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MISCELLANEOUS

The European Association of Echocardiography — and the future of European echocardiography

Alan G. Fraser [a,*], **Petros Nihoyannopoulos** [b]

[a] *President, European Association of Echocardiography, European Society of Cardiology*
[b] *President-Elect, European Association of Echocardiography, European Society of Cardiology*

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The European Association of Echocardiography is now three years old. In our short life we have taken great strides, but many challenges and opportunities remain. This is a good time to take stock of our achievements and reflect on priorities for the next stages of our development — hopefully from sturdy toddler to vigorous youth!

Euroecho

The decision to establish a major annual conference was the crucial step in our development from the Working Group on Echocardiography of the ESC, ultimately into the EAE, and the Euroecho meeting remains the jewel in our crown. In Florence last December we had a record attendance of almost 2900 participants from 82 countries, including a record number from industry. More abstracts than ever before were submitted (about 1100) and so the standard for acceptance was raised while the absolute number of presentations also increased. All these figures are gratifying since they explain the increasingly strong financial position of the EAE, which allows us to support new initiatives. A more interesting question than numbers, however, is why the conferences have been so successful.

Euroecho has developed an important formula for the composition and balance of the scientific sessions. The strong research base and long history of development of cardiovascular ultrasound in Europe mean that we can organise excellent sessions on recent advances and research, while the wide reach of the European Society of Cardiology allows us to call on many colleagues to contribute to a very high standard of main sessions on the clinical applications of diagnostic imaging. At Euroecho we have never considered diagnosis to be an end in itself; instead we have always emphasised the clinical context and impact of high-quality diagnosis. To achieve this, many speakers have been invited to discuss basic mechanisms of disease, cardiac anatomy or physiology or pathology, and advances in medical and surgical treatment. Thus Euroecho is as much about pathophysiology and clinical cardiology as it is about diagnostic research and recent advances.

The main focus of Euroecho is echocardiography, of course, but from a clinical perspective it does not make sense to use a particular diagnostic test unless it is the best test to answer the particular question at issue. At Euroecho we have deliberately involved colleagues with expertise in other imaging methods, so that the relative advantages

* Corresponding author. Tel.: +44 29 2074 3489; fax: +44 29 2074 3500.
E-mail address: fraserag@cardiff.ac.uk (A.G. Fraser).

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and pitfalls of different tests are compared. This multimodality approach will continue, with talks on alternative tests fully integrated into the programme. We will also continue to hold many sessions jointly with the other subspecialist Associations and Working Groups in the European Society of Cardiology, and with echocardiographic associations from around the world.

For Euroecho 10 in December this year we will return to Prague where we held our first meeting in 1997. Although the meeting is already well established on the international calendar, we hope for a special attendance this year so that many cardiologists and engineers and sonographers can join in our special celebrations. New features will include a congenital heart disease track throughout the conference, and sessions devoted to basic and technical advances in ultrasound engineering which will involve physicists and engineers from universities and industry.

Future of cardiovascular imaging

An important spin-off from Euroecho has been the opportunity to develop collaborations with the other imaging Working Groups in the ESC. With the European Association of Nuclear Medicine and the Association for European Paediatric Cardiology, we have produced a general policy statement on the future of cardiovascular imaging and non-invasive diagnosis. This sets out common goals for developing diagnostic services in large cardiac departments, jointly with cardiac radiologists, and for training the next generation of non-invasive cardiologists who should have experience in several imaging modalities. Some recommendations may not be applicable to smaller hospitals but the principle of applying the most accurate test that is supported by the best clinical evidence, is relevant everywhere.

Echocardiography will remain the workhorse of diagnosis in cardiology for the foreseeable future, because it is uniquely informative about cardiac structure and function, and also accessible, cost-effective, and harmless. It may be simple to apply but it is not simple to perform — high levels of expertise are required in order to use and interpret echocardiography to its maximal potential. As cardiac ultrasound becomes more commonplace, with the development and widespread adoption of hand-held machines, then it will be an important task to ensure that operators are appropriately educated and able to diagnose accurately and safely. The perception by non-imaging specialists that in the not-too-distant future, optimal diagnosis will be by tomographic imaging, is not realistic; our joint statement clearly sets out that new imaging modalities should be used only when they are better or more cost-effective than existing alternatives.

Through accurate and efficient diagnosis, echocardiography can contribute enormously to the appropriate management of patients with cardiac disease, but for this to make a difference, then it needs to be fully integrated within the clinical process and decision-making. All cardiologists and cardiac surgeons need to understand what it can and cannot do, just as they would use a stethoscope or interpret an electrocardiogram. It is very difficult to predict how technological advances may transform echocardiography, but these should include more automated measurements and intelligent reporting systems. Within Europe, we need to ensure that diagnostic imaging attracts its share of the best young cardiologists, and that as echocardiography matures it continues to be practised to the highest standards. Much research and development is still required.

Education and accreditation

Within European cardiology the EAE has pioneered the development of sub-specialist accreditation. We offer a system for personal accreditation based on assessment of theoretical knowledge, reporting skills, and clinical experience, and from this year will have established all three main programmes, in adult transthoracic echocardiography, in transesophageal echocardiography (with the European Association of Cardiothoracic Anaesthesiologists), and in echocardiography in congenital heart disease (with the European Association for Paediatric Cardiology). The challenge now is to continue to promote the examinations, maintain the early high standards, and work with colleagues in each country to establish recognition to increase their value. We will also publish standards for the organisation and conduct of echocardiographic laboratories, that can be used within each country when establishing systems of institutional or laboratory accreditation.

Our accreditation programmes need to be supported by good educational resources. Most initial teaching of cardiologists and sonographers should be conducted within each country, but the EAE has a key role to establish European-level standards and educational courses. There are syllabuses for the individual accreditation schemes, and teaching courses related to each programme. In addition, we have started our own extramural

programme and will continue to organise regional courses by invitation, providing teaching in advanced clinical echocardiography with an emphasis on practical demonstrations and case discussions. Finally, we think that basic and continuing education may be offered in the future most efficiently by e-learning, and so we have established a case-based library on the EAE website (the Case Portal). The EAE is also organising a comprehensive distance learning course that will be available to internists, anaesthesiologists, intensive care physicians, primary care physicians, and cardiac surgeons, as well as cardiologists and sonographers — in short, anyone who may want to use a portable system.

The European Journal of Echocardiography is being cited increasingly, and we have observed a significant growth in electronic downloads of original papers. There is a valuable mission for our journal in providing a forum for specialist echocardiographic manuscripts, and we are strongly committed to its further development.

Guidelines

Medical guidelines are much in demand but there is less evidence that they change clinical practice, and many diagnostic guidelines are recommendations on optimal practice rather than meta-analyses of outcome studies. Doctors want to use guidelines, perhaps as a way of coping with the plethora of publications which makes it impossible now for any individual to read all the manuscripts within a particular field far less to keep up-to-date across the range of cardiology. Within diagnostic imaging, however, we have hardly started to meet this challenge — and so the EAE is coordinating an initiative with the other imaging associations to reassess the rationale and methodology for producing diagnostic guidelines. We will take advice from the many international expert groups that promote optimal standards and practice in this field, and from academic colleagues who are developing new electronic formats for guidelines. One important outcome may be to propose a new system for summarising the quality of evidence that supports a particular test.

Once new standards are agreed, we will need to plan a programme for producing and regularly updating a core set of guidelines in echocardiography, and we may want to assess their impact by an audit of practice. The Euroheart Survey of the ESC offers a system for conducting regular reviews, that would be available to the EAE if we want to apply it to echocardiographic databases. These activities may become a most important task for the EAE but they will need significant investment and professional commitment.

In the meantime, we have recently agreed on two new initiatives — an expert task force will produce updated recommendations on stress echocardiography, and a joint study group with the Heart Failure Association of the ESC is considering and writing new recommendations for the diagnosis of diastolic heart failure.

National societies and communication

As a European professional society, the EAE (and indeed the ESC) needs to collaborate with all the national societies and working groups. There is no point in trying to compete when some services are best provided within each country. To develop a specific pan-European perspective and value for all that we do, we need regular two-way communication with all the echocardiographic societies as well as with individual members. In 2005 the EAE established an office within the European Heart House with administrative staff dedicated to supporting our activities, and so we are putting our own house in order. We have also been conducting a survey of all the national societies. We recognise that much remains to be done, however, and so we invite colleagues around Europe to join the EAE and to help us to achieve all our objectives. We need a large and active membership so that we have the chance together to promote and raise the standards of echocardiography within cardiology. If you are not already a member and would like to join, then all the information is available on the EAE website—you can contact us directly, or by e-mail to EAE@escardio.org, or by visiting www.escardio.org/EAE.

Logistic and strategic challenges

The mission of the EAE is ''to promote excellence in clinical diagnosis, research, technical development, and education in cardiovascular ultrasound in Europe''. We are already addressing most of these goals, but to organise, coordinate and do them justice could be a full-time occupation for several cardiologists. With all the competing demands on our time, this is impossible. Thus our major priority and biggest logistic challenge must be to expand the network of echocardiologists, scientists, and engineers within Europe who are active in our Association — and to do this we need to develop and devolve systems in which everyone

can participate. We will always remain open to new proposals and offers of help.

One important area where we have yet to invest significant resources as an Association is in research, yet the budget for basic and clinical research that is coordinated at the European level is now an enormous sum and a most important proportion of the total resources for research within Europe. We hope that the EAE will be able to act as a forum for establishing research networks and supporting innovative projects, and possibly for coordinating applications to the Framework 7 programme; indeed, this could be our biggest strategic initiative. Whatever we decide, we can be confident in a healthy future for our Association.