Is the Ross procedure the best option for aortic valve disease? Pages 14-15

A message from the President

The European Association for Cardio-Thoracic Surgery is a success story. In 2011, we celebrated the 25th anniversary of this professional organisation that now has more than 2,800 members, not only from Europe, but from all over the world.

In 2012, we will celebrate the 25th anniversary of the European Journal for Cardio-Thoracic Surgery, that now brings to its readers more than 2,500 pages per year, has a print run of more than 5,000 copies per issue and can of course be accessed through the world wide web from practically anywhere, at any time (www.eactsjournal.org). In addition, two other journals have been founded, the Interactive Cardio-Vascular and Thoracic Surgery (www.icvts.org), and the Multi Media Manual for Cardio-Thoracic Surgery (www.mmcts.org), and all of them can be accessed through CTSnet (www.ctsnet.org).

The most recent development is the opening of EACTS House. To celebrate its official opening, we held the 2nd Strategic meeting entitled, ‘EACTS in the Future’ on February 10, 2012. At this occasion, the EACTS Council and delegates of the EACTS Domains (Domain of Thoracic Disease, Domain of Vascular Disease, Domain of Congenital Cardiac Disease and Domain of Acquired Cardiac Disease) came together with representative thoracic and cardio-vascular surgeons from North America, Asia and BRICS countries, as well as senior management of the industry in order to find out where to go from here or, in other words, ‘to identify challenges and opportunities for the future development of our specialties’ (see page 2).

EACTS House was the perfect place to hold such a meeting. Not only does EACTS House put EACTS on the map but it holds also an approximate 300m² for offices, meeting rooms and training facilities. In fact, the first floor on the ground is designed for courses including wet labs and can receive up to 70 participants. The 2nd floor holds meeting rooms and the 3rd floor hosts the EACTS offices and individual work stations.

EACTS House is fully-equipped with the latest audio-visual and video conferencing facilities, as well as a wired and wireless network. Every EACTS member should visit EACTS House, be it for a course in their field of interest, committee work, and/or to meet colleagues.

Welcome at EACTS House!
Ludwig K von Segesser, MD, FECTS, FACS, FESC President EACTS

EACTS meets EU

Last year, the EACTS President and the Secretary General, together with representatives from the ESC and ESCVS were received by the President of the European Parliament, Polish MEP Jerzy Buzek. The meeting was a unique opportunity to raise awareness on the burden of cardiovascular diseases in Europe at the highest level of the EU institution as well as to discuss the challenges met by the profession to promote cardiovascular health. To understand the disease and to improve the management the availability of comparable data on cardiovascular disease in Europe is crucial and was discussed as one of the main challenges in Europe, at EU and member states levels. Another challenge will be to raise the funding dedicated to cardiovascular research, to help understand how the diseases develops as well as find treatment and cure. Finally, participants in the meeting shared with Mr. Buzek the efforts of the profession to improve the quality of care across Europe, hence striving to reduce inequalities in access to optimal care and treatment, and to provide the best possible level education to medical students as well as to confirmed doctors.

A second meeting with Mr. John Dalli, Commissioner for Health and Consumer Policy of the European Commission was held in February 2012. Over the next few months the members of the European Parliament will be faced with several pieces of legislation that contribute to reducing the burden of cardiovascular health in Europe: the content and budget of the next research framework, the recast of the medical devices directives as well as the revision of the clinical trials directive.

In this issue

EACTS House
Founding fathers Francis Fontan and Konstantin Moghissi officially open EACTS house

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We talk to Hans Huygens about his career and the future of the cardiothoracic specialty

Fundamentals in cardiac surgery
We report from the first course to be held at the new offices in Windsor - Fundamentals in Cardiac Surgery (Part I)

PARTNER implications
Olaf Wendler examines the clinical implications for the PARTNER trial and SOURCE registry outcomes

Minimal invasive techniques
Peyman Sadati Nia reports from Nieuwegein, The Netherlands, on the minimal invasive techniques course

Barcelona 2012
Paul van Schil, Martin Czerny and Volker Far Falk outline the Thoracic, Vascular and Technological college programmes at this year’s meeting
2nd Strategic Meeting - EACTS in the future

The EACTS Strategic Meeting gathered together the EACTS Council members, representatives of each Domain and representative thoracic and cardio-vascular surgeons around the world, as well as industry ‘to identify challenges and opportunities for the future development of our specialities’.

EACTS President, Ludwig von Segesser (Switzerland), opened the proceedings by welcoming all the invited guests to EACTS House and said that following on from the Association’s 25th Anniversary in 2011, “the aim of today was to assess what the Association’s role would be in the future.” He stated that from his institution’s experience in Lausanne, Switzerland, there is increasing competition from cardiologists, vascular surgeons, intensivists, as CABG and open valve procedures continue to decrease.

EACTS Secretary General, Pieter Kappetein (The Netherlands), then showed how the Association and the annual meeting have both grown over the last two decades, not only in Europe, but as a truly international organisation. Furthermore, he emphasized how the EACTS has not only attracted cardio-thoracic surgeons to become members, but also congenital and vascular surgeons, demonstrated by the quality of papers presented within those domains at the annual meeting.

The next presenter was Paul E van Schill (Belgium), Chair of the Thoracic Domain, who discussed the future of thoracic surgery. He began by stating that the Domain was dynamic and has several working groups (including Chest wall, Reconstructive medicine, Robotic, Thymic etc), as well as playing an active role in the European School of Cardiothoracic Surgery. The Domain also has a vital role in inter-disciplinary cooperation at both national, European and international level with participation in conferences and taskforces. Despite this, Van Schill said that thoracic surgery throughout Europe was varied with specific training in some countries (Spain, Switzerland, Italy) but not in others, whereas in the USA and Asia there were dedicated thoracic centres. In conclusion, he said that in the future thoracic surgery must embrace new technologies and develop and improve technical skills, create a European database for thoracic surgery and through the UEMS have a uniform training programme.

Discussing the future of congenital surgery, Chair of the Domain, William Brawn (UK) said that the Domain has continued its very active participation in education programmes not only at the annual meeting but also the EACTS Foundation Courses, as well as international activities such as cooperation with the Association for European Paediatric and Congenital Cardiology (AEPCC), AATS and STS, which emphasis multi-disciplinary approach to surgery. He discussed how despite advances in technologies and technolo- gies there were still many issues of congenital surgery that needed solving such as myocardial protection and cardio-pulmonary bypass. Looking to the future he said that the ability to reactivate resident human cardiac stem cells offers the potential for myocardial regeneration, and advances in mechanical pumps also offers new treatment options. Earlier and more accurate antenatal diagnosis, foetal interventions, maternal blood tests will all have a huge impact on congenital surgery, said Brawn.

Next, Chair of the Vascular Domain, Martin Czerny (Switzerland), stated that vascular surgery has in recent years focused on aortic disease and technological advances have expanded treatment options (such as thoracic endovascular aneurysm repair). He added that the best ways to treat patients would be to have “Aortic Centres” that are specifically equipped to treat the entire organ and would be staffed by a multidisciplinary team offering pharmaco- logically, surgically and by endo-

Heather Pepper (UK), Chair of the Adult Cardiac Domain, commented over the next five years there are many areas that will change cardiac surgery including: TAVI; hybrid approaches to CABG using LITA to LAD and drug-eluting stents; surgery for heart failure; and imaging advances (such as diffusion spectrum MRI tractography). With regards to training, Pepper added that improvement in medicine have resulted in young surgeons not been exposed to problem arising in intensive care and he said there should be some simulation training and giving them the confidence to deal with such situations. He also called for combined cardiac and vascular training programmes, intensive imaging courses for surgeons and developing a system of cadre surgeons carrying out prospective cohort studies.

Discussing the patient’s needs, Leslie Hamilton (UK) said that the patient must always be the first concern of any doctor and their actions must best serve the patient. The key of providing optimum patient care is best med-

Official opening of EACTS House

On Friday 10th February 2012, the new headquarters of the Association, ‘EACTS House’, were officially opened by two of the Association’s founding fathers, Professors Francis Fontan and Keyvan Moghissi. Based in Windsor, UK, the new building houses the EACTS Executive Office and has first class educational and business facilities.

In 2012, EACTS House will host many of the Association’s Academy Courses and boasts state-of-the-art conference amenities complete with lecture theatre and dining facilities. The official opening of EACTS House came at the end of a busy week at the new headquarters. As well as hosting the first Academy Course, ‘Fundamentals in cardiac surgery Part I’ in the new venue, EACTS House also held the Second Strategic Conference.

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EDWARDS TRANSCATHETER HEART VALVE PROGRAM

Advancing TAVI. Changing Lives.

Partner with us to continue advancing valve science and building unrivaled clinical evidence as you transform the lives of patients.
2nd Strategic Meeting – EACTS in the future

Continued from page 2

Robert Level III Course

The next presentation by Stuart Head (The Netherlands), examined the role of the ‘Heart Team’ and emphasized the

It would lead to an improvement in patient care.

Continued from page 2

Douglas E Wood

...and especially in clinical trials.

To continue work together in the cath lab/operating theatre

...on those patients deemed high risk

...are saving lives, especially in

formed’ data. He said that de-

providing the patient with ‘in-

...tion between specialists and then

plinary team was communica-

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the robotic team’. The course, which started a year

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...in emerging technologies.

...prove the performance of robotic sur-

...their knowledge and skills.

...that this could impact quality improvement programmes, healthcare

...as well as impacting whether

...there will be an adequate workforce, concluded Wood.

Presenting the views from the America Association for Thoracic Surgery, current President Craig Smith (USA) said that

North America is facing specific challenges such as malprac-

...costs, increasing government regulation, decreasing funding, decreased support from industry and a reduction in an expressed interest in CT training from med-

...ical students. He addressed how the AATS has tried to address these concerns including summer scholarship programmes, direct

...ing academic support

through the Association’s Academy, and increased co-opera-

...with international organisations.

Representing the Society of Thoracic Surgeons, vice-presi-

...Douglas E Wood (USA) outlined the current status of

Thoracic surgery in the United States. Although performing dif-

ferent procedures, the training pathway for cardio- and thoracic surgeons does crossover.

He highlighted that the length of training surgeons was an issue but added that the creation of integrated residences facilities dedicated and

...pecialized training (with an

...ivest invivo training element if requested). In the US, the future of

...he future of healthcare is largely dependent on Medicare reform as this could impact quality improvement programmes, healthcare

...verage and reimbursement, as well as impacting whether

...there will be an adequate workforce, concluded Wood.

Discussing the future of the EACTS, Rafael Sadaba (Spain) focused his presentation around two issues: setting and raising standards; and transcatheter techniques and survival.

He said that despite cross border recognition there is a distinct lack of standards, which results in unequal and suboptimal training.

He noted that the EACTS has a duty and responsibility to play a leading role in addressing these issues and facilitating discussion among the national societies and other stakeholders. The EACTS has also created the ‘EACTS Sim-

...ical Training’ awards to improve innovation and education in training. In addition, he outlined the importance of sustained

...in disruptive innovations in relation to developing new technologies, adding that the EACTS was taking an active lead with the creation of the EACTS Academy to provide training in minimally invasive techniques.

All participants, both delegates and faculty expressed their enthusiasm and satisfaction for this live surgery course. These are some of the comments:

“I wanted to thank you for inviting me to your superb

...What a great course and an incredible job. It
takes great leadership”.

Kemp H. Kernstine, Sr., M.D., Ph.D.

Professor and Chairman, Division of Thoracic Surgery University of Texas, Southwestern Medical Center and School of Medicine

“Thanks very much for the wonderful course. The

...size of the group was just fine to keep it familiar. This course will keep me stimulated to continue my efforts with robotics in thoracic surgery here in Switzerland…”

James Habicht (Switzerland)

“I was delighted to participate to your course, thank you once more. The sessions were honest and open to free discussion, it was a real pleasure to follow your and your staff expertise at the OR…”

Ari Mennander Tampere (Finland)

EACTS Robotic Level III Course

Kemp H. Kernstine – Dallas (US)

Franca Mealli – Pisa (Italy)

Wiley L. Nifong – Greensville, North Carolina (USA)

Jens C. Buckett – Berlin (Germany)

Ralph Alexander Schmid-Bern (Switzerland)

Giulia Veronesi – Milano (Italy)

Today, robotic surgery represents the most advanced technological devel-

...onments in minimally-invasive sur-

...ery. However, in cardio-thoracic

...surgery this technique is well stand-

...ed for very few centres. Sci-

...entific societies, such as the EACTS

...tage in advanced surgical training in emerging technologies.

The goal of this course was to im-

prove the performance of robotic sur-

...geons already experts in cardio-tho-

...acry surgery. Sessions were held in

...two operation rooms of the Multidis-

...iplinary Center of Pisa. Both

...ese rooms are equipped with the

...est generation of surgical

...matic systems. The system’s dual

...ul control allowed the faculty to show the

...ations step-by-step. This ses-

...ation was associated with a pre-clinical

...hat involved using a simulator (Skill Simulator). The course included

...two full days of live surgery followed by a final day dedicated to the inter-

...active discussion, entitled: ‘Contron-

versial issues; operative consideration and anesthesiology management for the robotic team’

Surgeons who attended the meet-

...ing came from The Netherlands, Ja-

...apan, Greece, Ireland, Italy, Iran, Bel-

...gium, Switzerland, Portugal, Austria and Finland. Upon completion of

...course, attendees were able to: select patients who would be suita-

...ciable candidates for robotic cardiotho-

...surgery; use the robotic system by acquiring all the fundamental ele-

...emotional and practical, the so-called ‘skills’), and ensure an opti-

...mal outcome for patients.

 Franca Mealli

Franca Mealli, Director of Robotic Multidisciplinary Center, University Hospital, Pisa, Italy

Directors: F. Mealli, R Consula R Schmid
Second Strategic Meeting
EACTS in the future
In this issue we talk with Professor Hans Huysmans, founding member of the EACTS and past-president of the Association. We discuss his career in medicine, his memories of the EACTS and the challenges cardiothoracic surgery faces over the next decade...

Why did you decide to pursue a career in medicine? I come from a family who for six generations before me were doctors, so it seemed it was inevitable that I would continue the tradition. However, probably because of this reason, I had other thoughts and started out studying chemistry, although I changed to medicine in the first year.

When it came to specialising, at first I wanted to study neurosurgery because I was very impressed by the way the neurologists studied the function of the brain and how they influenced or manipulated brain function by removing little parts of the brain and thereby restoring normal function. To make sure I was making the right choice before I started my training position, I went to work in a neurological clinic and I was a little shocked that after a few weeks I had not seen one patient going back home ‘normal’.

At that time in 1950’s, the merit of neurosurgery was less than I had thought. Of course, I saw the potential of improving, but I realised that I would be psychologically burdened by witnessing so many of my patients not having a satisfactory outcome. I remember that I had to sign a six year contract for the position of a neurosurgeon before I had even started my training. I thought this was unfair and objected, and we managed to convince the other surgeons to sign a six year contract for the position of a neurosurgeon.

Looking back on your career, who were your greatest influences and why? At the beginning it was a Professor of Neurology who was an excellent teacher who taught an excellent way of thinking. Later in my career I had some great surgeons to take up new position in general surgery, St Antonius Hospital asked me to stay. So I agreed for one year, then two years, then three by which time I had done more cardiac surgery than most of the Chiefs in the academic departments in the country. I thought it would be a waste to do away with the experience and I thought that there was a real need for cardiac surgeons, even before the advent of coronary artery bypass surgery.

Sometime later, I became the Professor of Cardiothoracic Surgery at Utrecht University, which at the time was an unusual position as cardiothoracic surgery was not yet a specialty, so although I had performed lots of cases I had received no formal training. I was delighted to have gained an academic post, although they were unwilling to invest in the necessary resources and facilities required to ensure this was a leading academic cardiothoracic surgery department. At the same time Leiden University asked whether I would be interested in a similar position at their institution, and I stayed at Leiden for the rest of my career.

Looking back on your career, who were your greatest influences and why? At the beginning it was a Professor of Neurology who was an excellent teacher who taught an excellent way of thinking. Later in my career I had some great surgeons to take up new position in general surgery, St Antonius Hospital asked me to stay. So I agreed for one year, then two years, then three by which time I had done more cardiac surgery than most of the Chiefs in the academic departments in the country. I thought it would be a waste to do away with the experience and I thought that there was a real need for cardiac surgeons, even before the advent of coronary artery bypass surgery.

In the early days it was a struggle, we had to work hard and travelled a lot, for which we paid for ourselves. In the first ten years we were a small collective working hard and believing in something and we never believed 25 years later the Association would be where it is today.

During your career, you were heavily involved with the European Union of Medical Specialists (UEMS), please can you tell us about your involvement? I have always felt more European than Dutch and I believe that we were wasting so much time, energy and resources in not harmonising educational programmes. I remember it was proposed that we should approach the European Union (or European Community as it was known) to address these issues, but I said we should not as it would take years, it was slow and bureaucratic. What I proposed was that we should start something ourselves and then approach the EU with an organisation and system in place. So that is what we did and to a certain extent it worked and we successfully created European Boards to oversee examinations.

However, one of the main problems was one universal training programme for all European countries that would facilitate the exchange of medical professionals across European boarders, increasing knowledge and opportunity. The problem is of course, everybody believed that they had the best model on which a training programme should be based. In the end we got most national societies to agree to a training schedule and brought it before the UEMS, but gaining their approval turned out to be a rather difficult task.

At that time, cardiothoracic surgery as a specialty did not exist in Europe and so were not in the specialities of the UEMS. However, after much deliberation and consultation, we manage to convince the other specialties one by one that cardiothoracic surgery should become a section of the UEMS. After this we faced more formal problems such as having representatives from each of the member states. However, these people were not always appointed by the national society or had different ideas, and so this has become a significant issue over the years in trying to develop and gain universal agreement and progress.

The European Board is functioning more or less by itself, but not as
a fully functioning element of the UEMS. As a result, I think the UEMS has lost momentum and so people are less enthusiastic about supporting the Board and sitting the examination. Unfortunately, things have not really progressed as I wished.

What are the biggest challenges facing cardiothoracic surgery over the next decade?

If you look at history diseases and conditions come and go and they are always replaced. For example, years ago the whole of thoracic surgery was based on tuberculosis, now it is lung cancer. One of the challenges the surgeon will face will come from the physician, not from a financial aspect but in terms of providing the treatment the patient requires. We need to know what the patient wants from their treatment and I think ultimately, they want a treatment to improve their quality of life. We all know as we get older things to not function as well as they did, but as professionals we must look at the long term and try and find treatments that are durable. Look at the bypass vs. stenting outcomes and in most cases surgery is better. Yes it takes time, yes it takes a lot of work, but that is what surgeons should do.

Of course it is tempting to make more money by doing a procedure even if it is inferior, but this happens because no one is asking the right questions. For example, none of coronary stenting studies are examining long term outcomes, why, because all most people are interested in is short term outcomes. As a former Dutch Minister of Health once said to me: “You do realise the cheapest patient is a dead patient!”

You have been retired for a decade or so now, how have you found retirement?

In The Netherlands it is mandatory to retire at 65, but I was quite fortunate as Leiden did not replace me straight away, so I kept busy involving myself in educational programmes examining new techniques in valve surgery. This involved a lot of travelling so I was lucky as I kept busy in my own field. But then, I have seen too many examples of people staying too long and I wanted to enjoy life outside of my surgical career. I started a role as acting as a mediator for medical complaints in our hospital area, which was quite interesting and I discovered that there are not really that many medical mistakes, but a lot of miscommunication between patients and doctors. This is one aspect that can be addressed during training and education. I enjoyed this role because I maintained patient contact and it was not only cardiothoracic patients but patients in the Leiden area. Outside of work I still enjoy walking and cycling, one of the advantages of cycling is that you can do it alone. In our profession with long and sometimes unsociable hours it is an activity you can enjoy alone and I used to have a racing bike some years ago. I still enjoy cycling, but no longer on my racing bike! Of course, this is all away from my family of which I am very proud, particularly my 14 grandchildren. If I am ever in need of something to do they keep me very busy. I think it is unavoidable that they will follow in the family profession. We have four children and one adopted son and two have chosen a career in medicine. My daughter is an epidemiologist and my son in an orthopaedic surgeon. I think like me, he did not want to go in the same direction as his father and decided to make his own name.
Fundamentals in Cardiac Surgery Part I

From 6-9 February 2012, nearly 40 surgeons-in-training attended the first Academy course to be held at the new offices in Windsor. The aim of ‘Fundamentals in Cardiac Surgery (Part I)’ was to provide a comprehensive overview of cardiac surgery. The course gave the attendees a unique opportunity to discuss the clinical challenges of cardiac surgery with an experienced faculty from around the world. The curriculum (formerly delivered at the European School for Cardio-Thoracic Surgery, Bergamo) addressed a whole host of subjects from the anatomy of the heart to cyanotic heart disease, and trials and guidelines in coronary revascularization to how to write a medical paper. This report reports some of the key highlights from the four day course.

Professor William Brawn (Birmingham, UK) began the proceedings with a brief ‘History of cardiac surgery’ and highlighted how the heart has been a symbol of life throughout human history from ancient Egypt to Rome. In the middle ages scholars began to make key observations about the anatomy of the heart, culminating in William Harvey (1628) detailing how the heart propels blood around the body. Over the next 300 years, progress was slow with many leading physicians such as Stephen Paget stating that ‘surgery of the heart has probably reached the limit set by nature’. Nevertheless this did not stop brave pioneers (Alexis Carrel and Henry Souttar) carrying out experimental surgery and advancing knowledge.

Another pioneer was Robert Gross who in 1948 grafted artery tissue from one person to another thus enabling the repair of damaged arteries and in the 1950’s Walter Lillehei introduced the cross-circulation technique, which led to the development of the first heart-lung machine by John Gibbon. The ‘big explosion’ came in the 1960’s with coronary artery surgery and heart transplants. In congenital surgery there have been many pioneers including Senning, Mustard, Glenn and Fontan. The past 20 years has seen the advent of the interventionalist and he added that in the future there will be further advances in robotic surgery and remote surgery (trans-Atlantic). In summary, Brawn concluded, “We can learn from the past however, the future is still totally unpredictable.”

The ‘Anatomy of the heart’ session utilised a video camera and several heart specimens. Professor Andrew Cook (London, UK) intrigued delegates analysing the various structures of the heart. “Demonstrating the anatomy has been around for centuries and we believe this is one method of bringing it up to date. The concept of utilising the camera is something we have developed over a number of years and this method of learning is certainly more interactive and facilitates hands-on learning with the specimens if desired,” explained Cook. “Specifically, the ‘close up’ technique has dramatically improved the experience because it provides a greater perspective than ever before.”

In the first of three presentations, Susanna Price (London, UK) presented a general assessment of cardiac function with respect to physiological and function in clinical context, as well as examining the roles of the right and left side of the heart in her presentation ‘Physiology of the heart’. She emphasized the importance of monitoring patients as this can forewarn of impending cardiovascular crisis, differentiate causes of haemodynamic instability and shock, and enable ECG monitoring of response to therapeutic intervention. With regards to blood pressure, her take home message was: “Blood pressure does not correlate to cardiac output.” She asked the audience to remember that no monitoring or investigation improves the outcomes unless coupled with a suitable intervention; therefore the interpretation must be in a clinical context as the greatest risk to the patient is misinterpretation. She stressed that the left and right heart are fundamentally physiologically different, they work at different pressures, have

What the delegates thought...

Ruslan Lazarev
Age: 30
Location: Moscow, Russia
Position: Studying a Phd
Stentless valves in aortic positions

Jiri Nicovsky
Age: 28
Location: Prague, Czech Republic
Position: Cardiothoracic surgery resident (third year)
I was looking on the EACTS website and colleagues recommended the course they previously attended in Bergamo. I really enjoyed the aortic valve replacement presentation, as this is the area I find most interesting. I would definitely recommend the course and I am going to attend the ‘Advanced’ course later in the year.

Thomas Martens
Age: 30
Location: Zaffelare, Belgium
Position: General surgery resident
I am a member of the EACTS and saw the course advertised on the website. I was interested in the lecture by Professor David Taggart on CABG and trials results and the congenital aspects of surgery so I enjoyed the presentation by Professor William Brawn. What is impressive is the quality of speakers, they are all real experts in their field.
different filling times, the ejection times maybe different although they also still interact will each other.

In her second presentation enti-
tled, “Intensive Care 1”, she out-
lined the management of cardio-
genic shock and presented some
clinical examples, which outlined
training paradigms, complications and outcomes. Through the ex-
amples she demonstrated how im-
portant it is to know the underly-
ing cause of cardiogenic shock and that stated that “shock is not a di-
agnosis”. Price also said that it was
important to assess and treat both
sides of the heart independently
and then together.

In her final presentation enti-
tled, “Intensive Care 2”, Price dis-
cussed various imaging modalities
and their limitations for the cardi-
vascular system on the ICU, com-
mon complications on the ICU and
why other organs impact on the pa-
tient’s health. In regards to imaging
systems she reminded the delegates
to make the most of the specialist
radiology/nuclear medicine depart-
ments in their hospitals and stressed
the importance of looking at the
lungs, liver and kidneys for signs of systemic failure. “Each time you
gain another organ failure your pa-
tient is more likely to die and that is
why you must not just concentrate
on the heart,” she concluded.

In the first of two presentations, Professor John Pepper
(London, UK) discussed extra-coroporal cir-
ulation and began by reminding ad-
tendees that “the way the blood
moves around the heart is deter-
mained by the fibres and is thrust out
in a pulsatile and twisting form. The
challenge of cardipulmonary by-
pass is CPB is to pump five litres of
blood per minute, oxygenate and
remove the carbon dioxide. The so-
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Continued on page 11
Two-year PARTNER trial cohort B: What are the implications and how do the results compare with SOURCE?

Olaf Wendler  
King’s College Hospital/King’s Health Partners;  
Department of Cardiothoracic Surgery, London, UK

Early results from Cohort B of the PARTNER trial demonstrated that Transcatheter Aortic Valve Implantation (TAVI) is superior to standard medical treatment in inoperable patients with severe aortic stenosis (AS). Interestingly the mortality of surgical aortic valve replacement (sAVR) in PARTNER was estimated by the involved interventional cardiologist and cardiac surgeon. Patients were classified as inoperable and therefore selected for Cohort B, if their expected mortality from sAVR was >50%. However, there is only limited information available on how the inoperable group of patients was different to patients considered only high-risk for surgery (Cohort A), which makes comparison with other TAVI investigations challenging.

Recently presented two-year outcome data from Cohort B not only confirmed that TAVI remains superior during follow-up, but also demonstrated an incremental benefit with an overall survival of 56.7% compared to only 32.4% with standard treatment. The number of patients which need to be treated to save a patient’s life decreased from five at one-year follow-up to four patients at two years and is expected to further decrease over time. Direct comparison with the largest European TAVI Registry, the SOURCE Registry, in which the same device, the Edwards SAPIEN™ transcatheter heart valve (Edwards Lifesciences Inc) has been used, is hampered in that Cohort B, if their expected mortality from sAVR was >50%. However, there is only limited information available on how the inoperable group of patients was different to patients considered only high-risk for surgery (Cohort A), which makes comparison with other TAVI investigations challenging.

In PARTNER Cohort B, TAVI patients benefitted not only from an increased survival, but were in fact also less often admitted for hospital treatment during follow-up. The large difference in repeat hospitalizations between the two groups at two years (TAVI 35% vs standard therapy 72.5%), has not only major implications for patients quality of life, but will also have significant impact on the economic benefit achieved using TAVI and future analyses are awaited.

The incidence of stroke in the Cohort B TAVI cohort was one of the main concerns at thirty days, resulting in discussions on the need and efficacy of embolisation protection devices. Hemorrhagic strokes did not play a major role at that early time after TAVI. However, at two years the difference in stroke frequency is largely due to an increased number of hemorrhagic strokes in the TAVI group. This raises again the question which kind and duration of antplatelet treatment should be considered after TAVI. There is currently no adequate scientific information available to answer this question and treatment is mainly based on experience from early feasibility trials. In this respect patients who are on additional anticoagulation for other reasons such as atrial fibrillation, are a particular challenge. The two-year results from Cohort B clearly indicate that there is a need for future studies to identify the optimal postoperative antiplatelet/anticoagulation treatment after TAVI.

In summary the two-year results from PARTNER Cohort B demonstrate that TAVI is highly superior to standard treatment in inoperable patients with severe AS in the midterm course. Given that only TF access was used in this Cohort, it is unclear what the outcome of inoperable patients without peripheral vascular access, who undergo TA TAVI or standard treatment would be. However, given the small difference in survival between TF and TA access in the SOURCE Registry, one would suggest that this group of patients would benefit in a similar way.
in life secondary to left atrial distension. The natural history of the condition shows that the patient’s health will decline with mortality in their 50’s as anything that increases the shunt decreases the patient’s lifespan. The vast majority of ASDs are asymptomatic and whether the hole is suitable for percutaneous device closure depends on the size of the hole (generally <25mm). The surgical approach to ASD closure is through a median sternotomy, although they can be closed via a minithoracotomy or port access procedures. A complication from surgery can include pericardial effusion, which Haw recommended should be assessed with an echo-cardiogram before they are discharged. In summary, he said that both device and surgical closure have merits, although late complications from device closure have not reduced despite the increase in operator experience.

VSDs can be either congenital or acquired, single or multiple and asymptomatic or unsuspected, and they can be located in the sub-arterial, muscular or perimembranous. The VSD can present as anterior or posterior, the latter is associated with other cardiac anomalies and may lead to late post repair sub aortic stenosis. He said there were a few special VSDs that cause physiological problems, for example a small muscular VSD may cause jet lesions in the mid-RV cavity and multiple small VSDs may cause a significant shunt, but often close spontaneously. Complications from surgery can include damage to the aortic valve, failure to close the defect and reduced ventricular function, with late complications including endocarditis and clarification of the patch. In conclusion, Haw said that VSD closure was incredibly safe and insisted that a full understanding of the morphology and thorough investigation helps surgical planning.

In an examination of Cyanotic heart disease (shunts, TGA, TF4), William Brawn began by stating that there are various shunts utilised for the relief of cyanotic heart disease including but not limited to Blalock-Taussig (BT), Pott’s and Waterston-Cooley. Complications arise from the procedures can include stenosis (distortion of the pulmonary arteries), nerve palsy, phrenic, recurrent laryngeal and Horner’s syndrome, as well as lymphatic leak, shunt occlusion and endocarditis, among others. It is also important to consider the location of the shunt. “Except in a few situations in congenital surgery, there is no such thing as a cure and it is always important to think about the next operation,” explained Brawn.

In his first presentation, Professor David Taggart (Oxford, UK) looked at conduit selection for coronary revascularisation and why certain conduits are chosen in certain situations. Introducing his lecture he emphasized that CABG is still the best therapy for most patients with severe coronary artery disease (CAD). This statement is supported by both the SYNTAX trial results and the Joint ESC/EACTS Guidelines for Myocardial Revascularisation 2010. Despite its benefits, conventional CABG does have two limitations; the damaging effects of bypass; and vein graft failure. Taggart explained that the routine use of the internal mammary artery is paramount (although not in obese diabetics) and advised that the radial artery should be used as a third arterial graft. He also recommended the use of off-pump CABG (the benefits are greatest in the elderly and high risk patients) and emphasized the necessity to confirm graft patency.

In his second presentation, Taggart examined the clinical evidence in cardiac surgery by looking at the trials and guidelines in coronary revascularisation. The evidence base consistently shows that patients (79% SYNTAX results) with three-vessel disease and patients with left main disease (65% SYNTAX results) who undergo CABG have superior survival, freedom from myocardial infarction and repeat revascularisation at three years. “PCI maybe the best treatment for ostial or mid shaft left main disease, the subject of the EXCEL Trial, and does have an important role in patients who are unfit for or refuse CABG,” said Taggart. “However, the Heart team approach must ensure that patients receive appropriate information and that their genuine informed consent is provided.”
Report on the course of “Minimal invasive techniques in adult cardiac surgery”

Peyman Sardari Nia, MD, PhD
Director, Department of Cardiothoracic Surgery, Amphia Hospital, Breda, Netherlands

The course was organized at St Antonius Hospital, Nieuwegein, the Netherlands
Dates: 13-15 February
The organizer: Surgical Training and Man-power Committee

Why was the course organized?
The success of the cardiac surgery is based on the consistency and the excellence of the results of the conventional techniques that have been the subject of scientific scrutiny for decades. The illusion within the cardiac surgery is that the operative techniques that have been developed during the past 40 years will continue to compete with new developments and techniques in coming decades. The challenge is to embrace and incorporate the new techniques in a responsible manner that no compromise is made with regard to excellence of the results and the patient safety.

The cardiac surgery is very dependent on the developments in related specialty of cardiology. The fast amount of resources and effort that are being applied in research and new developments in the field of cardiology are incomparable with our efforts. Therefore, the survival and growth are specially that we have to be dependent on our ability to take the lead on the innovation in the field and on our ability to train the young generation of the surgeons in minimal invasive techniques.

The course focus was the technical aspects of different minimal invasive procedures. The course was designed to provide the participants with a platform and a basis for starting the same program at their own institute. That is why the course was organized in a hospital where these procedures are performed on the daily basis. As the focus of the course was the technical aspects, these procedures were shown and explained through different presentations and live-surgery. As cardiac surgery is resulant of a team work, cardiologists, perfusionists and anesthesiologists were invited to present the technical aspects of their contribution to the procedures discussed. The faculty was mostly from the hospital so that the participants would see the same team presenting the techniques and performing the operations.

Report on the course:
The maximum capacity of the course was 100 people. The course was fully booked and we had to stop the registrations few days before the start of the course. The participants were from more than 25 different countries and came from Far East, Middle East, Europe and America.

The course was divided in six different parts. The first part was the Access part, whereby the different accesses used in minimal invasive techniques were presented in technical details. The five other parts were dedicated to 5 different minimal invasive procedures, namely Heartport, TAVI, Mini-AVR with MECC, Mini-maze and TEVAR. In each part external faculty gave presentations about the procedures in general, the comparison with conventional techniques and results so far known in the literature. In each part the faculty from hospital gave presentations about the technical aspects of the procedure. The presentations were given about the anesthesi—

What the delegates thought...

Feedback from residents who attended the ‘Minimal Invasive Techniques in Adult Cardiac Surgery’ Course, 13-15 February, Nieuwegein, The Netherlands

Tine Philipsen, MD
University of Antwerp, Belgium

I am currently in my last year of training for cardiac surgery, meaning the 8th year after my general medicine diploma.

I preferred the sessions on minimally invasive mitral valve repair because this highly interests me. But I think the entire course was very enriching, especially in the format of ‘tips and tricks’, what to do and what not to do, what in case of problems.

I already attended the level A and C cardiac courses from EACTS, and I hope to be able to extend my knowledge in the future by attending the other cardiac courses.

Wouter van Leeuwen, MD
Erasmus University Medical Center, Rotterdam, The Netherlands

I am a resident in the fifth year of my training so after this year another training year follows.

Live cases are always very interesting as it is very instructive to see how procedures are performed in other institutes with a lot of experience with certain procedures. Especially for a resident in training “the hands on” sessions are very important and therefore I liked them most.

My overall impression was that the course was very well organised and the offered programme gave a complete survey of minimal invasive cardiothoracic surgery.

I noticed however that the proportion of residents participating in the course was very low, so maybe in the future the organising committee should give more publicity for this course among this group of young surgeons.

I have planned two other EACTS courses for this year: Advanced Module Coronary Surgery and Fundamentals in Cardiac Surgery Part II.

Lucio Careddu, MD
University of Bologna, Italy

‘For Lucio Careddu the course in Nieuwegein was a bit of coming home since he worked in Nieuwegein as a trainee a year ago’

I’m in my fifth and last year of training. I have more than six month to fully complete my residency. At the end of this year I will be a cardiac surgeon.

What session did you like most and why?

This is a difficult question, because all the course was really interesting and all the session well explained but if I have to choose one I think the most important was the TAVI session because is one of the future pathways of cardiac surgery and I have to improve my knowledge as a surgeon in training.

What was your overall impression of the course?

Overall impression is really positive, even if I know most of the topics and I’ve work together with Robin Heyman, Aladin Yilmaz, De Kron and Dr Morshuis, everything was well explained and clear. The location and the accommodation were great.

Lucio is planning to attend more EACTS courses.
EACTS News

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ological preparation of the patients, the considerations regarding the perfusion, technical details of the procedure and instrumental necessities. Each part contained one or two live-surgical procedures to show the techniques in details.

The course was very interactive and after each presentation many questions of the participants were discussed and addressed. During the live-surgery there was a constant interaction between, moderators, surgeons and the audience. On Monday and Tuesday the program was concluded with live-heart team, whereby the surgeons, cardiologists and the participants discussed cases and choices of treatments.

On Monday there was also a social program organized. There was a walking dinner arranged in the City of the Utrecht. The participants were transferred by a bus to Utrecht to have their first course of the diner. After the first course, the participants were divided in small groups of 10 people with a guide who showed them the historical center of Utrecht and guided them to the next restaurant for the main course. The desert was consumed in different restaurant after second guided tour through the city.

We had asked each presenter in advance to send two questions regarding their presentations. These questions were compiled into a survey and were sent to participants through email prior to the course. After the course, the same assessment was sent to participants together with an evaluation of the course. These pre-and post-assessments will be used to evaluate the quality of the course and whether the course could significantly enhance the knowledge of the participants in objective terms.

Overall the quality of course was assessed excellent and the participants indicated that live-surgery was very important part of the course. Some results of the evaluation of the course are depicted below.

Acknowledgements:
The organization of this course would have been impossible without the help of many people involved. I would like to thank the organizing committee, St Antonius Hospital, invited faculty, the EACTS office, the participants, the sponsors and the patients operated on during the live-procedures for their support, help and participation. Please find a full list of their names below.

Organizing Committee:
- Pieter Kappetein, Rotterdam, Netherlands
- Rafael Sadaba, Pamplona, Spain
- Peter Krieg, Jena, Germany
- Mathias Siepe, Freiburg, Germany
- Peyman Sardari Nia, Breda, Netherlands
- Thom De Kroon, Nieuwegein, Netherlands
- Sharon Pidgeon, Amsterdam, Netherlands
- Amanda Cameron, Rotterdam, Netherlands
- Rianne Kalkman, Amsterdam, Netherlands

From Hospital:
- Helga Visser, Coordinator of the department of cardiothoracic surgery

Surgeons:
- Wim Morshuis
- Wim-Jan Van Boven
- Thom De Kroon
- Robin Heijmen
- Alaaddin Yilmaz
- Uday Sonker
- Edgar Daeter

Perfusionists:
- Peter Barselaar
- Frans Waanders

Anesthesiologists:
- P. Noordzij
- E. Scholten
- L.P Reusen

Cardiologists:
- E. Mast
- J. Van der Heyden

External Faculty:
- Mattia Glauber, Massa, Italy
- Ivo Deblier, Aalst, Belgium
- Pieter Kappetein, Rotterdam, Netherlands
- Filip Casselman, Aalst, Belgium

Sponsors:
- B. Braun Medical
- AtriCure
- Edwards Lifesciences

EACTS Office:
- Kathy McGree
- Paul Lehain

Martin Czerny, Bern, Switzerland

Please indicate the overall quality of the scientific program:
- Excellent
- Good
- Moderate
- Poor

Please indicate the overall quality of the course:
- Excellent
- Good
- Moderate
- Poor

Do you think it is ethical to have live-surgery during each course?
- Yes
- No

What attracted you the most from the program of this course that you participated?
- Overall scientific program with live surgery
- Overall scientific program regardless of live surgery
- Live surgery
- The hospital
- The faculty

Please indicate the quality of live-surgery:
- Excellent
- Good
- Moderate
- Poor
Aortic valve replacement in young patients remains a major problem for patients and surgeons due to the shortcomings of commonly used substitutes. On one hand there is a considerable risk of reoperation in bioprostheses, around 50% after 10 years in patients less than 40 years of age and on the other hand there is the risk of bleeding and thromboembolism with mechanical valves occurring unforeseeably and potentially leading to lifelong disability. The only exceptional substitute is the pulmonary autograft, being living, autologous tissue morphologically similar to the aortic valve, being able to adapt to systemic pressure and as such theoretically providing the best prerequisite for lifelong physiological function, which is the ultimate goal of therapeutic efforts. Nevertheless this method has not found widespread application and still remains of matter of debate.

Operative technique of Ross procedure

The operation can be performed in three different techniques, the original subcoronary, the full root, and root inclusion technique. The full root technique is most often used. Bicuspid aortic valves are generally not contraindication for the Ross operation, however, rheumatic heart disease, uncontrolled hypertension and malformed pulmonary valves are considered as contraindications. An aortic annulus of more than 26 – 28mm in diameter (depending on the size of the patient) should be tailored and reinforced. Replacement of the dilated ascending aorta allows for adequate tailoring and fixation of the sinutubular junction if necessary. One result of the German-Dutch Ross registry comprising of more than 2000 patients with systematic follow-up is the fact, that the reinforced full root procedure provides excellent results comparable to the original subcoronary technique. Nevertheless it must be considered that the surgical technique is more complex than that of other valve substitutes.

In general, judgement of valve replacement methods should take into consideration outcomes like survival, adverse events, reoperation, valve function and quality of life.

Survival

In experienced centres hospital mortality in Ross operations is low, around 1%. Up to 15 years after the Ross operation survival is comparable to the general population as shown by different groups. In most publications, however, the mean follow-up is less than ten years. But also in the second decade after the Ross operation survival seems to be comparable to the general population as recently reported (Fig 1). Whether this outcome is also valid for bioprostheses and mechanical valves is questionable, although it seems possible for patients with mechanical valves to have a comparable survival if their anticoagulation is optimally and continuously controlled. In this study, however, the mean follow-up was only 6.3 years. Furthermore this sophisticated anticoagulation surveillance is not routine in general practice. Altogether the survival advantage after the Ross operation seems to be real also in the second decade after the operation.

Major adverse events

Compared to other substitutes the rate of major adverse events such as thromboembolism and bleeding which come unforeseeable and suddenly and may cause lifelong disability is very low in Ross patients with a composite end-point of thrombosis, embolism and bleeding of 0.35%/patient-year. In addition the incidence of cerebral microembolism, the clinical significance of which is still un-
known, is very low or not present in the majority of patients.  

Reoperation

One potential shortcoming of the Ross operation is the fact, that two valve substitutes are at risk for failure, the autograft and the homograft. In experienced centers the reoperation rate is roughly 1% patient-year for both valves combined up to 12 years of follow-up and is definitely lower compared to bioprostheses at young age less than 60 years (Fig 2). Reoperations can be performed with low risk.  

Taking into consideration the natural survival curve, the lifetime risk for reoperation decreases with increasing age at operation provided the reoperation rate will continue to be linear after 10 years of follow-up which seems to be the case. For example the life time risk for reoperation, including autograft and homograft reoperation, is around 20% if the Ross operation is performed at age 40 (Fig 3).

Function

The pressure gradient across the aortic valve and effective orifice area are normal after the Ross operation at rest and exercise underlining the aortic valve and effective orifice area of specific application. In children and young adults the orifice area of specific application is 60 years (Fig 2). Reoperations can definitely lower compared to bioprostheses, a fact which may escalate the lifetime risk for reoperation after the autograft up to 12 years of follow-up and is is significantly less compared to bioprostheses, an inclusion cylinder or as a subcoronary implant, to have the native ascending aorta, especially during the first six months postoperatively, careful endocarditis prophylaxis, usage of anticoagulated homografts ready for endothelialization, and catheter based techniques for failed homografts may improve the outcome of this procedure. The concept of the Ross operation is ingenious. The surgical realization is the major challenge. The surgical realization is the major challenge.

Quality of life

Quality of life in patients after the Ross operation is superior to other substitutes like the mechanical valve(s). No anticoagulation is necessary, there is no valve noise and lifestyle is unrestricted. Especially in young patients the risk of reoperation is significantly less compared to bioprostheses, a fact which may also increase quality of life.

Conclusion

The results of the Ross operation in experienced centers are excellent and are not achievable after at least 15 years of follow-up by any other substitute especially in the young patients up to 60 years of age. Future refinements of surgical techniques, strict adherence to lower blood pressure especially during the first six months postoperatively, careful endocarditis prophylaxis, usage of anticoagulated homografts ready for endothelialization, and catheter based techniques for failed homografts may improve the outcome of this procedure.

A ready in 2007 we described that the full root autograft procedure initially fulfills the prospect of excellent long-term survival and avoidance of anticoagulation therapy. During follow-up, endocarditis and thromboembolic complications are uncommon, bleeding events and valve thrombosis do not occur. Especially children, patients living an active lifestyle and women wanting to become pregnant may benefit from this Ross operation. However, with time we also observed an increase in reoperations related to the pulmonary autograft operation. These reoperations may be complex, but can be performed with low risk. The increased proportion of reoperations confirmed the scepticism about the superior durability of this procedure, necessitating a selective application of this procedure.

In our ongoing prospective cohort study, the survival of patients who undergo an autograft operation indeed is excellent, seems to be favourable compared to patients with other valve substitutes and is comparable with the general age- and gender-matched population.

The question remains if this can be ascribed solely to the autograft procedure.

An autograft procedure is only performed is a small proportion of patients needing aortic valve surgery. Patient selection bias is unlikely since our (adult) autograft patients are mainly those who undergo elective surgery, are not too old, present with no or mild symptoms of dyspnoea, usually have isolated aortic valve disease or left ventricular outflow tract disease, and a normal preoperative cardiac rhythm.

On the down side we observed a worrisome increase in autograft reoperations starting in the second decade of follow up. The main cause for reoperation after the autograft operation is dilatation of the neo-aortic root. Due to this dilatation, coaption of the cusps is lost and aortic regurgitation occurs. As we and others observed a small but persistent increase in root dimensions and neo-aortic root regurgitation over time, we previously anticipated that more reoperations would be necessary during longer follow-up. By now we have observed that this dilatation not only involves the autograft per se, but in a significant number of patients the native ascending aorta as well. The association of this dilatation with a bicuspid valve is widely acknowledged and this dilatation is not prevented with any autograft procedure, full root or not. Microscopic evaluation of explanted pulmonary autografts reveals media abnormalities including local disintegration, intimal proliferation, and adventitial fibrosis suggestive of chronic exposure to high pressure. Off course, technical factors should not be issue. As with all surgical procedures, the autograft root replacement technique requires surgical expertise and includes some critical success factors. The autograft should be inserted at annular level, after scissoring the muscle to only a small rim below the valve cusps. In our experience continuous sutures are used for the proximal suture line. The length of this autograft beyond the sino-tubular junction should be kept to a minimum. We are aware of the arguments to insert the autograft as an inclusion cylinder or as a subcoronary implant, to have the native aorta supporting the pulmonary autograft and thus possibly preventing autograft dilatation. However these techniques cannot be applied in children and in patients with a relevant size mismatch between the pulmonary and aortic annulus (either positively or negatively). Claims of series involving these techniques of better results are all hampered by just running into their second decade. All autograft research unfortunately lacks controlled randomized studies and most often concerns patient selection. Therefore, the claim of better results should always be interpreted in relation to the length of follow up. It is likely that with any technique results will deteriorate when the series extends into the third and fourth decade.

The pulmonary autograft in the autograft procedure is until now well preserved and seems to be doing better than right-sided allografts implanted for other disease. Since we expect these autografts to show some failures on the long run, we are carefully monitoring our cohort into the third and fourth decade.

However, with the introduction of the percutaneous valve substitute the weight of this issue seems to change.

By now the previous worldwide enthusiasm for the autograft procedure, has developed into a small area of specific application. In children the autograft procedure remains an important tool in aortic valve surgery. In adults for most indications the use of autografts has developed into a small proportion of patients needing aortic valve surgery. Patient selection bias is unlikely since our (adult) autograft patients are mainly those who undergo elective surgery, are not too old, present with no or mild symptoms of dyspnoea, usually have isolated aortic valve disease or left ventricular outflow tract disease, and a normal preoperative cardiac rhythm.
Fontan prizewinner 2010

Gábor Veres M.D., PhD graduated from Semmelweis University in 2005 and then undertook his cardiac surgery residency in Uppsala under the supervision of Stefan Thelin (2005) and in Budapest under the supervision of Zoltán Szabócs, Ferenc Horkay and István Hartényi (2005-2011).

“When I was medical student, I was determined to be a cardiac surgeon. Why? Because I spent my first year of clinical training in the Department of Cardiac Surgery, and saw my first CABG procedure. During my medical training I also worked as a nurse in the cardiac surgery intensive care unit to gain an understanding of the full spectrum of cardiac surgery. Having decided to be a surgeon, I became fully involved in clinical practice (assisting as a second assistant of the full spectrum of cardiac surgery). At the beginning of my residency I spent four wonderful months in Uppsala as a novice cardiac surgeon and learnt not only how to do an operation with precision, but also experience the friendly training philosophy. I am eternally grateful for the guidance of the Uppsala’s team!

Meanwhile I applied for a cardiac residency in Budapest at Semmelweis University. I spent five years in Budapest, at first assisting in the full spectrum of cardiac surgery, but little by little the leading surgeon allowed us to do our first bypass anastomoses. I was able to learn and progress quickly and my mentors (Ferenc Horkay and István Hartényi) allowed me to do many procedures very early on. I am especially grateful to them for their supervision of my surgical practice and their communicating of the necessary men tal skills when conducting surgery. 80-90% of the CABG procedures were carried out as off-pump procedures, which are very complex and extremely difficult. Under these mentors I learned how to perform them accurately and quickly.

I was very lucky, as besides my surgical training, I was encouraged to undertake high-level research under my research mentor, Professor Gábor Szabó working at Heidelberg University.

I continued to work on my PhD, through research, in Heidelberg where Professor Szabó, the head of the Experimental Laboratory for Cardiac Surgery took over my supervision. By the time I was awarded the Fontan Prize, I had completed eight relevant, large, animal based studies (for example with cGMP activator, phosphodiesterase-5-inhibitor and a new HTK cardioprotective solution) in cardio-protection with the Heidelberg team. All of the studies were performed as a co-operation between the teams in Heidelberg and Budapest. I applied for the Fontan Prize in 2010, in the hope that I would benefit from the increased opportunities which would arise for research work with the Heidelberg research team and to gain further experience in cardiac operations (for example for mitral valve plastic, aortic surgery and VAD implantation, Heidelberg is the second biggest centre for heart transplantation in Germany).

Fellowship in Heidelberg

Throughout the year 2010-2011 I undertook daily clinical practice as well as working in the clinical heart failure program, which included heart transplantation and the implantation of assist devices. I observed my first ‘David’ operation under Professor Matthias Karck, the head of the Cardiac Surgery Department and worked in the cardiac laboratory with both small and large animal models of cardiac transplantation and cardiopulmonary bypass. I also became familiar with the basic methods of molecular biology analysis (PCR, Western Blot).

Our first study concentrated on the reduction of bleeding during CPB. The withdrawal of aprotinin, which was successful in the reduction of bleeding, caused difficulties as it had significant negative side effects. Because of its withdrawal, in combined, high risk cardiac operations it was very difficult to reduce post-operative bleeding to an acceptable level. We had to find alternatives and continue to do so. We therefore continue to work on new drugs with an equivalent effect to aprotonin but with antithrombotic properties, which effectively reduces post-operative blood loss, but also decreases the risk of graft occlusion after CABG. The primary aim of our study has been to investigate the efficacy of the new synthetic serine-protease inhibitor, which may protect against early thrombosis, one of the concerns which arose in connection with the use of aprotonin. We believe that these substances may offer a true alternative in the “post- aprotonin” era. A further major research goal was to develop a novel cardiac preservation solution to extend the safe cardiac preservation time beyond ten hours. This would improve the success rate in heart transplantation, to increase the geographical access radius to transplantable material and ultimately improve the better preservation of cardiac and endothelial function. This will provide our patients with a greater opportunity of having any particular cardiac operation with an improved chance of survival.

The recently discovered pathomechanisms in the development of ischemia/reperfusion and cold conservation injury provide new molecular targets for the better protection of the donor heart. In current clinical practice, Custodiol (also known as histidine-tryptophan-ketoglutarate or Bretschneider’s solution) is the most widely used solution. Based on recently discovered processes, considerable modifications have been made to its composition. Based on our previous excellent results with storage in Custodiol-N after 4 hours of ischemia, we attempted to lengthen the storage time. We therefore performed heart transplantation for 12 hours of ischemia (the maximal available ischemic storage time in the case of hearts is currently only 4 hours). In the old Custodiol group, we observed the development of typical stone heart syndrome after 8 or 12 hours of ischemia. The new Custodiol N, on the other hand, effectively protects the heart from this damage for up to 12 hours of ischemia, since contractile function of the hearts returned spontaneously. The left ventricles of the hearts stored in the new solution were capable of providing stable circulation in the recipients following the 2-hour reperfusion and detachment from the heart-lung machine. It is important to emphasize, that these studies were undertaken under the supervision of my mentor, Professor Gábor Szabó, who is not only an excellent cardiac surgeon, but also an excellent and highly regarded researcher. He has built up a friendly, ambitious and intelligent team in Heidelberg. Within Professor Szabó’s team, Tamás Radovits, advised me closely on conducting research, particularly to retain the necessary strict protocols. His friendship has become a valuable aid to develop and improve my work in Heidelberg.

Conclusion

During my surgical and research training, I have found that a friendly, cohesive, ambitious and a strict, supportive supervisor are the most important things to ensure that we learn and make swift progress. Another important lesson comes from Professor Szabó: “Doing a cardiac operation is not the most important thing in the early phase of the cardiac training. Gaining an understanding of and the knowledge of the background of pathophysiology of the processes is absolutely essential.”

I must thank my colleagues, the ‘team’, who assisted in the research with me. Last but not least, I must acknowledge the massive support given of my wife and family who, without complaint, enabled me to devote sufficient time to ensure the project’s completion.

I would recommend that any young ambitious colleague, who wishes to discover, or help to discover new techniques and who wishes to experience the various philosophies of well-regarded surgeons, should enter the competition for the award of the Fontan Prize. From the beginning of the process of application, through to the successful completion of the research project I have gained valuable new insights. I trust that anyone reading this will be inspired to do the same.
The differences in cardiac surgical training between Germany and The Netherlands

Léon M. Putman, M.D. M.Sc.
Department of Cardiac & Thoracic Vascular Surgery, Lübeck

Cardiac surgery is one of the more ‘special’ fields of medicine and surgery. To me it is fascinating every time seeing the heart, being able to perform surgery in cardioplegic arrest, ventricular fibrillation or beating heart surgery and afterwards continuing as if nothing happened.

Having made a change in surgical clinic and country, due to private circumstances, I can give my thoughts and opinions on Cardiac Surgical Training in the Netherlands and Germany, both for approximately one year.

In The Netherlands I’ve worked in a Tertiary Care University Hospital with the full spectrum of cardio-thoracic surgery, including paediatric cardio-thoracic surgery and both heart and lung transplant program. In Germany I also worked in a Tertiary Care University Hospital, with an adult program without transplant.

My first job as a medical doctor after finishing my studies was in the Department of Cardio-Thoracic Surgery, Erasmus University Medical Centre, Rotterdam in The Netherlands. Here, I have learned a lot from the basics of surgery, pre- and postoperative rounds, intensive care, pediatric cardiac surgery up to heart failure therapy, and had the possibility (due to a very good relation with the surgical staff) to perform, on my last day there, my first s in a patient with an ascending and aortic arch aneurysm. As in most cases ‘the first’ will not be forgotten. Despite my lack of experience, I was able to assist in the entire spectrum of cardio-thoracic surgery. This was for only one year and therefore cannot cover the entire cardiac surgical care.

My ambition is to eventually be able to continue in a paediatric cardiac surgical clinic as the clinical possibilities and technical spectrum within this subspecialty are very appealing to me. Also the decision-making process in, reoperation within children and congenital heart defect patients can be very difficult and interesting. In Rotterdam I have been able to witness these processes. Also the decision-making in adults with more and more co-morbidities is not always as easy and I think this is an interesting part of our specialty besides the technical possibilities.

Due to my excellent start, for which I am very grateful to my (former) colleagues in Rotterdam, and one year training I could progress relatively quickly in Germany. This means that within the first few months there I was first surgical assistant, as was standard in The Netherlands. I often perform sternotomy and sternal closure, and have done a few cardiopulmonary bypass cannulations. Nowadays I can, depending on type of procedure, start the operation, perform the sternotomy before the surgeon comes in and close the sternotomy with the surgeon already out of the operating theatre.

My research activities include two publications concerning adult congenital heart surgery and were both written in my time in Rotterdam. In my current clinic we have quite a large experimental laboratory besides the clinical data, for instance in the German-Dutch Ross Registry.

Concerning the specialty itself there are differences to begin with. In Germany for a longer time period. However, does not mean I couldn’t work and professional level. That, how- ever, does not mean I couldn’t work in Germany for a longer time period. The first goal is continuing and finishing my surgical training.

Concerning the job as Physician and the relationship to others, nurses, Off-team etc. there are clear differences. There is for instance more hierarchy in Germany than there is, at least in my former clinic, in The Netherlands. What I also notice, and pity, is the less interaction between disciplines, the Cardiologist and surgeon are a bit more apart here than they were in Rotterdam, there is no shared ‘coffee-room’ in the OR, that means after surgery is finished everybody goes their way. From what I have seen in Rotterdam I know that the working climate and working together can be improved by sharing a coffee and talking about other things besides those that are discussed during surgery.

Here in Germany the daily routine on the ward for instance includes all the blood sampling, whereas this was done by the nurse in the Netherlands.

Where do I see myself in the future? I could be in both countries, here the personal circumstances also come in to play. From my perspective, I, as Dutchman, prefer The Netherlands probably on both personal and professional level. That, however, does not mean I couldn’t work in Germany for a longer time period. The first goal is continuing and finishing my surgical training.

Léon M. Putman

EACTS News

Members views
If you would like to comment on any of the aspects concerning training and education, express your opinion regarding the outcomes from the SYNTAX trial or discuss the EACTS guidelines, EACTS News would be delighted to publish your views.

Please send your comments to: communications@e-dendrite.com. We will publish as many of your comments as possible.
For several years a specific thoracic track has been provided at the EACTS Annual Congress, which is of specific interest to thoracic and cardiothoracic surgeons. Following the successful 2011 meeting a similar outline is used for the 2012 congress in Barcelona from October 27 till 31.

Improvement of quality in thoracic surgery will be an integrated part of this year’s programme. This comprises quality of different surgical procedures and their comparison with alternative interventions, quality of training, databases and evaluation of long-term surgical results. Traditionally, mortality has been considered as main outcome measure to evaluate surgical results. However, more refined parameters are necessary taking into account pulmonary, cardiac function and other comorbidity factors in our patients. More prospective data are certainly needed, especially when comparing open thoracic procedures to alternative treatment modalities or minimally invasive approaches. The latter are the main subject of the thoracic Techno College which will focus on advanced procedures in minimally invasive interventions with thoracoscopic and robotic live pulmonary and mediastinal surgery from Nieuwegein, the Netherlands and Pisa, Italy.

Finally, the latest developments for mitral valve repair and replacement will be covered, including, but not limited to, new approaches for percutaneous mitral annuloplasty and facilitated surgical repair techniques.

Join us for another interesting Techno College that gives you a glimpse of the future in cardiovascular surgery.
26th EACTS Annual Meeting Barcelona, Spain 27th - 31st October 2012

To find out more or to register for the event visit: www.eacts.org

Raising Standards through Education and Training
Message from the Editor in Chief

A new look for EJCTS, ICVTS and mCTS: better service for our readers with the support of our new publisher, the Oxford University Press

Friedhelm Beyersdorf
Editor in Chief, EJCTS & ICVTS

All three scientific publications of the European Association for Cardio-Thoracic Surgery (EACTS)—the European Journal of Cardio-Thoracic Surgery (EJCTS), the Interactive CardioVascular and Thoracic Surgery (ICVTS) and the Multimedia Manual of Cardiothoracic Surgery (mCTS)—have been exceedingly successful over the last many years. In the light of this, we shall now take the next steps in the evolution of our successful journals with our new publisher, Oxford University Press (OUP). One of the major changes will be that OUP will publish all three journals together. This will allow us to develop a common strategy but—at the same time—diversely, further specialize and concentrate on the strength of each product. Marco Turina will stay on as the Editor-in-Chief of themCTS and I will be the Editor-in-Chief for the EJCTS and the ICVTS. These changes, which we are now going to implement, are a result of comments and suggestions from the readers, the publishers, the Editorial Office, the Councillors of the EACTS and from various other persons. I would like to take this opportunity to thank them all for their input and thoughtful ideas.

In the EJCTS, the following changes will be put into place:

- A new website.
- A new cover design.
- “Editor’s Choice” article—these will be articles chosen by the Editor-in-Chief as being particularly topical and/or interesting and will be made freely available.
- Supporting material such as additional data or videos can be made available by the publisher as online-only content linked to the online article.
- Free colour figures at the discretion of the Editor.
- Changes in the layout—clearly delineated sections within each issue (Thoracic, Adult Cardiac, Congenital, TX & MCS, etc.) with dynamic thumb tabs, - article type (Original Article, Review, etc.) above the title, on the top right corner, - ‘camera’ symbols will indicate when there is video content available online.
- A new set of instructions for authors providing guidance on the latest experimental and publishing ethics.
- A new EJCTS App in 2012. Our launch of the EJCTS App in April 2011 has generated positive responses from our readers. As such we will continue to develop and build up our offerings with our new publisher to provide greater functionality through our App. Readers will be informed once the new App is up and running.
- In the ICVTS, the changes are as follows: Same layout and style changes as for EJCTS.
- More interactive features will be made available.
- Access to advance content of the corrected proof.
- In themCTS, the format of the videos will be changed. In addition to these primary changes, we strive to continually improve and develop our journals to meet the expectations of our readers as much as possible. Further comments would be greatly appreciated.

“If you think adventure is dangerous, try routine. It’s lethal!”

Paulo Coelho

Advanced module: valve surgery including transcatheter

Professor Gerard Fournial
Course Director

This advanced module: valve surgery including transcatheter is designed for beginners in valvular reconstruction and repair but also for the surgeons involved in TAVI programme and more widely for those who have some interest in the new field of transcatheter valve treatment.

Besides conventional lectures, the different experts are going to present clinical cases and some surgical recorded cases to provide discussion and interactivity between senior and younger surgeons as well as cardiologists. At the end of the course, the attendees will be able:

- To understand and evaluate the different mechanisms of valvular insufficiency
- To know how to select the different surgical techniques for valve repair
- To understand the role of a complete “Heart valve Team” and to provide the best treatment for each particular patient according to the new transcatheter approach and how to build the team
- To know how to follow up on the patients after valve repair.

The content of this module is broken into four parts:

1. Basics in echocardiography and imaging (CT-MR)
2. Aortic valve and root repair
3. Aortic valve and root repair
4. TAVI session is going to involve a cardiac surgeon and an interventional cardiologist who are both going to illustrate how a "Heart Team" works.

**Part 1:** is designed by Dr Mathieu Gautier (cardiologist specialized in echo, Toulouse-France) and Dr Filippo Civaia (cardiologist specialized in radiology,Monaco).

Based on interactivity with the attendees, the different presentations are going to achieve the following aims:

- To analyse heart structure for a better understanding of valve insufficiency mechanisms
- To observe the aorta wall and major vessels and then to choose the best access for TAVI
- To select the best imaging according to the valve pathology.

**Part 2:** is to be lead by Dr Patrick Perier (Bad Neudstadt-Germany) who is one of the best experts on mitral valve repair. This session is going to be focused on degenerative mitral valve regurgitation in order to achieve the following aims:

- To observe the different anatomical situations
- To how to select the right surgical technique supported by numerous recorded cases.

Dr M Gautier (echocardiographer) is going to discuss lesion analysis with the attendees step by step.

Less invasive approaches are going to be discussed by Dr Francesco Maisano (Milan-Italy). He is also going to present the different transcatheter technologies.

**Part 3:** is chaired by Professor Carlo Antonia (Milan) and Dr Andrea Mangini (Cardiothoracic Surgery—reach out for the next decade). They are going to present a step by step approach how to understand plan aortic valve and root repair.

**Part 4:** TAVI session will be animated by Dr Nicola Piazza (Munich-Germany) who is a well known interventionist cardiologist expert and Dr Thomas Modine (Lille-France), a cardiac surgeon who has been very committed to this new field from its beginning. They are going to show how the “Heart Team” works on selecting the patient and choosing the best access to perform the operation, how to avoid complications, follow the patient and evaluate long term results.

Join us from 17th to 21st September 2012 in Windsor for the next advanced module: Valve surgery course including transcatheter valve implantation as part of the “Foundation cardiology surgery courses.”

References


Are you up to date with the EACTS journals?

As you may know, from this year EACTS has entered into an exciting partnership with Oxford University Press, who now publish the European Journal of Cardio-Thoracic Surgery, Interactive CardioVascular and Thoracic Surgery and the Multimedia Manual of Cardio-Thoracic Surgery. You can keep up with the latest articles, by signing up to receive content alerts from Oxford University Press. Choose to receive an email each time a new issue is published, or every time new articles are published online, ahead of print.

To sign up, simply:

2. Enter your details to register a new account
3. Once logged in, select ‘View alerting preferences’
4. Click on ‘Add eTOCs’
5. Select the alerts you would like and ‘save eTOCs’

If you experience any difficulties creating a new account or signing up for alerts, please contact Oxford University Press with any questions, using the details at: http://www.oxfordjournals.org/page/44783

You can read more about the new era with Oxford University Press, and the journal developments for 2012 in Friedhelm Beyersdorf’s January editorial: http://www.oxfordjournals.org/page/44782

Clockwise from top left: Gerard Fournial, Patrick Perier, Francesco Maisano, Carlo Antonia, Thomas Modine and Filippo Civaia

# EACTS Events 2012

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<td>Deadline for Receipt of Applications for the EACTS Young Investigator Awards, Hans G Borst Award for Thoracic Aortic Surgery C Walton Lillehei Young Investigator's Award</td>
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<td>Evidence-based surgery</td>
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**Course codes:**
- **Blue:** Foundation Course
- **Green:** Specialist Course
- **Red:** Professional Development Course
- **Brown:** Co-sponsored Educational Activity

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Raising Standards Through Education and Training

www.eacts.org
Mechanical Ventricular Assist Devices

R. Hetzer, MD, PhD, Deutsches Herzzentrum Berlin, Germany

Mechanical ventricular assist devices (VAD) were introduced into temporary clinical application in the 1960s and into clinical routine in the 1980s. During the most recent years they have matured to become established therapeutic tools for long-term and even permanent treatment of otherwise fatal heart failure.

Initially these were extracorporeal, pulsatile, pneumatically driven pumps and large either stationary or wheeled drive systems and were mostly used for bridge to later transplantation or as a rescue device post open heart surgery failure, aiming at cardiac recovery. In some elderly patients these systems helped to prolong life for more than five years. Today these extracorporeal systems still have their place in very advanced cardiogenic shock in a biventricular configuration and, in particular, in small children where the Berlin Heart pediatric device, which was applied in humans in Berlin on 13 November 1998. This was the Micromed DeBakey pump, which was first applied in humans in Berlin on 13 November 1998. This was the MicroMed DeBakey pump, which was then followed by a variety of designs by several manufacturers: the InCor by Berlin Heart, the Jarvik 2000 FlowMaker by Jarvik, the HeartMate II by Thoratec, the DuraHeart by Terumo and the HeartWare system. These pumps made use of either the axial flow or the centrifugal flow principle. The bearings of the rotors are either mechanical, hydrodynamic, magnetic or formed by a combination of these designs. Rotary pumps need considerably less energy than the pulsatile pumps, are completely silent and offer a highly improved quality of life and safety for several years. However, they are all designed for left ventricular support only.

In addition to the bridge-to-transplant concept, the bridge-to-recovery has gained great interest since it was observed that even chronic dilative cardiomyopathy could be brought to complete restitution of cardiac function, and several patients have now lived for up to 17 years with their own hearts following explantation of the pumps after a few months of support. However, the criteria that would make such recovery likely and the durability of heart function after recovery have remained largely in the dark.

Permanent implantation, so-called destination therapy, has now become by far the most frequent concept due to transplant organ shortage and by extending the scope into patient groups not qualifying for heart transplantation for medical reasons and for advanced age (up to now nearly 90 years). There are now many patients who have enjoyed life with the various designs of rotary pumps for more than five and up to eight years. With some minor experimental modifications the HeartWare system has also been made applicable for right heart support and thus biventricular application has become a reality when needed in the patients.

Although most clinical cases can be handled sufficiently with such variations, there are attempts to create a total artificial heart, some based on pulsatile and some on continuous flow pumps. These devices are still in a developmental stage and are not yet available for clinical use.

Continuous flow, which is prima vista unphysiological, may be responsible for some new pathologies that have been observed, such as aortic valve incompetence, intestinal microvascular bleeding, and some coagulation disorders, and it is unclear which further sequelae may appear after an even longer time of continuous VAD application. Most VAD-producing companies are now striving at smaller pumps, greater efficiency and less traumatic implantation and it can well be expected that VAD implantation will sooner become a widespread treatment modality, like pacemaker and automatic defibrillator implantation.

Because of the high incidence of driveline complications seen with prolonged assist duration, the development of transcutaneous energy transfer systems (TETS) for inductive energy supply of fully implantable pump systems is currently a key focus of many research and development programs.

Intermacs, a government supported US registry for VAD patients and systems was introduced to collect data for large-scale research studies and surveys. In Europe, where we have access to a much wider spectrum of systems than in the US, a similar registry, Euromacs, was founded in 2009 and is now well established; data collection has been started. This endeavor has attracted great interest in most European centers and also from several countries outside Europe. The symposium will present the current state of ventricular assist devices for long-term support, which have become the best and readily available treatment option for end-stage heart failure.

Register NOW

To register your interest, please visit: euromacs.org
email info@euromacs.org
or phone +49 (0) 30-45 93 2000/2001
Call for Applications

Awards and Prizes

FRANCIS FONTAN PRIZE
€30,000
Specialty training in cardiac or cardio-thoracic surgery.

THORACIC PRIZE
€30,000
Specialty training in thoracic or cardio-thoracic surgery.

LEONARDO DA VINCI PRIZE FOR TRAINING EXCELLENCE
Award trophy & roll of honour
€3,000
Specialty training in thoracic or cardio-thoracic surgery.

EACTS YOUNG INVESTIGATOR AWARDS
€3,000 (for each prize)
Best manuscripts on topics of clinical or experimental research.
- Cardiac Young Investigator Awards
- Congenital Heart Disease Young Investigator Awards
- Thoracic Young Investigator Awards
- Alessandro Ricchi Transplant Services Foundation Award

HANS G. BORST AWARD FOR THORACIC AORTIC SURGERY
€5,000
Stimulate advanced clinical or experimental research by young investigators.

TECHNO-COLLEGE INNOVATION AWARD
€5,000
Technological breakthroughs in new surgical methods or devices.

C. WALTON LILLEHEI YOUNG INVESTIGATOR’S AWARD
$10,000
Implanting the St Jude Medical heart valve.

ETHICON CARDIOVASCULAR SIMULATION AWARD
€3,000
Creation of a Simulator which replicates for training purposes in Mitral Valve Reconstruction.

For more information on the awards and prizes please visit our website:
www.eacts.org

Raising Standards through Education and Training
Fundamentals in Cardiac Surgery Part II

Congenital Day

Tjark Ebels  Course Director

The vast majority of students for the June course are in training to become cardiac surgeons and will spend their professional lives dealing with non-congenital adult patients. Previous courses have made clear that the Monday starter surgery is ever brought under attention of trainees. The major object of this one day prelude to congenital cardiac surgery is to increase awareness of the existence of congenital problems also in the adult population. In addition to awareness we shall bring across the existence of types of circulation and elements thereof that are fundamentally different from normal. One of the bottom lines of this day will be that it is unavoidable to embark upon “casual” surgery for congenital problems without having had full and proper training in this area of cardiac surgery. On the other hand, for those trainees enticed by the course and interested in congenital cardiac surgery, it might be a reason to divulge further into this area.

Increasingly national training programs around the world recognise that for acceptable congenital cardiac surgery a specialised training is a prerequisite. These programs result in qualified and certified surgeons, well capable to deal with all aspects of congenital cardiac surgery. In various countries the training for congenital cardiac surgeons is already formalised into existing and functioning programs, such as Poland and the USA. Other countries are well under way to organise training programs in recognition of the need for specialised surgeons. Similar evolutions are perceptible in cardiology, pediatrics, anaesthesia and intensive care medicine, which gradually produce comprehensive teams dealing with congenital cardiac problems as well in children as in adults. Because it has become clear that the teams dealing with adults with congenital heart disease are the same as the teams dealing with children.

The contents of the one-day prelude to congenital cardiac surgery is a mixture of subjects starting with an overview of the steadily increasing group of Grown-Up Congenital Heart disease (GUCH) patients that calls for challenging surgery. As an example embalming upon ostensibly straightforward coronary bypass surgery in one of the many patients that have had surgery for Tetralogy of Fallot, might end in a surprising disaster if not carried out with the knowledge and insights of the congenital team. Subsequently we will deal with various forms of the so-called Fontan Circulation, which is iatrogenic in nature increasing the quality of life in single ventricle patients, however on the other hand creates baffling problems that need extremely specialised attention. Finally we shall deal with operations such as the Ross procedure that have interesting implications for adult life and particularly for the surgeons having to deal with them. This day will prove to be an interesting starter to congenital cardiac surgery, both enticing interested trainees and giving insight into the complexities of congenital patients.

Adult Cardiac

Tjark Ebels  Course Director

This Course will represent the second appointment at the EACTS House for the EACTS School and its attendees for the Courses of Fundamentals in Cardiac Surgery.

The four-day adult-oriented programme is rather ambitious, since many major fields will be explored and discussed with renowned European experts.

On day 2 (Tuesday), day 1 being usefully devoted to congenital-related aspects, participants will have an unique opportunity to listen to presentations and be part of discussions on basic yet up-to-date information with regards to mitral and tricuspid valvular anatomy and assessments, surgical treatment (including reconstructive procedures and minimally invasive approach) and factors intimately linked to perioperative complications (right ventricular function).

On day 3 (Wednesday) percutaneous procedure to treat mitral insufficiency will be presented and debated, as well as management of atrial fibrillation with interventional or surgical procedures, details for surgical access during reoperations and, finally, discussion about fundamentals in aspects related to management of cardiac rhythm or AV conduction disturbances.

A free afternoon on Wednesday will be offered to take advantage of the nice location of the EACTS House in Windsor, giving the opportunity to enjoy Windsor attractiveness or London city.

Day 4 will be characterised by an extremely interesting programme, ranging from aortic vessel anatomy and diseases, open or endovascular treatment of aortic injury, management of chest trauma (lung and heart), and diagnosis and treatment of acute or chronic pulmonary embolism. Finally, always on day 3, an important discussion about data collection, risk assessment and performance evaluation will be carried out at the EACTS School, based on the current and expected future pressure that many parties will devote to our profession regarding quality control and professional audit.

The last day of the Fundamental Course Week will deal mainly with heart failure issues (transplant and alternative techniques), but pericardial disease and ethical aspects of our profession will also be addressed to provide a rather comprehensive programme for young surgeons in training or at the beginning of their professional career as specialists in cardiac, cardio-thoracic, or cardiovascular surgery.

The first Fundamental Course (Part 1) held last February, on the occasion of the official opening of the EACTS House in Windsor, was a real success, with a sold-out participation of young surgeons coming from all over Europe and outside the European countries. We are therefore confident that also the upcoming Part 2 will attract many attendees committed to our specialty and eager to experience a real “college” atmosphere, sharing knowledge and skill with invited speakers who will provide also many practical inputs, video presentation of technical aspects, and scientific reviews about the topics scheduled in the programme which will certainly enhance the participant armamentarium for their difficult, but fascinating professional life to which EACTS hopes to represent a constant reference point for education and training with the highest standard and quality.

SAVETHE DATE

8 June 2012

EACTS National Societies Meeting

EACTS House, Windsor (UK)

For further information please contact the Secretary General’s office via email: Rianne.Kalkman@eacts.co.uk

EACTS Working Group on Pleural Diseases together with Forlanini Hospital organizes the

EACTS-FORLANINI ADVANCED ‘HANDS-ON’ TEACHING COURSE ON PLEURAL DISEASES

10–12 May 2012, Rome (Italy) Further information: www.eacts.org

Rectification

In an article featured in issue 4 of the EACTS News newsletter, Professor William Brawn discussed the importance of the new EACTS offices in Windsor. In the printed newsletter, we incorrectly quoted Professor Brawn as saying: “I cannot understand the importance of the move”.

We acknowledge that in fact the article should have read: “I cannot underestimate the importance of the move.”

We apologise to Professor Brawn for any embarrassment or confusion this error may have caused.
Web-based clinical software solutions for the international healthcare sector

Hospital and database installations
Our innovative system has become the preferred clinical governance tool at over 250 major hospitals throughout the world.

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REVEAL • INTERPRET • IMPROVE

Station Road – Henley-on-Thames – RG9 1AY – United Kingdom
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At its annual meeting in Dublin the British Thoracic Oncology Group recognised the Mesothelioma and Radiocal Surgery (MARS) trial as a notable achievement despite its small size – only 50 patients randomised. When first proposed MARS was widely predicted to fail: there would be no randomisations many said. Perseverance and determination from a large number of people, clinical trials staff, research nurses and doctors throughout the British Isles kept up the momentum and MARS slowly, but eventually, reached its target – and a result. BTOG’s award suggests that the result merits attention. It also merits scrutiny. First up, naturally, the surgical results.

The survival plot of patients randomised to extrapleural pneumonectomy, is marked by a long plateau at 50% survival. That depicts the median survival. It provides an opportunity to view, alongside MARS, survival in large institutional series, reporting during the same time. They are not directly comparable but the published survival data are not dissimilar to MARS. What is different about these observational studies is the absence of any control data to indicate how those patients might have fared if they had not been operated on. In MARS, eligible patients were randomised to not have EPP. These non-operated patients fared better. In the words of the methodologist, Richard Lilford, some unbiased evidence is clearly better than none. Bias was excluded in MARS: the chief investigators played no part in allocation, intervention, or data analysis.

But, what about the power calculation? Power calculations are a necessary methodological precaution to ensure that efforts are not needlessly wasted. For his power calculation the statistician relied on estimates of benefit from previous clinical reports. Put technically, its purpose was to avoid a beta error. That is to say that the researchers might erroneously conclude that there is no difference, based on too few patients. In the event, MARS showed a bigger difference than estimated, and in the opposite direction.

The survival of patients in MARS: the red line is for patients allocated to EPP. The superposed markers show the median (50%) survival times: 10, 12, 13 and 14 months from MD Anderson, New York, Brigham and Memorial respectively.

BTOG awards MARS a Lifetime Achievement Award
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