

Congress-News

Wednesday 7 December 2016

EuroEcho-Imaging 2016 highlights: Tackling the latest controversies

by Prof. B. Cosyns, EuroEcho-Imaging 2016 Scientific chairperson and Clinical Professor of Cardiology, Universitair Ziekenhuis Brussel, Belgium

EuroEcho-Imaging is an important meeting in the field of non-invasive imaging, with more than 3,000 healthcare professionals attending from over more than 90 countries. To address the latest developments in the field, we will have two main themes, on the role of imaging in arrhythmias and aortic valve disease.

For the first theme, we will examine the role of imaging in predicting and stratifying the risk of new or potentially life-threatening arrhythmias while treating arrhythmias. We will also have a session dedicated to the role of imaging in risk assessment after, for example, life-threatening arrhythmia or sudden cardiac death. This is timely as there are a lot of new data on the topic. We will also look at common, non life-threatening arrhythmias, such as atrial fibrillation. As the European Association of Cardiovascular Imaging (EACVI) recently published a consensus paper on atrial fibrillation, we felt it was important to include this subtopic in the main themes of the congress.

Aortic valve disease is a very exciting area and controversial in terms classification. We know more and more about the pathophysiology and classification of aortic valve disease, particularly in the past few years, and these changes have been adopted into the new recommendations. Moreover, we have new techniques to treat aortic valve disease, such as percutaneous implantation of the valves.



Prof. B Cosyns, Brussel, BE

We also have a lot of joint sessions with our sister societies, illustrating the depth of our collaborations. As we are increasingly becoming a multimodality imaging congress, there will be dedicated tracks on cardiac magnetic resonance imaging (CMR) and nuclear computed tomography (CT), as well as echocardiography.

The safety of imaging

Elsewhere on the programme, we will continue to debate current controversies, including the safety of imaging; in particular, CMR. This is controversial as some data has shown that CMR may lead to DNA damage, and we will have the opportunity to discuss that in detail and determine whether or not there is any clear impact from CMR. The second session on safety will address the important issue of irradiation using CT.

The other main controversy discussed in Leipzig will be the use of pocket-sized echocardiography devices instead of the stethoscope. It will be in-

teresting to look at the European point of view versus the American one, as we know that pocket-sized echo devices have been implemented in the education of all cardiology students in the USA. We have also other forms of debate, and one that was successful last year was the Dr. Jekyll and Mr Hyde sessions. In essence, the pro and the contra arguments will be given by the same speaker. It's seems strange but it's very interesting. This year, for example, Maurice Enriquez-Sarano, from Rochester, USA, will talk about watchful waiting versus early intervention in patients with mitral valve prolapse, which will be a very exciting topic.

The surgical perspective

We have also a new type of session this year, called Tea for Two. This looks at something that we often see when our images have to confront the real world; i.e., the surgical point of view. The first speaker will be an echocardiographer, who will show images of a problem. Next, the surgical view will be given, and we will then come back to the imaging results. This situation corresponds a lot to what we see in clinical practice, and we will have four brilliant speakers in this session. Alongside a huge number of original abstracts, a new feature this year will be sessions dedicated to advanced imaging. To bring more cutting-edge science to EuroEcho-Imaging, we decided to bring back the engineers and technicians to the congress. We also have dedicated sessions on congenital heart disease and we will highlight the use of 3D printing in addressing these kinds of diseases.

CREATE AND SHARE
YOUR
CONGRESS MEMORIES

Take a picture on the EACVI stand with our photobooth!

Guiding imaging
into the multimodal age
by Prof. Habib

The EuroEcho-Imaging congress is a multimodality congress enabling improved relationships between the different imaging techniques. Importantly, over recent years a number of international relationships have been established which have been pivotal to the development of joint projects and publications. The development of the EURO-ENDO Registry is discussed

Don't miss
Wednesday 7 December

Consult the Heart Imagers of Tomorrow during the breaks!

► 16.00 - 18.00
Inaugural Session,
Room Beethoven

Today in this issue

- EACVI President G. Habib: Guiding imaging into the multimodal age
- Prof. A. Fraser: Edler lecture invitee: Life & Career
- Dr. M. Cikes: The role of imaging in health failure with preserved ejection fraction
- Dr. A. Hagendorff: Welcome to Leipzig!

Page 2

Page 3

Page 4

Page 4

WIN YOUR FREE
REGISTRATION FOR
EUROECHO-IMAGING 2017!

Visit the EuroEcho-Imaging 2017 stand A1 to be part of the prize draw.

European Association of Cardiovascular Imaging President Gilbert Habib: Guiding imaging into the multimodal age

Prof. G. Habib, C.H.U. De La Timone, Service De Cardiologie, Marseille, France, has been EACVI President from 2014 to 2016.

One of the main topics of EuroEcho-Imaging and of the presidency in general, and something that has been particularly important over these past two years, is the fact that we have moved towards becoming an imaging association, and consequently an imaging congress, enabling improved relationships between all of the different imaging techniques that we represent.

The European Association of Cardiovascular Imaging (EACVI) is a large association that has three sections, consisting of the Echocardiography section, the Cardiovascular Magnetic Resonance (CMR) section and the Nuclear Cardiology and Cardiac CT section. The past two years of the EACVI presidency, and the congresses that have been held during that period, are representative of the increasingly collaborative and productive relationships that exist between the three sections. It can be said that EuroEcho-Imaging really is a multimodality congress. This is crucial for the future of both the congress and of the EACVI, and what is also just as important is that the number of delegates attending the congress has been increasing year-on-year, and is now at a high level.

International relations

The second point to underline is the number of international relationships that have been established over the past two years, and this is something that is increasingly evident during the congress. More and more countries are getting involved in EuroEcho-Imaging, and the congress is, as a result, becoming increasingly international.

What is also very important to note is that EuroEcho-Imaging is now the premier imaging congress in the world. Thus, our meeting is now the most important and the largest echocardiography and imaging congress in the world. Furthermore, the majority of other congresses in the field focus specifically on echocardiography, cardiac computed tomography, nuclear techniques or cardiac magnetic resonance imaging. However, EuroEcho-Imaging is truly a multimodality congress.

Turning back to international relations, one of the most important and educational experiences that has been undertaken over the past two years of my presidency has been to



Prof. G. Habib (President EACVI), Marseille, FR

travel to several countries, not only in Europe but also outside Europe, including China, Korea, Japan, Brazil, Argentina and, of course, the USA. This has offered the opportunity to develop very close relationships with all of these countries over the course of the presidency. Possibly the best representation of what we have achieved is that we will have a special meeting during EuroEcho-Imaging over lunch with representatives of all the European national societies and our friends from outside of Europe.

The power of collaboration

These international relationships are particularly beneficial when it comes to the development of joint projects and joint publications, and the EACVI has worked on several consensus papers and guidelines over the past two years with, for example, the American Society of Echocardiography. We also have joint projects with other countries, involving organizations such as the Chinese Society of Echocardiography and the Brazilian Department of Cardiovascular Imaging.

One very important project that was launched during the presidency is the European Infective Endocarditis Registry, or EURO-ENDO (see Box). This is an international registry that was developed by the EACVI under the auspices of the European Society of Cardiology's (ESC's) EURObservational Research Programme (EORP), and involves all the participating national societies. This offers the opportunity to include patients not only from countries within Europe but also from several countries outside of Europe.

Furthermore, a notable and important aspect of the past two years has been the possibility to create a network between several societies, not only for educational purposes but also to reinforce the role of the EACVI and of the ESC in general, both within and outside Europe. This has in-

cluded the development of pan-European projects. EuroEcho-Imaging offers the opportunity for us to present our educational projects, and we have several that will be discussed this year during the meeting. These projects can also be found on both the EACVI and ESC websites.

An aspect of EuroEcho-Imaging that is a source of pride to everyone involved is the extremely high scientific level of the congress, not only in terms of the latest research and scientific findings presented at the Abstract, Rapid Fire Abstract and Poster Sessions and Symposia but also the educational Teaching Courses, How-To Sessions, Clinical sessions, Debate Sessions, Joint Sessions and Imaging Campus, among others. It is really an opportunity for everyone attending to meet and interact with all of the most respected specialists in echocardiography, cardiac magnetic resonance imaging and nuclear computed tomography, both from across Europe and the rest of the world.

This is underlined by EuroEcho-Imaging being truly a multimodality imaging congress, with each of the sections – echocardiography, cardiac magnetic resonance imaging and nuclear computed tomography – having the opportunity to develop themselves and to give delegates detailed information and updates about the most important aspects of all the techniques.

A part of the ESC

Finally, another aspect of the EuroEcho-Imaging congress, and the EACVI in general, is the possibilities that we have to work within the ESC and to have common projects with other branches of the organization. That means not only working with the ESC itself but also with other working groups and associations that form part of the group. This was something very important to be able to draw on, not only during my presidency but also for the benefit of the congress.

Another point that is important to make is that of the crucial role played by the whole EACVI team. We have had a really fantastic team during my presidency, and it was a pleasure for me to work with all of the board, all of the members of the wider association and all of the ESC/EACVI team over these past two years, not only in terms of building up the congress as it stands today but also in building the future of both the EACVI and EuroEcho-Imaging.

The European Infective Endocarditis Registry (EURO-ENDO)

The EURO-ENDO registry is a prospective, multicentre, observational study of patients presenting in the echocardiographic or imaging laboratories for definite infective endocarditis (IE) and treated and followed by European centres. The diagnostic methods, type of medical therapy, indications for surgery, and mode of follow-up will be obtained according to the usual practice of the participating centres.

The main goals of the European Endocarditis Registry (EURO-ENDO) are to describe the current diagnostic and management practices in IE in Europe and beyond, and to evaluate its outcome, depending on the correct implementation and adherence to the 2009 ESC guidelines on IE.

This registry will therefore offer a unique opportunity to assess the characteristics of IE in Europe, the current use of imaging techniques, as well as the correct implementation of the ESC guidelines and its consequence in terms of prognosis. All this will help improve the diagnosis and management of IE in Europe.

The Executive committee of EURO-ENDO is chaired by Prof. Gilbert Habib (EACVI) and co-chaired by Prof. Patrizio Lancellotti (EACVI). Alongside the Executive Committee members, which are made up of members of the EACVI alongside the those from the ESC Working Group on Valvular Heart Disease, the Steering Committee is composed by the chairmen of the study and by the National Coordinator of each participating country selected by the EACVI, in collaboration with the National Imaging Communities.

To find out more information about EURO-ENDO, visit: www.escardio.org/Research/Registries-&-surveys/Observational-registry-programme/infective-endocarditis-european-registry



Today 12:45 – 13:45, Room Wagner

SATELLITE SYMPOSIUM

“Clinical Reality for Mitral and Tricuspid Valve Interventions”

24 months’ results and clinical studies update –
100 patients: lessons learned

Prof. V. Rudolph, Cologne

Recorded LIVE demonstration

Minimal invasive „annuloplasty band procedure”

R. S. v. Bardeleben MD, Mainz



GE Healthcare

Echo Guidance: following the anatomy
and physiology

F. Kreidel MD, Hamburg



SATELLITE SYMPOSIUM

Today 12:45 – 13:45

Room Wagner



GE Healthcare



**“Clinical Reality for Mitral and
Tricuspid Valve Interventions”**

EACVI

EUROPEAN ASSOCIATION OF
CARDIOVASCULAR
IMAGING

**Special offer:
Silver Membership
for only 100€!***

... see you at the

* Instead of 156€ for the 2017 membership. Restricted to paying EuroEcho-Imaging



WE
ARE THE
ESC

I'm an EACVI member. We are the ESC

www.escardio.org/EACVI

Join the community



EACVI stand

2016 delegates. Not applicable to day ticket holders. Only until 10 December.

EACVI

EUROPEAN ASSOCIATION OF
CARDIOVASCULAR
IMAGING

**Learn from
imaging experts**



E-learning programmes
in Echocardiography
and in Cardiovascular
Magnetic Resonance



**Including didactic video tutorials
in TOE, TTE, CMR
and much more**

Prof. A. Fraser, Edler lecture invitee: Life and career

Prof. A. Fraser is Consultant Cardiologist, University Hospital of Wales, Cardiff, UK; Visiting Prof. in Cardiac Imaging at the University of Leuven; and Emeritus Prof. of Cardiology at Cardiff University. He has received numerous awards and is a former president of the European Association of Echocardiography. He will give the Edler lecture: "A 21st century manifesto for functional imaging" during the Inaugural session, Monday 16:00–18:00, Room Beethoven.



Prof. A. Fraser, Cardiff, UK

Understanding the basics

A key stage in his career was when he was invited by George Sutherland to take up the British Heart Foundation Fellowship at the Thoraxcenter in Rotterdam. That was his first real exposure to European cardiology, in a centre that made major developments in cardiac ultrasound, and where physicists and engineers worked closely with clinical academics to develop new technologies and evaluate their clinical role. The head of the Thoraxcenter at the time was Jos Roelandt, who had developed cross-sectional imaging with his engineering colleague Nicolaas Bom. Those were also the early days of transesophageal echocardiography, and Prof. Fraser contributed to how the technique is used today, particularly for valve disease and in the operating room.

As a result of his experiences, he believes that active collaboration between engineers and clinicians is crucial for the development of cardiovascular imaging. He strongly en-

courages younger colleagues to train in several centres and to work closely with engineers to learn the physics of imaging technologies, and so that engineers can understand which developments are needed for clinical practice.

Another key point was his clinical training in Cardiff. From Prof. Andrew Henderson, he learned to question everything and take nothing for granted, while trying to understand the basic principles behind any clinical problem in terms of its pathophysiology, so that treatment could be rational. He still likes to be challenged to a good debate and to have his mind changed, and his research has focused on using cardiac imaging to understand mechanisms of myocardial dysfunction, ventricular-arterial coupling and heart failure.

International medicine

Prof. Fraser is convinced that sharing experiences with colleagues and learning from each other is essential.

He considers it a huge privilege that the academic subspecialty of cardiac imaging has led him across the globe to lecture and to teach, including taking part in the first echocardiography courses in places such as Rajasthan in north-west India and Sudan.

Cardiac ultrasound imaging is increasingly relevant to all clinicians, now that it is disseminating from specialist hospitals into routine clinical practice for emergency and primary care physicians. There will always be a need for education in how to use the technology properly, and for systems to ensure that technology is evaluated appropriately before being released onto the market, an objective that Prof. Fraser pursues through his chairmanship of the Committee on Regulatory Affairs at the ESC.

The Edler lecture

Alan Fraser was fortunate to meet Inge Edler in 1995, when he was in his mid-80s. One of the questions he asked was whether or not he and Carl Hertz had ever anticipated how echocardiography might develop. Prof. Edler replied that he never answered that question as it was impossible to predict technological development. Prof. Fraser feels that to some extent that remains true; technological advances will take care of themselves.

What he will concentrate on instead in his Edler lecture is the human challenge of how we think about and use all the modalities of diagnostic imag-

ing. In other words, assuming that we have the tools we need, what should we do with them? One of the main challenges for the future, in his view, lies in harnessing information and computing technology to help clinicians to make better clinical decisions, and to reduce diagnostic error and over-diagnosis.

An important aspect is to look at how diagnostic tests are reported. They all have some imprecision, but when results are given to clinical colleagues, the conclusions are usually a discrete 'yes' or 'no'. Instead, Prof. Fraser believes that the probability of a disease should be reported rather than whether or not it's present. Experienced clinicians weigh probabilities and make judgements all the time, and so we should learn how to interpret diagnostic tests in a similar way.

Imaging is becoming more objective and more quantitative, making it increasingly difficult to interpret as subclinical abnormalities become apparent. Prof. Fraser will therefore call for decision-support tools to be developed and deployed that allow the probability of disease to be estimated while adjusting for individual patient risk factors and circumstances. Another key goal should be more research to evaluate which diagnostic tests are clinically effective in reducing disease and prolonging survival, as well as those that are cost-effective. Finally, he will suggest that manufacturers should share responsibility for supporting research to establish the utility of their systems, rather than just provide them 'as is'.

EACVI
EUROPEAN ASSOCIATION OF
CARDIOVASCULAR
IMAGING

Join the community



Special offer:
Silver Membership
for only 100€!*

... see you at the EACVI stand

* Instead of 156€ for the 2017 membership. Restricted to paying EuroEcho-Imaging 2016 delegates. Not applicable to day tickets. Only until 10 December.



I'm an EACVI member. We are the ESC

www.escardio.org/EACVI



The role of imaging in heart failure with preserved ejection fraction

Dr. M. Cikes, University Hospital Rebro, Zagreb, Croatia

"At first, it may seem cumbersome to diagnose heart failure with preserved ejection fraction (HFpEF) by imaging, specifically echocardiography, as the typical features of heart failure, such as left ventricular (LV) cavity dilation and left ventricular ejection fraction (LVEF) impairment, are lacking. However, the main structural changes seen in HFpEF typically imply a certain grade of LV hypertrophy and left atrial dilation, which can be clearly observed and quantified by echocardiography.



Dr. M. Cikes, Zagreb, HR

ease but without overt signs and symptoms of heart failure. Deformation imaging studies also demonstrate an important role of atrial function and its impairment in HFpEF.

Regarding cardiac function, preserved LVEF, in the recently published ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure, implies a LVEF of $\geq 50\%$. However, this value is arbitrary: several trials included patients with a LVEF of 40%–49%, now labelled as heart failure with mid-range ejection fraction and recognized as a grey area.

More detailed analysis of cardiac function using deformation imaging shows that LV systolic function is not entirely normal in patients with HFpEF: a reduction in LV longitudinal strain has been confirmed by multiple studies. There are even data showing reduced circumferential function, which may further distinguish HFpEF patients from a similar group with hypertensive heart dis-

Another functional alteration suggested in the diagnosis of HFpEF is an $E/e' \geq 13$, implying elevated LV filling pressures. However, all of these features should be interpreted within the context of possible etiological factors (typically: female sex, older age, hypertension, obesity etc), as well as the clinical presentation and elevation in biomarkers (NT-proBNP and BNP).

Finally, echocardiography provides the additional diagnostic option of performing a diastolic stress test, typically a bicycle stress echocardiogram. During this procedure, LV function is quantified as mentioned above, but also allowing for the non-invasive quantification of pulmonary artery pressures, stroke volume and cardiac output, and their changes with exercise."

Welcome to Leipzig!

Dr. A. Hagendorff, Universität Leipzig, Med. Universitätsklinik I, Leipzig, Germany

Dr. Hagendorff, who served on the European Association of Cardiovascular Imaging (EACVI) board from 2008 until 2012, and again from 2014, explains why it's an honour to welcome EuroEcho-Imaging to Leipzig, as Local host.



Dr. A. Hagendorff, Leipzig, DE

"In Germany, we have several centres with expertise in echocardiography, which has been my specialist field since 1990. I am from the region of Cologne, but have been at the University Hospital in Leipzig since 1999. Leipzig is a brilliant city for living and having a family, and it was therefore easy for me to stay here and do my work.

One of the reasons why, I think, the EACVI considered coming to Leipzig was my engagement in education, including my work in 2008 on the basic echocardiography course for the EACVI website. It is, of course, a great success to have the first European Society of Cardiology association congress here. Personally, it's a great honour to host EuroEcho-Imaging. It's like scoring the winning goal in the World Cup!

Leipzig is an attractive city, and a city of music. It's the birthplace of Richard Wagner, and the city of Johann Sebastian Bach, Felix Mendelssohn Bartholdy and the conductor Kurt

Masur. He was involved in the peaceful revolution in Leipzig in 1989, which eventually led to the reunification of Germany.

Of course, we have the world famous Thomanerchor and the Leipzig Gewandhaus Orchestra. The Auerbachs Keller features in Faust by Johann Wolfgang von Goethe, who studied law here and ate at the Keller. We also have an excellent Christmas market, which is famous throughout Germany and will be running during EuroEcho-Imaging.

Leipzig is a very attractive place, but I hope that the people will come for the congress and not only for the town!"



Welcome to Leipzig!