A year ago it was announced that Circulation would go European, and since the beginning of this year we have published each week, with the help, expertise, and enthusiasm of Keith Barnard, MB, BS, the managing editor of this section of the journal, features on all aspects of cardiology in Europe. We acknowledged the European pioneers of our specialty, from past giants such as Wenckebach and Grüntzig, to current leaders such as Attilio Maseri, Patrick Serruys, Ulrich Sigwart, Stefanie Dimmeler, and Sir Magdi Yacoub, to mention just a few that have helped shape this discipline. Indeed, it was our intention to shed more light on the enormous contributions of European cardiologists and scientists to the understanding, diagnosis, and management of heart disease and circulatory disorders.

The continuing and in fact growing productivity of the old world in cardiology is reflected by the substantial number of papers, editorials, and reviews published by European authors in Circulation. Moreover, the current editorial office and its editors under the leadership of Editor-in-Chief Joseph Loscalzo, MD, PhD, rely heavily on the expertise of European reviewers in the evaluation of a substantial proportion of the submitted papers.

But Europe is not just history, it is also diversity — 25 member states are part of the European Union (EU), and many more countries belong to its culture and hence to its science and medicine. The European Society of Cardiology’s (ESC) 44,000 members are also members of 49 national societies. Even in a flat world, cardiology is not practised in the same fashion everywhere — certainly not in this part of the world. Of course, the guidelines of the ESC — often published in line with position papers from US bodies — have increasingly harmonised the recommendations for clinical practice beyond national boundaries.

Indeed, many trials even from European companies take place in the United States, and research and drug development in the pharmaceutical world has decreased over the last 2 decades, as we reported in an important feature in Circulation: European Perspectives in Cardiology this year. Certainly, there are exceptions to the rule; for instance, the Scandinavian trials, interventional cardiology, and others. Nevertheless, if this trend continues and no countermeasures are taken, it will affect the strength of European science and medicine unfavourably.

Leaders in European cardiology have been acknowledged, such as (from the left) Attilio Maseri, Stefanie Dimmeler, and Sir Magdi Yacoub.
Given the fact that international competition is likely to become fiercer as China and India are waking up, it is of the utmost importance that political initiatives are introduced to halt and reverse this development. The ESC has built important relationships with the political decision-makers in Brussels, and it is hoped that this will help to address the issue. By publishing features on this topic, Circulation: European Perspectives in Cardiology hopes to increase awareness of these issues.

Finally, the European academic system is diverse and only in part competitive with the United States and the ever-improving Asian-Pacific region. In many European countries, particularly those in the east, no effective funding system for young, promising physicians and scientists is in place. Positions at the assistant professor level — statistically the most productive period in the career of most researchers — are sparse throughout the continent.

Furthermore, private medicine increasingly lures the most talented away from an academic career, particularly in cardiology, where salaries are several times higher in private practice than in academic centres. Indeed, in many countries, recruitment rates to clinical academic posts have declined. In the United Kingdom, for instance, positions at the lecturer level fell by one fifth in the last year.3 With the Pioneers in Cardiology United Kingdom, for instance, positions at the lecturer level fell significantly in the last year.4

References

Viewpoint: Management of Atrial Fibrillation

Harry Crijns, MD, FESC, is chair of the Euro Heart Survey on atrial fibrillation, which examined how cardiologists in Europe manage this arrhythmia. He talked to Jennifer Taylor, BSc, about how practice may change.

The new joint American Heart Association/American College of Cardiology/European Society of Cardiology guidelines on atrial fibrillation (AF) have now been published,1 but are they any different from current practice? Dr Harry Crijns, chair of the Department of Cardiology at University Hospital Maastricht, thinks it showed that the way some cardiologists practice is outdated.

“One of the main issues is prevention of stroke,” he says. “Traditionally, the focus of management has been treating the arrhythmia itself rather than its consequences.” The mindset now should be to focus first on the prevention of stroke, even before considering the management of the arrhythmia. Stroke prevention should focus on antithrombotic treatment, that is, oral anticoagulants for most patients, and even the use of nonantithrombotic drugs like antagonists of the renin-angiotensin-aldosterone system (Figure 1). These may stop thrombogenic remodelling of the left atrium and the aorta, as suggested by a subanalysis of the LIFE trial.6

This mindset is reflected in the new guidelines and goes against the current paradigm adopted by many cardiologists in Europe, as evidenced in the surveys led by Dr Crijns.7 8 The prevailing concept is that getting rid of the arrhythmia eliminates the stroke risk, “which is not settled,” says Dr Crijns. In addition, cardiologists believe that the more atrial fibrillation you have, the higher the stroke risk. “But we don’t know if that relationship holds,” he says.

The survey found that if patients were considered cured, cardiologists stopped the anticoagulants, leaving patients at risk of stroke. And in patients with paroxysmal atrial fibrillation, where doctors presume a lower arrhythmia burden in many such patients, only 50% received oral anticoagulants compared to over 75% in patients with persistent atrial fibrillation.9 This is despite the fact that both types of patients have similar outcomes for stroke. The bottom line is that the presence and duration of the arrhythmia are far less important in determining stroke risk than other factors, including age, hypertension, heart failure, and diabetes.

Figure 1. Cumulative stroke rate in the LIFE trial in patients with hypertension, left ventricular hypertrophy, and AF.
The new guidelines support this new way of thinking, and the risk stratification scheme it presents, the CHADS2 score (an acronym for Congestive heart failure, Hypertension, Age>75, Diabetes Mellitus, and prior Stroke or transient ischaemic attack), does not account for the type of atrial fibrillation. Dr Crijns says people will eventually accept this change and adopt it. As for new avenues in stroke prevention, obviously new antithrombotic agents that are safer and don’t require intensive monitoring are eagerly awaited. In addition, he says, “We should focus on fine-tuning the stroke risk.” The CHADS2 score is quite crude, and imaging tools and blood markers for thromboembolism need to be developed.

One area Dr Crijns is currently investigating is the use of transoesophageal echocardiography (TEE) (Figure 2) to image the risk and decide if treatment is really necessary (TIARA pilot study, clinical trial registration number NCT00224757 – see www.clinicaltrials.gov/). But the technique is invasive and inconvenient to use, and ideally magnetic resonance imaging (MRI) techniques will be improved, enabling more patients to have imaging than is possible with TEE. With MRI, it may become possible to get more detail on atrial contractility and morphology plus local blood flow, as well as on the condition of the aortic wall, which sometimes contains thrombogenic plaques.

When it comes to rhythm control with atrial fibrillation, Dr Crijns believes this should be directed primarily to symptomatic patients. “In the past we have been treating ECGs rather than the patient,” he says. The new guidelines are very clear about this, saying that atrial fibrillation that does not produce arrhythmia symptoms should not be the target for rhythm control. This holds especially because current drugs may produce proarrrhythmia, and catheter ablations are not without severe complications. New drugs are needed that lack proarrrhythmia.

There are 2 possible solutions here. Drugs that are either atria-specific and thus do not affect the ventricles, or drugs that have a built-in safety net, which means they can stop ventricular proarrrhythmia while retaining antiarrrhythmic effects on the atria. “Molecular biology and cellular electrophysiology have taught us in the past 10 years a lot about the underlying ion channel mechanisms of atrial fibrillation,” says Dr Crijns. These developments have led to drugs that are now being studied across the world, involving several pharmaceutical companies, but it will be a few years before they become available. When they do become available, Dr Crijns thinks they will largely replace the drugs that are in current use, or at least they will allow for a more targeted treatment of arrhythmias.

Another area of development is ablation techniques. The mapping of arrhythmias “has become child’s play compared to just 5 years ago,” says Dr Crijns, because industry and electrophysiologists have developed systems that make it easy to merge anatomic and electrophysiological maps. This has made it practical to identify mechanisms of atrial fibrillation and its substrate. “The technique has developed to a level that it may be used without trying a lot of antiarrrhythmic drugs first,” says Dr Crijns. “But we need to be selective when it comes to identifying which patients are suitable.”

The ideal patient is one in whom atrial fibrillation is associated with a focal mechanism in an otherwise healthy heart, rather than with a cardiovascular disease like hypertension, which may cause structural remodelling of the atria.

The new guidelines advise that these 2 types of patients should be distinguished before starting treatment. In the first situation, atrial fibrillation becomes sustained due to a focal mechanism or due to idiopathic atrial flutter. These cases can be ablated fairly well. In the second type, the substrate for atrial fibrillation develops long before the arrhythmia emerges, that is during sinus rhythm. The atria are already enlarged at the time atrial fibrillation occurs, which relates to atrial stretch and stimulation of the renin-angiotensin-aldosteron pathway. “Primary and secondary prevention using nonantiarrhythmic drugs like angiotensin-converting enzyme inhibitors or angiotensin receptor blockers rather than ablation is indicated here,” he says.

Jennifer Taylor is a freelance medical writer.

References

Your Name in Lights?

Well, not exactly, but you may like to see your cardiology society, your society president, your country, or your own personal views featured in *Circulation: European Perspectives in Cardiology*.

Since it was first published a year ago, *Circulation: European Perspectives in Cardiology* has regularly featured articles that focus on the practice of cardiology in various parts of Europe. Countries that have been in the spotlight include the Baltic States, Bulgaria, Greece, Iceland, Luxembourg, Slovenia, Spain, Sweden, Romania, Russia, and Turkey. No country is too large or too small to be of interest to cardiologists throughout Europe. And although the map (right) does not show all the countries on the southern borders of the Mediterranean (Turkey, Lebanon, Israel, Egypt, Libya, Tunisia, Algeria, and Morocco), these countries are all members of the European Society of Cardiology (ESC) and deserve, and receive, equal prominence. If you are an official of your national society and would like to have a feature included in the journal, come to the Lippincott Williams & Wilkins stand number G600 at the World Congress of Cardiology/ESC Congress in Barcelona, Spain, 2–6 September, and ask to see Keith Barnard, MB, BS, LRCP, MRCS, the managing editor of *Circulation: European Perspectives in Cardiology*.

The opportunity to appear in *Circulation: European Perspectives in Cardiology* is not limited to the ESC’s national societies. Eminent physicians, key opinion leaders, and pioneers of cardiology have all written for these pages, or been interviewed by our team of medical journalists. And eminence is not a prerequisite to having your say. A number of young cardiologists have had the opportunity to express their views on European cardiology through these pages.

Journal editors should also take note. The *Romanian Heart Journal* and the *Polish Heart Journal* have both been featured, and there are plans to look at other national society journals, large and small, whether published in English or their native tongue. We want to know what you are planning for the future, and to tell your European colleagues about it.

If you come into any of the categories above, have something to say about cardiology in general, your speciality in particular, have views that will be of interest to our large pan-European audience of fellow specialists, or suggestions about the content of these pages, then be sure to visit the Lippincott Williams & Wilkins stand. If Dr Barnard is not available when you call, please leave your card and where he can find you, and he will be pleased to come and discuss your ideas. You can also leave your card and contact details at the American Heart Association stand number D520. If you don’t have time to make a personal call, please e-mail Dr Barnard at Keith.Barnard@wolterskluwer.com.

Thomas F. Lüscher, MD, FRCP, FACC, professor and head of cardiology, University Hospital, Zurich, associate editor for Europe of *Circulation*, and editor of *Circulation: European Perspectives in Cardiology*, will also be pleased to speak to you about your ideas and suggestions.

Your contributions to the journal will be taken seriously and be widely read, because *Circulation*, the flagship journal of the American Heart Association, has an impact factor of 11.632, and ranks No. 1 for impact out of 72 journals in the cardice and cardiovascular systems category, No. 1 out of 51 journals in the peripheral vascular disease category, and No. 1 out of 62 journals in the hematology category (ISI Journal Citation Report 2005). *Circulation* reaches more than 25,000 subscribers in both print and online formats, with around 40% of these subscriptions coming from outside North America, mostly in Europe.

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