The European Heart Journal launches Ethics Review Board

Following recent difficulties the European Heart Journal has taken measures to improve the future of submitted manuscripts

Honesty and precision are the cornerstones of science—without them science loses its mission. The Codex of Science\(^1\) is essential in the training of young researchers, but is equally important throughout the career of any scientist. Indeed, it is of utmost importance that data of scientific projects are reported as they have been conducted, that results are reported as they have been obtained (and that they truly have been obtained), and analysed with appropriate statistics. The methods and results section must be written with care\(^1\) and illustrated with original figures and tables reflecting what has been found. Unfortunately, as with any codex, so also the codex of science is sometimes broken for various reasons.

As outlined in recent editorials by the editor-in-chief of the European Heart Journal Thomas F. Lüscher MD\(^2,3\), it appears that the number of retractions of scientific papers has increased recently. Furthermore, several scandals of scientific fraud in medicine and beyond have brought the attention of many editors and the scientific community at large back to an old problem: how can we assure the quality of scientific publications? Obviously, it is primarily the duty of the authors and all co-authors to assure the quality of their work. However, reviewers and editors also have a responsibility. But how should reviewers and editors live up to it?

Today, a Medline check to exclude double publications or plagiarism and a separate statistical review to assure proper analysis of the data are routinely applied. Databases of large trials are increasingly in the public domain and in the future, possibly all data of published studies will be as well. But availability of the data does not guarantee that these are correct. What to do if a suspicion of fraud is raised by a reviewer, a reader, or a colleague? Indeed, the editors of the European Heart Journal as well as other editors have increasingly received such accusations.

To address this issue the European Heart Journal has established an Ethical Review Board chaired by Maarten Simoons with Kim Fox and Christian Hamm as members, all very experienced clinical researchers with impeccable reputations. As of now all allegations raised either by reviewers, readers or whistle-blowers on submitted or published papers of the European Heart Journal will be forwarded to this board for evaluation. Indeed, the first case has already been forwarded to this distinguished board and is under review. The board may contact the authors or their institution or other experts, reach a conclusion and provide recommendations to the editors of the European Heart Journal. In some cases it may be impossible to reach a verdict. Indeed, it is not the aim of this initiative to create a court on scientific fraud, but rather to ensure a fair and balanced handling of allegations as much as is possible. Furthermore, the board will stress the importance of proper conduct in research by its shear existence as well as by regular Viewpoints in the European Heart Journal.

Both basic science and clinical science studies should be conducted following a pre-defined plan or protocol, with careful and complete data collection and appropriate statistical analysis and reporting. These principles should be discussed in each department, particularly during the training of research fellows. It is the responsibility of all authors, in particular the senior co-authors, to ensure that these principles are followed. The editors and reviewers of a journal have limited means to verify whether the research has been conducted and reported correctly. The Ethical Review Board will help to address issues of possible scientific misconduct if these arise.

Thomas F. Lüscher
Maarten L. Simoons

References

2013 ESH/ESC Guidelines for the management of arterial hypertension

After reconsideration of the evidence, the guidelines recommend a unified target SBP < 140 mmHg

The 2013 ESH/ESC Guidelines for the management of arterial hypertension were produced by a joint Task Force of the European Society of Cardiology (ESC) and the European Society of Hypertension (ESH).

The Task Force was jointly chaired by Prof. Robert Fagard (Leuven, Belgium) of the ESC and Prof. Giuseppe Mancia (Milan, Italy) of the ESH.

The guidelines will be presented at the 23rd European Meeting on Hypertension and Cardiovascular Protection in Milan (14–17 June) and at the ESC Congress 2013 in Amsterdam (31 August – 4 September). They will be published online simultaneously and on paper in the *Journal of Hypertension*, *European Heart Journal and Blood Pressure*, and will also appear on the ESC and ESH websites.

The previous ESH/ESC Guidelines on the management of arterial hypertension were published in 2007. Unlike the 2007 version, the 2013 joint guidelines have tables of recommendations and levels of evidence.

There are a number of other new features in the new 2013 version of the guidelines. Unlike in 2007 it includes epidemiological data. Prof. Fagard says: ‘We were surprised to see from papers published in the last decade that the prevalence of hypertension in Europe is still about 30–45% and there is no evidence that this is changing. That was quite disappointing’.

A second change was in the topic of blood pressure measurement. The 2007 and 2013 versions of the joint guidelines both say that ambulatory blood pressure monitoring is a more reliable assessment of actual blood pressure than office blood pressure. This is because regression models show that night time blood pressure is more important than daytime blood pressure and because of the importance of white-coat and masked hypertension.

With regard to out-of-office blood pressure, since 2007 evidence has accumulated for home blood pressure and the 2013 joint guidelines give it nearly the same importance as ambulatory blood pressure monitoring for the diagnosis of hypertension.

‘We leave the choice between home blood pressure and ambulatory blood pressure to the clinician’, says Prof. Fagard. ‘They do not give exactly the same information, so it depends on specific indication, availability, cost, the clinician and patient preference’.

Both home and ambulatory blood pressure can be used to detect white-coat hypertension and masked hypertension. Patients with white-coat hypertension have high blood pressure in the office and normal blood pressure out of the office. Prof. Fagard says: ‘There is now a consensus that you do not have to treat these patients with drugs, except perhaps when they are at high risk. But they need appropriate lifestyle changes and close follow up because they are more prone to develop sustained hypertension’.

The more difficult class is masked hypertension because they have normal blood pressure in the office and high blood pressure out of the office. ‘It’s difficult to detect but there are some indications of who is at risk’, says Prof. Fagard. ‘We feel that they should be treated because their prognosis is as bad as sustained hypertension’.

A third area was total cardiovascular risk assessment, where the ESH and the ESC have different systems. The Task Force integrated the score system from the ESC and the tabular system from the ESH. Prof. Fagard says: ‘One of the difficulties in preparing the guidelines was getting everybody to agree on this integrated system’.

A fourth area was the initiation of antihypertensive treatment and particularly the target for blood pressure treatment. The 2007 guidelines had two distinct blood pressure targets, which were < 140/90 for low-to-moderate-risk hypertensives and < 130/80 mmHg for high-risk hypertensives (with diabetes, cerebrovascular, cardiovascular, or renal disease). The 2013 joint guidelines take the important step of having one unified target systolic blood pressure of < 140 mmHg for almost all patients. Prof. Fagard says: ‘That was a difficult decision but we felt there was not enough evidence to justify two targets’.

A fifth area is initial monotherapy, where the guidelines take a liberal approach. The Task Force said there was insufficient evidence to recommend the first and subsequent drug that should be taken by different categories of patients. But recommendations are given for special conditions including hypertensive women (dealing with issues like pregnancy, contraception, and hormone replacement therapy), the elderly and very elderly, coronary heart disease, heart failure, cerebrovascular disease, resistant hypertension, renal disease, and diabetes.

Treatment of octogenarians was a sixth new area. In 2007 it was clear that hypertensive patients over 60 years of age should receive treatment but it was less clear for patients over 80. There is now new evidence including the HYVET trial to indicate that octogenarians also benefit from antihypertensive drug treatment.

And finally, there is a special section on resistant hypertension, where interventions like renal denervation are now in use. Renal denervation is commonly used in some countries but the Task Force said there was insufficient evidence to recommend widespread...
adoption. Prof. Fagard says: ‘We give strong advice to first complete the evidence base and specify the indications before making it available to all centers’.

Applying the ESC levels of evidence to diagnostic tests for the evaluation of patients with hypertension was a challenge because they were primarily designed for ranking treatments. As a member of the ESC Committee for Practice Guidelines, Prof. Fagard will help to produce some general solutions to this problem to aid future Task Forces.

Another challenge was that levels of evidence A and B require ‘data derived from randomised controlled trials’ but the outcome is not defined. The Task Force took the novel approach of giving for example one level of evidence for the effect of different lifestyle factors on blood pressure and other risk factors and another level of evidence for the effect on hard outcomes.

Beta-blockers continue to be a controversial issue. ‘For some, beta-blockers are out of the question as initial therapy in hypertension but as in previous guidelines we include them because if you look at the meta-analyses of randomised controlled trials they deserve to be there,’ says Prof. Fagard. ‘But of course you have to consider specific indications and specific contraindications’.

From the outset the Task Force aimed to have concrete contributions from more than a handful of experts. After the framework for the guidelines was decided, the topics were divided into three subgroups with eight writers each. Each section had a coordinator who sent the manuscript to Prof. Mancia and Prof. Fagard for integration. Prof. Fagard says: ‘Everybody has written something in his/her area of expertise, which I think is an important strength of our guidelines, together with the stringent review process’.

The guidelines contain whole sections on follow-up and on how to improve blood pressure control in hypertension, which Prof. Fagard hopes will help clinicians in their practice. Dissemination of the recommendations will be reinforced by ESC educational tools and supported by ESC’s national cardiac societies, ESH centres of excellence and national hypertension societies. Prof. Fagard concludes: ‘Despite all our guidelines the epidemiological data indicate that there has been little improvement in blood pressure control. We have to do a better job and we hope these new guidelines will help’.

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**Book review**

**Tips and tricks in interventional therapy of coronary bifurcation lesions**

Editors: Issam D. Moussa and Antonio Colombo

Publisher: Informa Healthcare Books

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Bifurcation percutaneous coronary intervention (PCI) is an area of interventional cardiology that still continues to generate much debate. Considered more of an art-form than a science, several clinical trials over the past decade have shed some light on the optimal management of these complex anatomical lesions.

While the percutaneous approach to a bifurcation lesion is traditionally broken down into two broad approaches namely, provisional side branch stenting vs. the two stent technique, the best approach relies on complex decision-making to ensure the best outcome for the individual patient and to minimize the risk of complications. There is rarely a ‘one-size fits all’ remedy in
medicine and PCI for bifurcation treatment represents a typical example.

Decision-making for these lesions must take into account several factors including the relative sizes of the main vessel, side branch and distal vessel, presence or absence of disease in each respective vessel, angulations, lesion length, whether to ‘kiss’ or not to ‘kiss’, etc. Therefore making the right decision for the individual patient can be challenging.

Tips and Tricks in Interventional Therapy of Coronary Bifurcation Lesions by Drs Moussa and Colombo is a concise and accessible book to help interventional cardiologists navigate this path. The book is neatly divided into four sections.

† The first section summarizes the fundamentals of bifurcation lesions and provides a very informative and illustrative section on bifurcation anatomy.

† The second and third sections deal with non-left main and left main coronary artery bifurcation interventions, respectively.

† The final section deals with the ‘basic science’ of bifurcation stenting and burgeoning field of dedicated bifurcation stents.

One of the most appealing characteristics of this book is the extensive use of diagrams, figures, and still frames, many of which are in colour and some in a three-dimensional format; there are very few pages within the 254 pages of this book that do not contain at least one figure.

A proper and comprehensive understanding of the anatomy of a bifurcation lesion sometimes requires the use of various imaging techniques (e.g. intravascular ultrasound) and physiology assessment. The fact that these modalities are also addressed in the book complements the other sections nicely.

Last but not least, the most important clinical studies—up to the first edition 2010—addressing the outcome of interventional bifurcation treatment are discussed and referenced.

The authors, recognized as the experts in this field of complex coronary interventions need to be congratulated on a comprehensive, nicely illustrated and didactically very well presented book. It may serve as a reference book for any experienced interventional cardiologist but also as first step into the world of complex PCI for an interventional Fellow and particularly for those who would like to make bifurcation PCI a ‘niche’ area of their practice.

More at: http://informahealthcare.com/isbn/9781841847276

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**Expert consensus statement on diagnosis and management of patients with inherited primary arrhythmia syndromes**

Three Scientific Societies present the first comprehensive recommendations on patients with inherited arrhythmias at Heart Rhythm 2013

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**European Heart Rhythm Association**

A Registered Branch of the ESC

**APHRS**
The Heart Rhythm Society (HRS), the European Heart Rhythm Association (EHRA), and Asia Pacific Heart Rhythm Society (APHRS) release the HRS/EHRA/APHRS Expert Consensus Statement on the Diagnosis and Management of Patients with Inherited Primary Arrhythmia Syndromes. The expert Statement was presented at Heart Rhythm 10 May 2013 in Denver, USA.

The Heart Rhythm Society’s 34th Annual Scientific Session provided the first comprehensive statement of recommendations on the proper diagnosis and management of patients with inherited primary arrhythmias.

The document addresses inherited conditions that can increase the risk of sudden cardiac death, especially in young individuals. Sudden cardiac death is one of the leading causes of non-traumatic mortality in young individuals in Western countries. Long QT Syndrome (LQTS), causes 3000–4000 sudden deaths in children and young adults each year in the USA, according to the National Heart, Lung, and Blood Institute.

‘The complexity and prevalence of inherited cardiovascular diseases is growing, thereby creating a greater demand for the proper diagnosis and management of patients with these conditions’, said Silvia G. Priori, MD, PhD, Fondazione Salvatore Maugeri, Department of Molecular Medicine University of Pavia, Pavia, Italy, HRS Chairperson. ‘Clinicians and other healthcare professionals from around the world have come together to address this concern which is top of mind for our field’.

The statement provides a state of the art review by a group of international experts. The recommendations summarize the opinions of the expert writing group, based on an extensive literature review as well as their own clinical experience. The consensus statement is for all healthcare professionals who manage individuals who have survived cardiac arrest at a young age, family members of young individuals who have died suddenly with a negative autopsy, patients in whom the diagnosis of an inherited arrhythmia is clinically possible or young patients with unexplained syncope.

The statement provides the diagnostic risk stratification and management of patients affected by LQTS and Brugada Syndrome. Documented for the first time is a consensus of recommendations on the diagnosis, risk stratification, and management of the following arrhythmic diseases and unexplained causes of sudden death/cardiac arrest:

- catecholaminergic polymorphic ventricular tachycardia;
- short QT syndrome;
- early repolarization;
- progressive cardiac conduction disease;
- unexplained cardiac arrest including idiopathic ventricular fibrillation, sudden unexplained death syndrome (SUDS), and sudden unexplained death in infancy.

‘This document is a great advance for electrophysiology because it provides one comprehensive and uniform recommendation on all rare arrhythmia syndromes’, said Arthur A. Wilde, MD, PhD, University of Amsterdam, Netherlands and EHRA Task Force Chairperson. ‘As new data emerges and our understanding of the role of genetics improves, collaboration like this will help ensure that the best quality of care is delivered’.

An additional primary recommendation from the expert consensus writing committee is that patients and first-degree relatives with a diagnosed or suspected inherited cardiovascular disease should be evaluated in a dedicated clinic with appropriately trained clinical staff and the resources to provide support to the patient and family members.

The document will be published simultaneously in Heart Rhythm and EP Europace in autumn 2013.

Heart Rhythm 2013 is the most comprehensive educational program for heart rhythm professionals, featuring > 8000 attendees, 250 educational sections, and > 130 exhibitors showcasing innovative products and services. The Heart Rhythm Society’s Annual Scientific Sessions have become the must-attend event of the year, allowing the exchange of new ideas and information among colleagues from every corner of the globe.

Andros Tofield
Unmet needs in acute cardiovascular care

A concern for all, it is a priority for the Acute Cardiovascular Care Association of the ESC

Acute cardiovascular care: a dynamic and complex process

Over the past decade, acute cardiovascular care has evolved with increasing complexity in the management of patients presenting with acute cardiovascular diseases.

An increased proportion of older patients with co-morbidities populate the ICCUs and CCUs.

New anticoagulants and antiplatelet therapies and different invasive strategies and timings are now recommended in recent ESC guidelines for NSTEMI, STEMI, and pulmonary embolism. Also, newer treatment principles have emerged for other acute cardiac diseases, such as non-invasive ventilation for acute cardiac failure, hyperthermia for cardiac arrest, and new strategies for acute aortic and valvular syndromes.

With the diversity of systems for care, from the pre-hospital phase, through the ICCU and CCU phase until hospital discharge, our efficacy of acute cardiovascular care is challenged. It is not merely based on individual knowledge and skills, but increasingly dependent on an integrated systems approach, particularly demonstrated for patients presenting with ST-elevation myocardial infarction (STEMI networks) and cardiac arrest.

Significant post-discharge mortality in patients with acute cardiovascular syndromes persists

Despite major advances, we are still confronted with clinical and logistic issues in the management of high-risk patients with acute cardiovascular diseases. Owing to lack of organization and specialized centres, too many patients still go to medical wards where they are often misclassified and consequently under- or wrongly treated.

Practitioners managing these patients continue to face difficulties in bedside clinical decision-making. Acute coronary syndrome (ACS) and heart failure remain as leading causes of death and disability worldwide and particularly in Europe.

In addition to important variations in drug therapies, techniques, systems, quality of care and educated staff among different centres, regions and countries, actual standards of references are not always optimal:

- European guidelines help to improve acute cardiovascular care but are frequently made for countries with high standards of available resources and thus not well implemented worldwide.
- Risk scoring systems are frequently outdated and must be reviewed and updated.
- Despite evidence-based data on the best medications, recommended drug therapies are frequently underused.

Accordingly, there is an urgent need to re-think and revise the structure of acute cardiovascular care, expand skills and knowledge of all professionals involved (not only cardiologists) in the diagnosis and treatment of patients with acute cardiovascular diseases. This will better risk-stratify patients, assist physicians in making quick and correct diagnoses and then deliver the best treatment.

Developing an active network to bridge the gap in acute cardiovascular care

Aligned with its mission, the Acute Cardiovascular Care Association (ACCA) considers optimizing structures, supporting and actively performing education, and increasing diagnostic and therapeutic skills as a priority. By working closely and permanently with national experts to monitor actual practice in different countries, it will help form the basis for optimal diagnosis and provide the best treatment for patients.

Each country together with its leading physicians must be actively involved in this endeavour, working hand-in-hand together with ACCA.

Sharing experiences and learning from each other is the best way to improve standards, homogenize, and harmonize quality of care.

ACCA has already reached out to several professionals involved in acute cardiovascular care in their countries to obtain their feedback on ‘Unmet needs in Acute Cardiovascular Care’.

An awareness campaign to sensitize professionals on these unmet needs and on the necessity to act together was conducted during January to May 2013, supported by an unrestricted educational grant from Astra Zeneca. This campaign included

- a series of video interviews with national representatives;
- quick polls and surveys to collect data from different countries;
- a live webinar about diagnosis and treatment of ACS (still accessible on the ACCA web site); and
- most importantly, the organization of a dedicated ACCA summit at the Heart House, which recently welcomed 72 national leaders from 32 countries who had the opportunity to exchange challenges, gaps and needs in different countries, during interactive and practical workshops.
The campaign results will be soon posted on ACCA web site and will serve as a concrete basis for the formation of an educational programme.

Teamwork and harmonized education to reach out for best patient outcome

Acute cardiovascular care is not only the concern of cardiologists but also a matter for everyone involved in ACCA.

The best quality of care can only be provided by systems where exchange and cooperation is taking place with other professionals including, paramedics, nurses, emergency physicians, internists, clinical cardiologists, interventional cardiologists, electrophysiologists, imaging experts, and intensive care physicians, who combine expertise to deliver the best of care and improve the outcomes for patients with acute cardiovascular diseases.

A privileged collaboration with national cardiac societies is the absolute key to success in developing harmonized education in acute cardiovascular care.

A Clinical Decision-Making Toolkit: best patient outcome at your fingertips

As a first step towards harmonization, the ACCA wishes to develop an innovative ‘easy-to-use’ decision-making toolkit based on the practical implementation of ESC guidelines.

This instrument is aimed to help practitioners and other professionals in their daily practice to make the best bedside clinical decisions when managing patients with acute cardiovascular diseases.

The toolkit will be launched at the Acute Cardiac Care Congress, 12 – 14 October 2013 in Madrid, but do not miss discovering the first chapters at the ESC Annual Congress in Amsterdam (31 August to 4 September 2013) in Village 3.

Join Acute Cardiovascular Care Association: a fast growing multi-disciplinary community!

The mission of ACCA is to improve the quality of care and outcome of patients with acute cardiovascular diseases, encompassing the complete care of patients from first medical contact until patient stabilization.

ACCA is the first and unique platform of scientific exchange where a multi-disciplinary team can share knowledge and improve educational skills towards one single goal.

‘Together saving lives!’ is our motto.

Learn more about the association and its educational initiatives: www.escardio.org/ACCA

Acute Cardiovascular Care Association

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