovascular deaths and a 21% reduction in CHF hospitalisations.

Pharmacogenetics

"If it were not for the great variability between individuals, medicine might as well be a science and not an art," said the great physician Sir William Osler many years ago. Pharmacogenetics, however, may yet turn medicine into a science, as, according to Dr Clive Weston, a Consultant Cardiologist at Singleton Hospital, Swansea, it aims to explain variability and "predict the effects of drugs based on genetics".

Dr Weston's talk was one of the highlights of the meeting and he reminded the audience that "the only difference between a drug and a poison is the dose". Our best efforts to avoid 'poisoning' patients are often characterised by trial and error, he said. Errors can be costly, as the Audit Commission has shown. Their report entitled *A spoonful of sugar* suggests that approximately £500 million was spent coping with the increasing number of adverse events from drugs in 2002.

Besides the common causes for variations in our response to drugs that are due to compliance or disease severity, differences in our genetic makeup can also play a crucial role. "The central dogma on which pharmacogenomics is founded is that a patient's response to any pharmaceutical is influenced by variations in proteins encoded by the genome," Dr Weston said. He explained the difference between pharmacogenetics and pharmacogenomics: the former is concerned with single gene effects whereas the latter focuses on the influences of multiple loci.

Variations can result from deletions (missing base pairs in the DNA), duplications and single nucleotide polymorphisms (SNP). "Most genetic variations are attributable to SNPs," he said. "If an SNP results in a significant change to the final protein, then it could affect its function."

Polymorphism can manifest in various ways, Dr Weston told the audience. For example: "the polymorphism of genes that code for receptors might affect the ability of drugs to work on those receptors". Variations of the bradykinin 2 receptor (BR2) receptor, for example, are associated with a significant increase in ACE inhibitor-induced cough. Polymorphism can also have pharmacokinetic influences with genes affecting drug metabolism, which can, for example, lead to extended pharmacological effects. The biggest family of enzymes involved in drug metabolism is the cytochrome family, in which many variations have been identified. For example, variations in CYP2C9 will affect the metabolism of over 60 different drugs, including the metabolism of warfarin.

Dr Weston suggested that pharmacogenetics could, in future, lead to detailed genetic profiling which could

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allow the selection of appropriate drug therapies. The benefits, according to Dr Weston, would include a reduction in drug adverse effects and less polypharmacy. There would also be the possibility of the restoration of drugs that have had to be withdrawn because of rare but serious adverse events.

Despite the potential for a pharmacological utopia of bespoke therapy for everyone, Dr Weston highlighted some problems. Multiple variations can interact in a complex and less predictable manner. There are profound ethical issues surrounding who and what should be known of our genetic profile. No economic assessment yet exists but it might always be cheaper to throw a single drug at 10,000 people rather than test each of them before choosing the treatment.

Dr Weston suggested that pharmacogenetics is so complicated that, despite its promises, it may deliver very little. He noted, however, the example of herceptin in breast cancer, in which a genetic marker is already used to guide treatment. Meanwhile Roche Diagnostics in the US have come up with a simple diagnostic 'array chip', which can run a test for cytochrome P450 varia-

tions on a drop of blood. Genetic profiling is nearly at the bedside.

GPs with a special interest

It was the experience of sitting in an overbooked ENT clinic late one evening, seeing many patients he felt could have been handled in primary care, that persuaded Professor Ram Dillon, a Consultant Surgeon at Northwick Park Hospital, Harrow, to become involved in training programmes for GPs.

He explained how general practitioners with special interests (GPSIs) can actually introduce more capacity to the system. Patient management involves too many internal loops with the patient shuttling between primary and secondary care while the health service tries to get to the correct diagnosis and begin optimum treatment. Some patients may see the GP up to six times and still not have a correct diagnosis. Then they get referred to secondary care where again they may return repeatedly, he said. This produces an artificially huge demand. "If we get to the correct diagnosis more quickly, we can increase capacity and reduce demand," he explained.

> ***'Developing GPs and nurses with special interests is a win-win situation'***
>
> Ram Dillon

What the system needs is an individual situated in what he called the "no mans land" between primary and secondary care – the "locus of perceived demand". This is the area where he feels the knowledge and skills to manage what can be managed in primary care is often missing. This intermediate tier of care can be provided by a new healthcare professional with the requisite knowledge and skills.

It is only through training and education that diagnostic and treatment abilities can be improved. Professor Dillon explained the need to graft clinical skills on top of knowledge. He described a model developed by his department, initially developed for training GPs in ENT, by imparting knowledge through directed learning. "Clinical skills are best obtained by working closely with someone who uses the skills all the time." So the GP engages in regular clinical activity with a local clinical specialist.

The concept, Professor Dillon explained, is not limited to GPs. "Many health professionals are being asked to take on new tasks for which they feel they do not have the requisite skills," he said. "There is a huge benefit in developing special interests if we are going to deliver the sort of healthcare that you and I want and the patients need."

Professor Dillon anticipated the introduction of special interests would bring major benefits in integration, retention and recruitment to the NHS. He showed statistics from an ENT service, run by a GPSI, which showed great reductions in out-patient waiting times and ENT referrals, and an increase in patient satisfaction.

Concluding, he recommended that, ultimately, all 35,000 GPs and practice nurses should have at least one special interest. "Developing GPs and nurses with special interests is a win-win situation," he said.

Launch of the PCCS Training Programme

Anyone inspired by Professor Dillon's talk will have been heartened by the news from Ms Jan Procter-King, a CHD tutor and a CHD lead for a Primary Care Trust (PCT) in Leeds. She announced the launch of a new training programme in cardiology – a post-graduate diploma course. It was developed as a result of collaboration between the University of Bradford, Bradford City Teaching Primary Care Trust, Bradford North PCT, the Coronary Heart Disease Collaborative and the PCCS. The Royal College of General Practitioners has credited the course.

The course comprises one core module and three clinical modules (hypertension and arrhythmias; ischaemic heart disease; and heart failure and valvular disease.) The three modules can be taken sequentially over the course of a year or studied as stand-alone modules.

> ***'Introducing the new PCCS training programme in cardiology'***
>
> Jan Procter-King

Each clinical module begins with a teaching day and ends after 14 weeks with an assessment day. In between, the practitioner will pursue work-based learning, on placement, for half a day per week. Each clinical module takes four months to complete. The special interest core module provides an evidence-based understanding of the models of working as a primary care practitioner with a special interest. Anyone wishing to enrol will need to provide evidence of support from their local PCT. In addition they must be a registered practitioner and be able to provide evidence of support from an NHS consultant who will offer the mentor supervision.

NHS modernisation progress

Dr Roger Boyle, the National Director for Heart Disease, was given the breakfast slot on the second day of the PCCS meeting. Delegates who made it down for the generously late 9am start would have heard some good news. "The NHS is getting better!" he told them. So far £950 million has been spent and Dr Boyle is optimistic about hitting the government National Service Framework (NSF) targets, well before the 10-year deadline. "Deaths from circulatory diseases are set to be reduced by 40%,

three years ahead of target," he said. He outlined the progress that had been made in many different areas and writes with fuller details of these achievements on pages 412–13 in this issue.

The Coronary Heart Disease Collaborative, an NHS Modernisation Agency programme, was initiated in the year 2000, to accelerate and bring forward the aims of the NSF. Dr Mark Dancy, a Consultant Cardiologist at Central Middlesex and St Mary's Hospitals in London, has been the National Clinical Chair of the Coronary Heart Disease Collaborative, since its inception. There are now 30 programmes in total, each corresponding with the strategic health authorities (SHAs) and Dr Dancy outlined some of the improvements that have had a significant impact to delegates. Examples

'The NHS is getting better'

Roger Boyle

of some of these are found on pages 446–9 in this issue. The Collaborative will continue to function until the year 2006, when its local work will be taken over by SHA modernisation leads, he said.

The new GP contract

Another new NHS development – the new GP contract – was summarised for PCCS members by Dr Stewart Findlay, a general practitioner in Richmond, County Durham, and PCCS Treasurer. The contract, he said, is "completely different from what has gone before". Outlining the key benefits, he said it offers practices total flexibility, and the option to say no to parts of the contract. He described the government's planned investment in primary care over the next few years as "huge", rising from the current £6.1 billion to £8 billion in 2005/6.

Money will be paid to practices as a 'Global Sum', staff will be paid out of the sum and the practice will take what profit it can out of what remains. The new contract will be between the Primary Care Organisation (PCO) and the practice, not the individual GP. The contract makes it clear what GPs are being paid for and what is extra.

GPs have to provide the essential services, defined as "looking after people who are ill, or think they are ill, and terminally ill patients". There are additional services that GPs will be expected to provide but can opt out of, either temporarily or permanently, such as cervical smears, vaccination and immunisations. Then, income can be increased by the provision of a range of services, termed 'enhanced services', which can include anticoagulation monitoring, for example, or looking after violent patients. PCOs will also have the option to provide General Medical Services themselves. If practices are failing to deliver, the PCO can take on the work or contract it to another practice, to ensure that it meets its targets.

Dr Findlay said that a key feature of the new contract is that GPs will be able to opt out of out-of-hours commitments entirely. Describing this as "potentially a problem for PCOs", he explained that out-of-hours cover will be sourced from a variety of places, such as NHS Direct, deputising services and NHS trusts.

Dr Findlay moved on to discuss the calculations that determine the global sum, calling them "quite complicated". It will be worked out by looking at the actual list size and adjusting for factors, such as age, sex, and rurality, according to a formula. This will give a notional population upon which income will be based.

The new contract also has specific rewards for quality introduced via a 'quality and outcomes framework'. High achievement against quality standards is encouraged by financial incentives. "An additional £1.3 billion is being provided across the UK for quality indicators and this money will be additional to the global sum," Dr Findlay said. The quality framework contains four domains: clinical, organisational, additional services and patient experience. Each domain contains a range of areas. Examples of these areas are coronary heart disease or

'The new GP contract is completely different to what has gone before'

Stewart Findlay

asthma (in the clinical domain); indicators in these areas include whether there is a CHD register in place, or a register of asthmatic patients, for example. Performance in each area will be measured by a variety of different indicators.

There is a substantial amount of money on offer in the new contract. A maximum of 1,050 points can be gained by GPs, each worth £75; the value for each point will rise to £120 per point per annum by 2005/6. Payments are of three types. Firstly preparation and aspiration payments will form part of the money paid in advance to help GPs prepare for the framework and to gradually expand their services. Achievement payments will be awarded for achieving quality indicator points. Every practice will be free to choose which areas of the quality framework to focus on. To ensure that GPs do not just cherry pick the most lucrative options, holistic care payments are also available to encourage breadth of service.

"So where do GPs stand now?" Dr Findlay asked. "Can we deliver the quality indicators in the new contract?" The results of a recent survey of GP computer records suggests that even in a high priority area, such as coronary heart disease, cholesterol management

is still following the rule of halves. In this case, performance against the clinical indicators would be quite low. "It is all going to be much more difficult than people might think," Dr Findlay warned.

The priority for practices now, according to Dr Findlay, is to complete the transition to paperless records and to 'clean up' data. Any practice which has not gone some way towards completing this process will be "in real trouble", he heeded, adding that careful workforce planning will also be essential to provide whatever quality services each practice chooses to deliver.

There should be little extra paperwork, to produce the statistics, according to Dr Findlay. An annual report will be produced on computer with provided software and there will be an annual visit from the PCO. "Hopefully the only time you will see the PCO will be at the end of the year when they come to give you money!" he said.

Satellite symposia and workshops

The sponsored symposia provided an extra dimension to the meeting, especially with invited personalities such as BBC Radio 4's James Naughtie, who moderated a 'moral maze' discussion on coronary heart disease management. This included Esther Rantzen who came to the meeting to represent the often confused hypercholesterolaemic patient. Jan Procter-King represented the nurses perspective, Roger Boyle the NHS/Government, and Simon Fradd and George O'Neill provided contrasting general practitioners' perspectives. Another symposium looked at the cost of best antiplatelet therapy.

A light-hearted debate looking at whether GPs were needed to reduce cardiovascular disease risk also provided respite from the more serious side of cardiovascular medicine. Dr Mark Davis, a general practitioner in Leeds and PCCS Honorary Secretary, was up against Jan Procter-King, representing the nursing profession. After a well argued debate, PCCS Chairman Professor Richard Hobbs diplomatically summed up the proceedings: "We need GPs," he said, "but we are not yet making the best use of a very good nursing resource." Although Dr Davis won the vote, Ms Procter-King won the swing, with many delegates changing to vote against the motion once they had heard the debate.

Away from the main meeting, the workshops provided valuable insights into such topics as risk management – how to reduce medical errors by avoiding a blame culture and analysing how mistakes arise. An exciting virtual learning environment was demonstrated in another workshop. Called the Cardioprogramme, it demonstrated the potential of interactive media to add value to the learning process and promote uniformity in medical management. Two further workshops looked at sex and the heart, and managing heart failure in the community.

Having gone as far afield as Dublin for their cardiovascular update, many delegates felt that a spot of retail therapy was justified to round off the trip. So it was out with the Euros and off to the shops before heading home to the complexities of calculating payments under the new GP contract – in Pounds Sterling.