Thrilling, practice-challenging information to be presented at ESC Congress 2017!

Welcome to ESC Congress 2017 in the beautiful city of Barcelona! We are certain that you will find the content interesting, stimulating, and truly useful for your clinical practice and scientific work. As always, we aim to reflect your needs and cover all areas, but we will also be turning a particular spotlight on some key areas, says Congress Programme Committee Chairperson Professor Stephan Achenbach.

This year’s congress marks the 40th anniversary of the first percutaneous coronary intervention (PCI) procedure—performed by Andreas Roland Grützig—and that will be a focus of some of the sessions of the congress. In fact, this year’s programme is particularly rich as far as PCI is concerned. We felt the 40th anniversary was a good opportunity to take a step back and look at what PCI has done for cardiology in general, and how it will influence and shape it for the years to come. Part of our commemoration will be to highlight especially educational “Live in the Box” sessions, the ESC Andreas Grützig Lecture on Interventional Cardiology, and “A Tribute to Andreas Grützig” on Sunday 27 August.

As always, our Hot Line sessions will showcase studies that have the ability to substantially change the way we treat our patients. I can promise you some real treats, with fantastic new science and relevant results from a number of very large, very important trials. In particular, look out for some extremely interesting data from COMPASS (Cardiovascular Outcomes for People Using Anticoagulation Strategies) and from CANTOS (The Canakinumab Anti-Inflammatory Thrombosis Outcomes Study). CANTOS investigates the role of suppression or modification of inflammation in preventing future cardiovascular events. This concept is steering cardiology in a new direction, and will also be covered in other sessions that focus on the role of inflammation in cardiovascular disease. Another recent development, which also has the potential to really change how we treat patients, are the new options to achieve lipid lowering through PCSK9 (proprotein convertase subtilisin/kexin type 9) inhibition.

There are a number of sessions focusing on this concept, including a Hot Line session that has the one-year results from ORION (which assessed the impact of a novel uPAR inhibitor to PCSK9 on reductions in low density lipoprotein cholesterol). The ESC Guidelines sessions are always worth attending, and this year’s ESC Congress has a particular emphasis on understanding recent developments in cardiology—with very important guidelines being presented on the key issues of acute myocardial infarction/ST-segment elevation myocardial infarction, valvular heart disease, and peripheral arterial diseases. There is also a focused update on dual antiplatelet therapy (DAPT). Although it has not been that long since the DAPT recommendations were last updated, it is so central to what we cardiologists do that ESC has decided to revisit them because of the number of trials that have changed our thinking about treatment indications and duration. The past focus has been on shortening DAPT, but now studies suggest that longer DAPT also has benefits; this update will look at which patients might benefit from extended DAPT.

The ESC Congress provides unique opportunities to interact with globally known experts in cardiovascular disease. We have increased such opportunities, for example by introducing a series of “Expert Advice” sessions. Luminaries in a given field will provide advice about particularly difficult situations, or specific patients, and will also be available to answer questions. This provides a level of personal engagement that a presentation that would never be possible other forms of learning. Also, in the ESC TV studio, sessions will be recorded and transmitted live for the first time in front of an audience. Typically in the format of conversations and moderated debates between experts, these sessions will make for a truly stimulating interactive experience.

Attendees are likely to notice that the faculty is more gender balanced this year, and I am pleased to announce that a quarter of speakers and chairpersons are women—a figure we hope to build on each year to reflect the growing numbers and influence of women in the profession.

I urge you to embrace all the opportunities you are presented with over the next five days here in Barcelona, and to make the most of this unique and exciting educational resource. Enjoy your time at the ESC congress and make new friends from all over the world. Bienvenido!

A haunting attack on the eve of ESC Congress

It was a brilliant, sunny Thursday afternoon. The ESC Congress was more than a week away and a handful of ESC’s advance staff had just arrived in Barcelona, including Chief Executive Officer Isabel Bardinet. I was walking down Las Ramblas to the market called La Boqueria,” says Ms. Bardinet. “I stopped to have a glass of juice, but it was so hot, and there were so many people, I started walking back to the Plaça de Catalunya. As I was crossing the Plaça I heard this most awful noise and people started screaming.” She turned around to look when a traffic officer standing nearby took her arm and told her: “Leave. Go away. Just go away.” He then picked up his radio to request police reinforcements at the scene. Ms. Bardinet started telling her: “Leave. Go away. Just go away.” He then picked up his radio to request police reinforcements at the scene. Ms. Bardinet started telling her: “Leave. Go away. Just go away.”

Once at the hotel, she made her way to the rooftop and watched as helicopters and convoys of police cars, then ambulances, raced to the scene. It was only when she went on Twitter, that she saw the ghastly pictures and realised it was most likely a terrorist attack. “My initial reaction was horror. Utter horror,” she said. “I had just seen those same people minutes earlier. They were laughing and so happy, just enjoying life. And the idea that somebody had deliberately driven a van into them… how can you do something like that?”

For the ESC staff it was eerily reminiscent of an attack a year earlier in Nice, not far from the ESC headquarters. A truck was driven into a large crowd celebrating Bastille Day, killing 86. Since then, there have been vehicular terrorist attacks in Germany, the UK and Sweden. “Nice showed just how easy it is to inflict a lot of pain on large groups of unsuspecting people,” said ESC President, Professor Jeroen Bax. “It is something no one can control.”

In the hours that followed the Barcelona attack, the ESC advance staff witnessed the resilience of the Barcelona people. That evening people were back out on Las Ramblas, sitting in the terraces eating tapas. By the following day, the streets were bustling once again.

For the ESC leadership, the question quickly became: What to do about the ESC Congress? During a phone call between Prof. Bax and Ms. Bardinet they determined that the event would proceed as planned.

“I thought whatever happens we have to go through with this,” Ms. Bardinet said. “If not, we will be giving in. These attacks are meant to terrify and disrupt. They only succeed if we allow them to succeed.”

The ESC Congress, like other events involving tens of thousands of people, had over the next five days here in Barcelona, and to make the most of this unique and exciting educational resource. Enjoy your time at the ESC congress and make new friends from all over the world. Bienvenido!
Imaging quiz: What’s your diagnosis?

BROUGHT TO YOU BY THE EUROPEAN ASSOCIATION OF CARDIOVASCULAR IMAGING (EACVI)

Transthoracic echocardiography in a 62-year-old man with dyspnoea on minimal exertion and leg oedema. The figure presents the modified four-chamber view zoomed in on the tricuspid valve (diastolic frame); a 3D visualisation of the tricuspid valve (ventricular view, diastole); and the CW Doppler flow profile across the tricuspid valve.

Bogdan A. Popescu. University of Medicine and Pharmacy ‘Carol Davila’ - Euroecolab, Institute of Cardiovascular Diseases ‘Prof. Dr. C. C. Iliescu’, Bucharest, Romania.

See page 6 for the solution.

Barcelona firestorm 2006 “killed initial enthusiasm” for drug-eluting stents

Drug-eluting stents were introduced to reduce the risk of restenosis that was associated with bare metal stents (which they did effectively). However, data started to emerge that indicated that DES were associated with a significantly higher risk of late stent thrombosis than were bare metal stents (BMS)—raising concerns about the safety of these devices. These concerns were increased with the presentation of a meta-analysis by Doctor Edoardo Camenzind at the ESC Congress 2006 and led to intense discussions among the cardiovascular community.

The meta-analysis assessed a sirolimus-eluting stent and a paclitaxel-eluting stent; the most widely used DES at the time. It showed that, compared with BMS, the former was associated with a 30–40% higher rate of death/myocardial infarction at three years while the latter was associated with a 5% higher rate. According to Dr. Camenzind, these higher rates were related to a higher rate of stent thrombosis with the DES. Speaking to ESC Congress News, Professor Adnan Kastrati (Deutsches Herzzentrum München, Technische Universität München, Munich, Germany) says that the fallout from this meta-analysis for DES was significant. He explains: “Despite its methodological limitations to evaluate the entire evidence on this comparison, the study had a large impact because it killed the initial enthusiasm that surrounded the introduction of this new technology. The impact was greater in the USA than in Europe with a more than 25% reduction in the use of DES within one year from the ESC Congress 2006.” Also, following the “firestorm”, the recommended duration of DAPT was extended to 12 months for both the sirolimus-eluting stent (previously, three months) and the paclitaxel-eluting stent (previously, six months).

Prof. Kastrati comments that the results of the meta-analysis did have a “positive impact” because they increased “awareness within the cardiology community of the limitations of first-generation DES and encouraged efforts to develop more effective antithrombotic treatment strategies and safer new-generation DES”. However, he adds that the second-generation DES that is most widely used today—an everolimus-eluting metallic stent—was already being evaluated in clinical trials prior to 2006 before any lessons could be learnt from the firestorm. “I would say that progress in the early years was achieved by chance rather than intentional improvement. This said, the remarkable safety and efficacy of second-generation DES have left almost no room for the use of BMS,” Prof. Kastrati observes.

Bioresorbable scaffolds, which are designed to completely disappear after a set period, have been suggested as an alternative to second-generation DES as they could potentially reduce the rate of restenosis yet further. However, some challenges have been encountered with the first-generation designs.
New edition of ESC Guidelines presented

This year, four new European Society of Cardiology (ESC) Guidelines have been published: covering acute myocardial infarction/ST-segment elevation myocardial infarction (AMI/STEMI), valvular heart disease, peripheral arterial disease, and dual antiplatelet therapy. As with previous editions, the document on valvular heart disease has been developed as a joint guideline with the European Association For Cardio-Thoracic Surgery (EACTS), the document on peripheral arterial disease has been developed in collaboration with the European Society for Vascular Surgery (ESVS) and the focused update on dual antiplatelet therapy developed in collaboration with EACTS. Each represents at least two years’ worth of extensive task force work including literature reviews, synthesis of new evidence, and consensus to provide the latest information for clinicians to use in their everyday clinical practice.

Professor Stephan Windecker (Bern University Hospital, Bern, Switzerland), acting chair of the ESC Committee for Practice Guidelines (CPG) 2016–2018 and Chairperson of tomorrow’s 2017 ESC Guidelines Overview session with Professor Jean-Philippe Collet (Université Pierre et Marie Curie [UPMC-Paris 06], Institut de Cardiologie, Pitié-Salpêtrière Hospital [AP-HP], ACTION Group, Paris, France), says that putting together an ESC Guideline is such a long and comprehensive process that the preparatory work to establish the task forces for the 2019 ESC Guidelines—a full two years before they will be published—“has already been done”. He explains that when Guidelines on a specific topic need to be revised, usually every four to six years, a Task Force consisting of 20 to 30 experts and “typically two to three chairs” will be created. This Task Force comes up with a “table of contents” that covers every aspect of the topic Guidelines will address that needs to be included in the new Guideline, encompassing prevention, diagnosis, risk assessment, therapy, review of indications, management strategies and performance measures. They then review the new data in the respective field and analyse that data to develop a consensus for the recommendations of the new Guideline. Subsequently, an independent panel of reviewers—ranging from “global” reviewers who look at all of the recommendations to specialists (focused reviewers) who look at specific areas—evaluates the resultant Guideline document. Prof. Windecker comments that, ESC Guidelines, because of the extensive work and careful review that goes into them, represent high-quality documents that guide clinical practice in many geographies beyond Europe. However, while the process of developing ESC Guidelines is long and thorough, the task forces make every attempt to draft the Guidelines as concisely as possible. The ESC CPG has taken steps to ensure that the Guidelines remain readable. “We have noticed that over the past decade, cardiology has witnessed a rapid evolution of diagnostic and therapeutic modalities together with an exponential increase of publications. Inevitably ESC Guidelines have become more extensive, challenging their translations into clinical practice. Thus, we implemented a strict word count and, in each Guideline, we have put a colour-coded table that clearly shows what the new recommendations are and how they compare to previous versions.” Other items include a list of the “gaps in evidence” to increase awareness of areas that need further research and, hopefully, stimulate research in those areas. Additionally, key messages summarise the most important aspects of a given Guideline and assist the guideline documents (www.escardio.org/Guidelines/Clinical-Practice-Guidelines) is worthwhile. “The session will give an impression of what is to be found in the new Guidelines and what is new compared with previous Guidelines. It will provide a succinct summary of what the key messages are,” Prof. Windecker comments.

Pick up your 2017 Free Pocket Guidelines

ESC
FESC Lounge
From Saturday 26 August 08:00

ESC PROFESSIONAL MEMBERS
ESC Professional Members’ Lounge
From Saturday 26 August 08:00

ALL OTHER MEMBERS*
Registration Area – Zone 6
From Sunday 27 August 07:00

*Members of National Cardiac Societies, Associations, ESC Working Groups and Councils

Programme

27 August
ESC Guidelines 2017 – Overview
08:30–10:00; Barcelona - Plan Auditorium
ESC Guidelines 2017 – AMI-STEMI
14:00–15:30; Barcelona - Plan Auditorium
ESC Guidelines 2017 – Focused update on dual antiplatelet therapy developed in collaboration with EACTS
16:30–18:00; Barcelona - Plan Auditorium

28 August
ESC Guidelines 2017 – Valvular heart disease
08:30–10:00; Barcelona - Plan Auditorium
ESC Guidelines 2017 – Diagnosis and treatment of peripheral arterial diseases; in collaboration with the ESVS
16:30–18:00; Barcelona - Plan Auditorium

Chairperson
Professor Kurt Huber
15:30 Welcome & Introduction: 40 years of PCI Chair
15:40 Interactive Cases (presentation and discussion)
STEMI PCI
Dr Esteban Lopez de Sa
Diabetic NSTEMI PCI
Professor Andreas Schäfer
16:20 Summary and closing remarks
Chair

Satellite Symposium
A non-promotional Satellite Symposium organised and funded by Daiichi-Sankyo Europe held during ESC Congress 2017

40–years of PCI: Optimising antiplatelet strategies in ACS

Saturday 26 August 2017, 15:30–16:30
Room: Fira – Village 1
Fira Gran Via
Barcelona, Spain

www.escardio.org
#ESCong2017
Marie-Claude Morice: Helping to establish post-stent medical therapy was one of my biggest achievements

Doctor Marie-Claude Morice (Ramsay Générale de Santé - ICPS, Massy, France) talks to ESC Congress News about her career in interventional cardiology, including her involvement in the landmark RAVEL trial, and outlines her thoughts on developments in drug-eluting stents (DES) and transcatheter aortic valve implantation (TAVI).

Why did you decide to become an interventional cardiologist?
Cardiology really appealed to me as a “clean” specialty, which was dealing with a “noble” organ and, therefore, I felt it was the right field for me. My interest in the heart has never left me! I chose to become involved in interventional cardiology as it was a very innovative and practical field, with multiple challenges.

You were the principal investigator of the pivotal RAVEL study. How have drug-eluting stents evolved since that study was first published?
The RAVEL trial opened a new door for interventionists, and is part of history. It was the first double-blind, randomised study performed in Europe to evaluate the use of DES. It is now difficult to believe that, before the RAVEL trial, which assessed the performance of a sirolimus-eluting stent against that of a bare metal stent—patients would be told after a successful percutaneous coronary intervention (PCI) that they were to be closely monitored during the year following their intervention to detect stent thrombosis rates. Even though it is rare, stent thrombosis is a devastating complication. Since then, DES have been constantly improved, and stent thrombosis rates have been reduced to one third of the patients. A few years after the revolution of DES, we discovered the limitations of the first generation of DES with the increase in patients, without letting themselves be affected by excessive competition. Research that I have been involved in that led to the development of successive generations of DES has also contributed to the widening of PCI indication and improvement of its outcomes. DES, which is the new therapeutic revolution in the field of interventional cardiology, has also been a main research focus for me.

What have been the challenges of working in a predominantly male field?
The challenges have been the same for me as they are for all women involved in pioneering work. The way to overcome them is to work hard and follow our own path to establish our legitimacy. I have also had to learn how to overcome patronising attitudes.

What can be done to encourage more women to specialise in cardiology?
Women should work on improving their self-confidence and eliminating their own doubts about their ability to be as successful as men in this field.

What advice did you receive early on in your career that you would pass onto someone just starting out?
I would encourage my young colleagues to single-mindedly pursue their objectives, with steadfast dedication to their work and their patients, without letting themselves be affected by excessive competition.

Given that this year marks the 40th anniversary of angioplasty, what do you think has been the most important development over the last 40 years?
There have been a lot of important developments, but I will focus on TA VI, which for me represents the other most important achievement of interventional cardiology. In the space of just a few years, TA VI has become a well-accepted approach for patients with severe aortic stenosis who are deemed to high risk, or who are denied surgery. However, there are still some limitations, including extending the indication to lower-risk patients. Two of the most critical needs are to reduce the risk of severe vascular complications when using the femoral approach, and to find a solution to the risk of significant paravalvular leak.

What will be the key developments over the next 40 years be?
I am not good at making predictions, and have been surprised by most of the achievements in our specialty since the beginning of my career. I will be happy to follow any of the surprises yet to come. This is the charm of our work, to be often destabilised by novelties.

ESC Andreas Grüntzig Lecture on Interventional Cardiology
27 August - 14:00–14:35; Podgorica - Village 6

www.escardio.org/365

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The ESC thanks its 56 Member National Cardiac Societies for their valuable scientific contribution to ESC Congress 2017

All can benefit from understanding big data

A session on Monday—Big Data for Dummies—will explore the potential benefits of using big data in cardiology. Doctor Eric Peterson (Duke Clinical Research Institute, Duke University Medical Center, Durham, USA), who will be giving the presentation Big Data analytics for cardiology: how does it work? at the session, says that big data will allow electronic medical records to be combined with disparate sources of information—administration claims, biosensor information, social media and imaging, genomic, proteomic and metabolic data.

According to Dr. Peterson, one of the advantages of big data is that “that data traditionally locked within individual databases can now be more broadly shared, leading to collaborative opportunities”. In the field of genetics, for example, multiple investigators will be able to share their data allowing for validation across hundreds of thousands of subjects, and the identification of different subgroups of patients.

But for big data to become a reality, says Dr. Peterson, the scientific community will need to pull together to create standardisation of data collection. “If we can collect data in a similar fashion, whether genetic data or clinical records, it will allow us to pool that data and improve the overall quality of our databases,” he explains.

There are also issues around data governance and privacy of confidential information that need to be addressed. Regarding patient confidentiality, Dr. Peterson adds, security systems are already in place that will prevent personal information from being attributed back to individuals.

Big data will undoubtedly change the way research is undertaken. One analogy is that with current methods of research, investigators “reach into the haystack in the hope of picking up the needle” but big data approaches will allow them to search through the “entire haystack” in a relatively short period, accelerating the discovery process. Taking the example of epidemiology, Peterson says that in the past investigators spent their lives generating the discovery process. Taking the example of epidemiology, Peterson says that in the past investigators spent their lives

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Echocardiography is highly suggestive of carcinoid heart disease: thickened, fibrotic tricuspid valve leaflets, severe tricuspid regurgitation, tricuspid stenosis, and dilated right heart cavities. Abdominal CT and high levels of urine 5-HIAA confirmed the diagnosis.

Questions remain over TAVI use in lower-risk and younger patients

Prof. Falk adds that there is also the issue of long-term durability, noting: “Most long-term data for durability, in elderly populations, have indicated a low incidence of structural valve deterioration. But, the deterioration process [with surgical valves] is usually accelerated in younger patients. It remains to be seen if freedom from structural valve deterioration in this population will provide similar mid- and long-term data for TAVI.”

Interventional cardiologist Professor Eberhard Grube (Department of Cardiology and Angiology, Siegburg Heart Centre, Germany) will be speaking at today’s The TAVI/TAVR Summit. He points out that there is an important differentiation to be made between low-risk and younger patients. “Trials into low-risk patients are ongoing, and we will see what the results demonstrate. In my view, we probably will proceed to using TAVI in low-risk patients but of course we have to wait until all the data from the randomised trials are available,” he adds.

Whether or not TAVI is routinely used to treat low-risk patients, according to Prof. Falk, the heart team will always remain vital to the successful treatment of patients with aortic stenosis. He comments: “The heart team is an ongoing success story that started with the SYNTAX trial. In principle, all caregivers throughout the process should be involved—including the interventional cardiologist and cardiothoracic surgeon who perform the procedure, anaesthesiologist, and other specialists that may be needed for the decision making.”

Furthermore, for him, the cardiothoracic surgeon can most certainly play a role as the operator of TAVI. He states: “The role of the surgeon should be an active one and cannot be limited to discussing cases and providing back up for severe complications. Depending on the level of competence with regards to individual catheter skills, trained cardiothoracic surgeons are able to perform TAVI by all access routes, including transfemoral.” Prof. Grube also believes surgeons have a central role to play. “TAVI can probably be safely performed without surgery onsite, but it is not only about complications. A patient who is a candidate for the procedure should make a careful decision about treatment options with the heart team, and this definitely requires a surgeon’s view. Therefore, I think a patient is best served with on-site cardiac surgery for the procedure.”
ESC Congress celebrates 40 years of percutaneous coronary intervention

On 16 September 1977, Andreas Grüntzig performed the first-in-human coronary angioplasty procedure. Almost 40 years to the day, the ESC Congress is celebrating that percutaneous coronary intervention (PCI) and the decades of innovation that have followed. This year’s Congress features 59 sessions focused on PCI, shining a spotlight on the groundbreaking procedure and its legacy in contemporary clinical practice.

“Andreas Grüntzig from Zurich was the pioneer,” Professor Marco Valgimigli, an interventional cardiologist based at University Hospital of Bern, Bern, Switzerland tells ESC Congress News. Inventor of the technique, Grüntzig spent two years searching for a suitable first patient. Professor Bernhard Meier (University Hospital of Bern, Bern, Switzerland), then a young resident, spotted an ideal candidate in a 38-year-old insurance salesman, a heavy smoker, who was caught out one morning by a bout of severe angina. Meier came across his angiogram in the form of a 35mm cinefilm, and realised he appeared to have exactly the kind of results Grüntzig had been looking for.

The first patient had been found, and the first procedure had been performed successfully. Discharged on a vitamin K antagonist, the patient stopped taking prescribed drugs within a matter of weeks. According to Meier, he has survived 40 years without cholesterol-lowering or antiplatelet drugs.

Following this breakthrough, numerous advances have improved the now-common procedure. Catheter systems with a steerable guidewire were introduced in 1981, and the “monorail” rapid exchange catheter in 1984. Since balloon angioplasty was limited by occlusive dissections and restenosis following the procedure, metal scaffolding with stents was added to enhance procedural success.

“The introduction of metallic coronary stents is, for sure, the most relevant advancement,” Prof. Valgimigli said. “After that, the idea to make them biologically active—ie a piece of metal releasing a drug for a critical time frame—was a key development.” Following reports of acute and subacute stent thrombosis, dual-antiplatelet therapy and IVUS-guided optimal stent placement were studied as potential solutions. However, restenosis remained a persistent limitation of bare metal stents. In 1996, cardiologist Robert Falotico succeeded in developing a system to elute an antiproliferative drug following stent deployment. Approved in 2003 by the US Food and Drug Administration, the drug-eluting stent has resulted in the effective reduction of in-stent restenosis.

More recent innovations have come in the form of bioresorbable scaffolds. Whilst there are technical issues still to address in these devices, they may offer a platform for the next stage of coronary angioplasty.

“I think it is difficult to find another area within medicine where practitioners much more than industry have revolutionised the field,” Prof. Valgimigli told ESC Congress News, praising the physician-led innovation exhibited by Grüntzig and those following in his footsteps. “Each major step forward has been initiated by cardiologists first whereas industry has followed, not vice-versa.”

Commenting on the future of interventional cardiology, Prof. Valgimigli added, “We need to become better at preventing the atherosclerotic plaque rupture causing heart attacks. We need to keep exploring the possibility of delivering drugs within the vascular tree not just to improve the safety and efficacy of our stents, but also to prevent atherosclerosis progression.”

The ESC Congress’ spotlight on PCI aims to showcase the latest in interventional cardiology research and technological innovation, as well as to offer guidance for young cardiologists in training. From imaging to complex techniques, spotlight sessions will take place every day. As well as addressing the theory and practice behind PCI, the collection of lectures, debates and symposia will offer an evaluation of the history behind current techniques, the place of women in the development of intervention, and an opportunity for delegates to meet their interventional cardiology legends, including Professor William Wijns (National University of Ireland, Galway, Ireland).

Four decades of innovation have resulted in a substantial reduction in major adverse cardiovascular events. Whether the next four decades are shaped by the development of bioresorbable scaffolds or another innovation, the discipline of cardiology looks set to continue moving forward at a rapid pace.
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onti Gaudi (born in 1852 and frequently struck by bouts of rheumatic fever during childhood) the founder of Modernism in Catalonia, is the architect of the Sagrada Familia, la Casa Batllo and La Pedrera among many other buildings in Barcelona. He took over the building project of La Sagrada Familia in 1883 and proposed a complete rethink of the design—abandoning the existing neogothic design in favour of one that was more monumental and innovative. His ambitious new plan was something that he would never see fully realised: not, at present, has anyone. By the time of his death in 1926—a result of injuries incurred in a tram knocked him down—only the first bell tower had been built. Following Gaudi’s death, the outbreak of Spanish Civil War and a lack of funds (works have always been funded through private donations and ticket sales) caused a further stumbling block to the building being completed. At present, 70% of the work has been completed and the goal is for the job to be finished by 2026.

Another important landmark in Barcelona is the Hospital de la Santa Creu i Sant Pau, built by Catalan architect Lluís Domènech i Montaner between 1902 and 1911. Professor Lina Badimon, who works in Sant Pau, explains that there are now two “Old Hospitals”. The first, called “Hospital de la Santa Creu”, was founded in 1401 in the centre of town (in what is now the Raval district) and is one of the most important examples of Catalan Civil Gothic architecture of the 15th century. Today, it is the home of the National Library of Catalonia, an Art School and the Library of Catalonia, an Art School and the Institute of Catalan Studies; it was declared in 1931 a Monument of National Historic and Artistic Interest. The second “Old Hospital”, named “de la Santa Creu i Sant Pau”, was built after a boom in the population of Barcelona. This meant the first hospital became too small. In 1978, UNESCO catalogued this hospital as a UNESCO World Heritage Site. However, after 80 years of healthcare activity in the modernist complex, the Hospital de la Santa Creu i Sant Pau moved to new premises in 2009 (built in the north of the campus). It is now a museum and cultural centre.

Prof. Badimon recommends both La Sagrada Familia and the Hospital de Sant Pau–Recinte Moderniste (and Old Hospital de la Santa Creu) as unique places that “once visited are never forgotten”.

For more information about places to visit, including opening times, in Barcelona, see: www.barcelonaturisme.com/visit, including opening times, in Barcelona, see: www.barcelonaturisme.com/

The Hospital de la Santa Creu i Sant Pau

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Changing the approach to complete revascularisation in STEMI

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istorically, revascularisation of non-culprit lesions in a patient with 75% segment elevation myocardial infarction (STEMI)—i.e., complete revascularisation—has not been recommended because of concerns regarding the safety of this approach. However, the PRAMI and CvLPRIT studies have prompted a rethink about the safety and efficacy of complete revascularisation.

Prior to PRAMI (Preventive Angioplasty in Myocardial Infarction) and CvLPRIT (Complete versus Lesion-only Primary PCI trial), most of the data for complete revascularisation came from registries and these indicated that risks outweighed benefits—which is why guidelines tend to advise against the approach. However, Professor Anthony Gershlick (Department of Cardiovascular Sciences, University of Leicester and National Institute of Health Research Leicester Cardiovascular Biomedical Research Unit, Glenfield Hospital, Leicester, UK), principal investigator of CvLPRIT, believes that the poor outcomes seen in these studies may have been a reflection of patient selection. He says: “The reason that the outcomes were not good may not have been because they had multivessel intervention but because they were sicker [all-comer registry populations]”. PRAMI and CvLPRIT, both randomised controlled trials, reviewed specific cohorts. They found, respectively, that percutaneous coronary intervention (PCI) in non-culprit arteries with major stenoses significantly reduced the risk of adverse cardiovascular events (after a follow-up of 23 months) and that PCI of non-culprit lesions significantly lowered the 12-month rate of a composite primary outcome (all-cause death, recurrent MI, heart failure and ischaemia-driven revascularisation). These studies, Prof. Gershlick observes, while not providing the “definitive” answer on complete revascularisation, did “start the debate” and “get people wondering whether or not it would be better to do complete revascularisation”.

He adds that these trials did lead to American recommendations on the approach changing from “you should not do it if you may do it if you think it is appropriate”. If complete revascularisation is to be performed, a key consideration is when to perform it. “The consensus is that if you are going to do it, if all other things are stable, do it at the time of primary PCI. But if it is in the middle of the night and your team is tired, and you have a lot of STEMI’s stacking up, then you should do it at that time. In these instances, you can do it before the patient is discharged,” Prof. Gershlick says. Though, ongoing studies are reviewing (if not performing the non-culprit PCI during index PCI) as to whether bringing the patient back after discharge may be better than bringing them back before. Another consideration is the role of physiological assessment in determining the need for revascularisation of non-culprit lesions.

Tomorrow’s ESC Guidelines 2017 – Overview session (08:30–10:00 in the Main Auditorium) provides a good opportunity to see the impact of PRAMI and CvLPRIT on ESC recommendations as the new acute myocardial infarction/STEMI ESC Guidelines will be reviewed. Next year, the revised ESC Guidelines on myocardial revascularisation will be published.