Foreign doctors say Non! to ‘slave labour’ wages

Pay rows threaten French health minister’s political future

Militant doctors are threatening to take the French government to court over its treatment of almost 7,000 practitioners whose qualifications were gained at universities outside the European Union. The French Health Ministry is coming under increasing pressure as clinicians, angered by its slow response to resolving issues of inequality, walk out of hospitals and clinics throughout the Republic to support their demands for action. However, they have been keen to reassure the public that emergency cover would continue to be provided ‘in all cases’.

A recent four-day stoppage – the second in less than a month in a campaign that has been gathering momentum over the past two years – highlighted their anger at being paid less than half that received by their colleagues with similar EU qualifications, as well as their lack of recognition by the French health authorities. Demonstrators took to the streets of Paris, many waving placards calling for a halt to ‘modern-day slave labour’ in French hospitals.

Dr Talal Annani, president of the National Union Group for General Practitioners with Diplomas outside the European Union (Impadhue), which is campaigning on behalf of the doctors, said that clinicians with non-EU degrees – many of whom are French nationals – were paid only 1,800 euros a month, compared with the 3,800 paid to colleagues with equivalent qualifications obtained in the EU. ‘These men and women come mainly from Morocco, Tunisia and Algeria, and also from black Africa,’ he explained. ‘They are in an intolerable position – apart from being paid up to three times less than a French doctor, they can neither establish their proper bona fides nor work in private practice.’

By Keith Halson
EH correspondent in France

LAWS DESTROY INVALUABLE DRUGS

UK – Inter Care, a Leicester-based registered charity that supplies returned/unused medicines to 94 healthcare centres in seven African countries – to date treating around one million people too poor to buy them – is facing possible criminal prosecution, brought by the country’s Environment Agency, due to what have been described as ‘confusing’ UK and EU laws, which led the agency to believe those medications present serious health dangers and should be destroyed.

As a result, Inter Care, which says it is ‘fighting for its very existence’, has dumped its stockpile of usable and costly medicines, earmarked for dispatch to meet orders from the African healthcare units.

Dr Margaret McDonald, CEO of Inter Care, said: ‘We could have carried on, but our Trustees decided it would be best to suspend activities. Now, to maintain a supply of medicine, we must purchase generic versions of the basic medicines. This will cost at least about £73,920, to partly replace the £443,490 – worth of returned branded prescription drugs. But many,’ she added, ‘are too expensive to even consider purchasing.’ These costs will now drastically reduce the range of drugs the charity can supply.

As a result of the, as yet, only threatened criminal prosecution, the charity has also suspended the collection and screening of returned prescription medicines.

Yet, Inter Care, set up 32 years ago by a general practitioner (GP), has contributed these returned/usable medicines, without hindrance up till now.

In addition, through the years, the charity has carefully adhered to the World Health Organization (WHO) rules and made regular monitoring visits to the African healthcare centres to which it donates the medicines.

The concept has been underpinned by a country-wide network of GPs who want to help in this valuable work, and volunteers who had collected medicines returned by patients to GP surgeries. Retired NHS professionals – a team made up of doctors, nurses and pharmacists – then carefully assessed the condition of the medications, their continued on page 3
Proven Outcomes with Tim (Total imaging matrix technology). In hundreds and hundreds of installations around the world, Tim® is proving that a new era in MRI is here. With Tim’s unmatched 32 independent RF channels and up to 102 Matrix coil elements, you can combine coils in any way, for multi-organ exams, all in a single patient set-up. Offering incredible flexibility and accuracy.

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continued from page 1 scaled packaging and shelf life. These approved medications then awaited specific requests from the African units before being despatched to meet need.

Understandably, EC rules have been created to ensure waste is not illegally dumped in countries to where it originates. The problem appears to arise from the incorrect interpretation of ‘waste’.

The Environment Agency stated that it could not comment on on-going investigations but that pharmaceutical products, e.g. pills and medicines, could contain chemicals and drugs that might be harmful to the environment and humans. ‘As the regulator, we have a duty to ensure that this waste is being disposed of and handled correctly. Sometimes these drugs are shipped to other countries that may need them, and while we recognise the intention is to be of assistance, we request they follow the controls,’ the Agency’s statement read.

Inter Care responded: ‘The World Health Organisation has produced the Guidelines for drug donation. These define minimum quality standards that are universally acceptable and are core to the Inter Care Quality Assurance. Inter Care uses the WHO quality guidelines when assembling every consignment for Africa.

The charity also sources medications to purchase from low-cost UK suppliers and the African healthcare units’ countries, depending on availability and the needs of the units. Old editions of MIMS and BNF (medicines guides) are also sent to Africa, with medicines, to ensure local medical staff can keep up to date with prescribing changes.

Inter Care CEO Dr Margaret McDonald

Inter Care is now ‘on limb’, not knowing the charges that might be brought against it, and simply awaiting to be called to an interview with the Environment Agency. ‘We understand that the agency could prosecute anyone at Inter Care, and the result could be huge fines or even imprisonment,’ said Dr McDonald, who has been even asked to supply the agency with the names and addresses of volunteer helpers. ‘We can give no answers from the agency. It’s frightening. We are dealing with faceless people about a skewed criminal offence. Perhaps they want us to make a test case.

Without answers we do not know which way to go.’

France

The situation is far different across the English Channel. Cyclamed, based in Paris, is a large, highly organised, non-profit-making group that recycles waste within that description, unused but saleable medications. Cyclamed supplies these to organisations for distribution to hospitals in France, as well as to humanitarian groups that include Médecins Sans Frontières – the renowned international humanitarian non-government organisation that provides emergency medical aid in over 80 countries.

In the 90s, Cyclamed received the approval of the then Prime Minister of France. It also operates with the co-operation of the French pharmaceutical industry – the Union nationale (Le Syndicat National de l’Industrie Pharmaceutique, now renamed Entreprises du Medicament) and runs TV, radio and poster campaigns to encourage the public to recycle medicines, etc. The public can drop them off regularly. The concept is generally admired and supported, from politicians down to the poor. ‘I am envious,’ Dr McDonald said ruefully. ‘It almost makes me want to move to France.’


Sourcing drugs and educational materials

continued from page 3

Acquiring medicines is not that easy, particularly as drug manufacturers destroy in-date, perfect quality medications, due to batch over-runs, cancelled orders, or items having damaged packaging. Sometimes Inter Care is given these valid products for donation to the African Centres.

Inpadhue also warned that there is a lack of political will. He does not understand the ill-will that doctors have to wait a further 12 months before anything is done?

Xavier Bertrand denounced the heatwave industrial action as ‘irresponsible’, but strikers countered with surgery cases really called on to deal with heatstroke cases.

SPEND IN EU

The UK spends more of its healthcare budget on cardiovascular disease than any other country in the EU. In 2004 alone, CVD accounted for at least €4.42 billion, or almost two thirds of the National Health Service bill for CVD. Related drug costs were almost €4.42 billion.

The country is crying out for more doctors and runs TV, radio and poster campaigns to encourage the public to recycle medicines, etc. The public can drop them off regularly. The concept is generally admired and supported, from politicians down to the poor. ‘I am envious,’ Dr McDonald said ruefully. ‘It almost makes me want to move to France.’


Inpadhue wants doctors from outside the EU to come over five years’ service in French hospitals to be exempt from having to take written examinations, preferring instead that they be assessed professionally on dosages, contra indications, side-effects etc., as well as with training and educational materials on diseases such as malaria and HIV/AIDS.

France has effectively created an ‘unacceptable ‘non-status’ situation in which non-EU degree qualified doctors are working in public hospitals and clinics. ‘It is little short of a disaster. The country is crying out for more hospital doctors yet the authorities refuse to recognise those with non-EU qualifications and employ them only on short-term contracts. Foreign doctors, some of whom are in their forties and who have vast experience, find this extremely frustrating and threatening to their career prospects. ‘That is why they are on strike.’

Meanwhile...

Surgeons, anaesthetists and gynaecologists are facing a professional crisis unprecedented in their history.

More than 3,000 of them, out of a total of 7,000, are taking industrial action at clinics and hospitals throughout France in a long-running row with the health ministry over a review of their pay and allowances. They are also angry at what they say have been unacceptable rises in the cost of their professional insurance cover and are demanding that premiums be capped.

They accuse health minister Xavier Bertrand of bowing to political pressure exerted by the powerful insurance companies and allowing them to make huge profits, while refusing to address the doctors’ claims.

The three professional associations representing the clinicians – UCDF (poster photo), the surgeons’ union, SYNGOF for the gynaecologists and obstetricians, and AAL, which represents anaesthetists – in 2004, when surgeons began limited strike action, an agreement was reached under which the health authorities promised to look at the issues. ‘However,’ the say, ‘nothing has been done since then. We are fed up with the delaying tactics of officials responsible for public health.

In the early part of the summer heatwave, UCDF president Philippe Cqij said he had warned the health minister of the problem but he had been merely waiting for such an opportunity to take action. ‘The Committee of the two councils is currently being asked to decide whether merely waiting for such an opportunity to take action. ‘The Committee of the two councils is currently being asked to decide whether merely waiting for such an opportunity to take action. ‘The Committee of the two councils is currently being asked to decide whether merely waiting for such an opportunity to take action.'
Nursing organisations have warned that about 70% of newly recruited nurses will find jobs in the UK’s National Health Service (NHS).

In August, the British government declared that the NHS no longer needs to recruit from overseas.

However, universities have been told that the NHS will be funding between 10 – 30% fewer places next year. The NHS has been blamed on the need to offset current, massive NHS deficits, but the plan has led university leaders to warn of a very serious future shortage of nurses – and the need, in the long term, to need again seek nurses from overseas.

The International Council of Nurses (ICN), based in Geneva, believes nurses have an important role to play in addressing the impact of conflict, including the emergency and long term health needs of refugees, other civilian populations and wounded armed forces personnel, and it demands protection for all health professionals and relief personnel providing care in conflict zones. In a statement, the organisation said: “The ICN opposes armed conflicts under any circumstances and we urge our member national nurses associations in 129 countries to join us in calling for an immediate cessation of the armed conflict in the Middle East and the rapid deployment of an international peace keeping force.

The awards were announced at the 2006 Globalisation of Nursing: ethical, legal and political considerations workshop held in the University of Surrey.

The nurses, Hanan Zaalal, Foad Najjar, Ghazi El Baba, Mohamed Barakat and Abdallah El Baba, could not be at the conference. Their award was received on their behalf by Jackie Jaidy, of the St John Eye Hospital, Jerusalem, of which the Gaza-based clinic was a part.

She said they had given the award because they had continued to work under great duress and great restrictions to both their daily and working lives.

Presenting the awards, Professor Anne Davis, International President of the International Centre for Nursing Ethics, valued at £1,000, congratulated the nurses on their determination to continue to provide nursing care to the Gaza population, despite difficulties in sourcing equipment, and in some cases even targeting the clinic.

Dr Verena Tschudin, Director of ICNE, said: ‘Nowadays, it is impossible to do almost anything without considering the ethics of this. It is particularly true in nursing, which is more than just a job; it is also a moral responsibility. Therefore, morality and ethics are a large part of any nursing role and should be recognised as such.’

The awards – This unique nursing award is given in recognition of any nurse’s outstanding commitment to human rights and exemplifies the essence of nursing’s philosophy of humanity. Nominations are open to all nurses around the world. The winners are chosen by an international committee.

Award winner includes: Sister Grace Kodian (India) for dedicating her life to the poorest of poor people in Bihar (Gidi Muludum (Gidi Kurehew)) for providing medical and psychological rehabilitation for victims of organised violence and torture; Karla Schefter (Germany) for founding and running a hospital in Afghanistan; Glenda Wildschut (South Africa) for resettle people after the Rwanda massacre (Gorongoro Mission); and Professor Mpho Motlehasadi-Sebanyoni (South Africa) for founding a hospice community for people suffering HIV/AIDS.

Council opposes armed Middle East conflict

Gaza - Five nurses from The St John Ophthalmic Outpatient Clinic and Cataract Day Case Surgical Centre, in Gaza, have been awarded the 2006 Human Rights and Nursing Awards in recognition of their extraordinary work in difficult circumstances to ensure that the people of the Gaza Strip receive ophthalmic nursing and cataract surgery of the highest possible standard.

The University of Salz is to present an honorary award to The General Secretary of the Royal College of Nursing (RCN), Dr Beverly Malone, in recognition of her inspirational role as a successful black nurse.

Another aspect of the Israel-Lebanon conflict is that health and safety rules could hamper the work of British international aid agencies, as well as supplies to devastated zones. Numerous safety rules have been imposed since September 11, by agencies such as Christian Aid, Oxfam, and Save the Children. The rulings include having to make detailed danger assessments prior to journeys into conflict zones, as well as hiring professional security officers for protection, who can decide whether a trip is too hazardous to undertake. This decision had, in the past, been one that the aid workers themselves worked out.

Such rulings have not been imposed on humanitarian workers from various other European countries, such as Belgium and Spain, which entered bombed areas in southern Lebanon within days of the war.

Part of the reason for these more stringent health and safety rulings are thought to be the fact that, recently, more aid workers have been targeted and killed in Afghanistan and Iraq. In addition, aid agencies were concerned that, in the Israeli-Lebanon crisis, the Israeli government did not establish a humanitarian corridor through which relief workers could pass in safety.

International agreements urged for the human right to healthcare

Following their July conference on ‘The Globalisation of Nursing’ and organised by the International Centre for Nursing Ethics, based in the University of Surrey, UK, the following statement was issued:

As nurses and nurse educators from 20 countries, we have spent two intensive days examining the impact of globalisation on health and healthcare. Millions of nurses throughout the world have the espically responsible role of ensuring the safe and effective position of frontline workers and professionals, caring for and preventing human suffering. We take our social responsibility seriously. We are committed to the theory that delay and neglect of key international agreements will exacerbate the growing global healthcare crisis and undermine the sustainability of nursing itself. Therefore, we call on our national governments and the relevant international organisations fully, diligently and urgently to respect, implement and enhance the international agreements on the human right to healthcare, on economic justice and on the mitigation of climate change.”
COMPANY NEWS

Multi-million euros IT set-up for Toulouse

France - Following a public tender, the Centre Hospitalier Universitaire (CHU), in Toulouse, contracted Agfa HealthCare to install ORBIS, the company’s clinical and administrative information system. The installation, scheduled to be concluded by 2011, will involve some 10,000 users.

AV-TV advances into more medical fields

Scotland - A joint venture by two National Health Service groups (NHS Tayside and NHS Education for Scotland) and the University of Dundee, has resulted in a new Postgraduate Education Centre at Dundee Dental Hospital and School.

Acquisition promises larger endoscopy range

Sopro, French manufacturer of a large range of dental and medical equipment - including cameras, light sources, insufflators, irrigators for endoscopy (distributed worldwide) has acquired the surgical endoscopy firm Comeg, of Tuttlingen, Germany.

With headquarters in La Ciotat, France, Sopro has 80 employees, exports worldwide and reports a turnover of €25 million.

Sopro is a subsidiary of the Bordeaux-based company Acteon Group, which designs, manufactures and markets dental and medical equipment (ultrasonic units, high frequency surgical units, autoslaves, etc.) as well as pharmaceutical products and consumables for dentists. Acteon employs 620 people, 220 of them located overseas in ten subsidiaries. Reported turnover: €95 million.

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Acquisition promises larger endoscopy range

Comeg designs, manufactures and markets a complete range of endoscopes for abdominal surgery, urology, arthroscopy, gynaecology and ENT. Employing 50 people, the company’s reported turnover is €6.6 million.

The new firm, Sopro-Comeg, unites their different R&D departments and the Acteon Group, working in five production sites with almost 60 engineers specialised in electronics, mechanics, computer engineering, as well as chemists and biologists, etc. This force will provide a large range of endoscopy products, from ‘capital equipment’ to all surgical endoscopes.


More AV-TV & surgery reports: pages 20-21
Medical error reporting by doctors to healthcare institutions, colleagues and patients, is not only important for incident safety but also to professional education. However, in a recent report, researchers at the University of Iowa point out that variables that might facilitate or impede disclosure are diverse and lack consistent understanding. Aiming to develop a comprehensive classification of factors that affect voluntary disclosure of errors by physicians, the team reviewed 316 articles, identifying 91 impeding or facilitating factors affecting doctors’ readiness to disclose errors. They also identified another 27 factors from exploratory focus groups reports. By sorting and hierarchical cluster analysis, the team organised factors into eight areas. ‘Confirmatory focus groups and expert review relocated six factors, removed two factors, and modified four domain names,’ the researchers said. ‘The final taxonomy contained four domains of facilitating factors (responsibility to patient, responsibility to self, responsibility to profession, responsibility to community) and four domains of impeding factors (environmental uncertainties, helplessness, fears and anxieties).’

The classification could prove a valuable tool in the design of error-reporting systems that would encourage the disclosure of errors by physicians. The study was published in the journal ‘General Internal Medicine’ (Vol. 21, September 2006). Authors: Laura C. Kaldjian; Elizabeth W. Jones; Gary E. Rosenthal; Toni Tripp-Reimer and Stephen L. Hillis.

**MEDICAL ERROR REPORTING**

**STUDY PRESENTS A ROUTE TO HELP DOCTORS WITH MEDICAL ERROR REPORTING**

UK - The Royal Society of Medicine (RSM) has appointed a new Chief Executive: Stephen Dodd, and new President: Professor Ilora Finlay. Professor Finlay is a consultant palliative care physician and cancer survivor who has championed the needs of people living with long-term illness. She is also an honorary professor at the University of Westminster and is a Fellow of the RSM she founded in 1861. Professor Finlay has been involved in cancer research and has overseen the development of palliative care services in many countries. She is a member of the House of Lords, and was appointed a Dame Commander of the Order of the British Empire in 1998. She is also a member of the House of Commons, and is a member of the House of Lords. She is a member of the House of Commons, and is a member of the House of Commons. She is also a member of the House of Commons.

Stephen Dodd, a former medical doctor, has been appointed as the new Chief Executive of the RSM. He brings with him a wealth of experience in the healthcare sector, having held senior positions at the Medical Council of Great Britain and the General Medical Council. He is a member of the Royal College of Surgeons and the Royal College of Physicians, and has a particular interest in the role of medical education in the 21st century. He is also the author of several books on medical education and healthcare policy. He is also a member of the Royal College of Surgeons and the Royal College of Physicians.

**Student’s immune defences hit by examination nerves**

Sweden - The rise in asthma and allergies is often blamed on stress in the West. Now research, involving medical students and carried out at the Karolinska Institute, in Stockholm, has indicated that there are important links between mental stress and characteristic physical inflammation reactions of allergens.

To understand the link between stress and allergy, the research team, led by Mats Lekander and Caroline Olgart Hoglund, examined how a major medical exam at the Institute affected feelings of stress, stress hormone levels, the immune system and lung function amongst the students who suffered allergies - 22 students had hayfever and/or asthma - and 19 other students who had none.

Two extensive tests were carried out, the first during a calm period of study, when the subjects faced no immediate examinations, then shortly before a major exam. The researchers were able to show, for the first time on record, that a group of regulatory T cells, which control the activity of a number of other cells in the immune system, appear to sharply increase in number in response to mental stress. Both groups of students had this increase. Blood concentrations of cytokines, a group of inflammation products, were also seen to have changed and shifted against a pattern associated with allergic inflammation in the allergic students, but remained normal in the healthy students.

The two discoveries might be linked. Mats Lekander explained: ‘There is much to suggest that the regulatory T cells are dysfunctional in people with allergies. When people become stressed, they increase in number and normally have an anti-inflammatory effect. But this system does not work in people with allergies, it could explain the changed cytokine balance that we have observed in them.’

Clinical & Experimental Allergy. Peer reviewed publication and references: ‘Changes in immunity regulation in response to examination stress in atopic and healthy individuals’.

**GENETIC MACHINE PRE-DATES HENRY FORD’S PRODUCTION CONCEPT**

Scotland - Researchers at the University of Dundee have made a significant new discovery about how cells copy their genetic information accurately and efficiently to avoid cancers and other diseases, according to a report in the scientific journal Cell (30th August 2006). Dr Tomo Tanaka, Professor Julian Blow, principal investigator of the Division of Gene Regulation and Expression in the University’s School of Life Sciences, with member Dr Etsushi Kitamura, discovered that, contrary to conventional views, the machinery that copies DNA stays fixed inside the cell whilst the DNA being copied has to move.

For the genetic information to be properly inherited, a cell must copy its DNA using a specialised ‘copying machine’ before it can divide into two daughter cells. It was originally thought that the DNA copying machine moves along the DNA as it is copied. Dr Tomo Tanaka said: ‘We can liken the process that we have discovered in cells to an assembly line for making cars, invented by Henry Ford and his engineers. It was a revolutionary idea in industry that products move along a line and engineers stay at fixed places to assemble them. This achieved much more accuracy and efficiency in manufacturing products.

‘Similarly cells can copy DNA accurately and efficiently by moving it through a stationary copying machine, rather than by moving the copying machinery along stationary DNA. Because errors in DNA copying cause human diseases such as cancers, it is crucial to understand how our cells organise the copying of DNA in space and time.’

Referring to cancer being caused by uncontrolled cell division and multiplication, Professor Angus Lamond, Head of the Division of Gene Regulation and Expression pointed out: ‘This latest advance is a wonderful example of how genetic research in Dundee is leading the way in understanding these fundamental processes and therefore helps us understand the basic causes of cancer. Future cancer research can now build on this improved understanding of what has gone wrong.’

Research for the study - ‘Live-cell imaging reveals replication of individual replicons in eukaryotic replication factories’ - was funded by Cancer Research UK.

Contact: Dr Tanaka. E-mail: t.tanaka@lifesci.dundee.ac.uk/ Telephone: 01382 385814.
First EU ranking of the Lithuanian healthcare - worst in EU

By Andrius Vagoras, our correspondent in Lithuania

healthcare measures are not bad (patients rights and information, accessibility to medical records), it also indicates that accessibility to treatment, especially new modalities and treatment outcomes, are unsatisfactory. Predictive arguments for poor funding are defended by presenting Estonia as an example of a similar former healthcare system; currently, in the EU, Estonia takes second position after Slovenia for the best value for money, meaning that not just money determines good results; by the same token, Lithuanian healthcare is not the poorest.

The particular proposals for Lithuanian healthcare from Health Consumer Powerhouse are to:

1. establish insurance, which will not expect patients who are victims of medical negligence to prove the guilt of the latter
2. set up indispensable vaccination of all the children against poliomyelitis
3. guarantee proper public information about the medical care system.

Dr A. Björnberg, head of the Euro Health Consumer Index survey, states that a healthcare system in Lithuania is undergoing thorough reformation, meaning scope and hope for a better score in 2007.

If we could optimistically transform the 2006 Euro Health Consumer Index slogan - 'Room for big improvements in every country' - the Lithuanian 'room' is the biggest.

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The country's motto is 'Let unity flourish'

The largest of three Baltic States, Lithuania borders Belarus, Latvia, Poland, and Russia, and lies on the Baltic Sea to the west. The country has an area of around 65,200 sq. kilometres and an estimated population (2006) of 3,596,617, with a growth rate of -0.3%. The birth rate is 8.8/1000 and infant mortality 6.8/1000. Average life expectancy is 74.2 years.

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Women, doctors and heart disease

Gender differences need recognition and medical research

patients diagnosed with heart failure participated. The study results showed that the risk of dying of heart failure had decreased significantly between 1979–2000. However, it revealed that the opposite was the case for older men.

As a specific example, although in the last decade heart attack survival has improved greatly due to thrombolysis, such as TPA and streptokinase, a USA study, involving 1,078 women aged 65 and over, found that up to 60% of the screened women were eligible for admission to the hospital and emergency departments or even when women were admitted to the hospital – different approaches are still made, and could prove life threatening. "Positive action is needed to move more and more awareness of gender differences and cardiac disease – even among cardiologists," said Eva-Elizabeth Swahn MD PhD, President of the Swedish Society of Cardiology, during a discussion on this subject with European Hospital’s Editor Brenda Marsh.

One problem the professor pointed to is the poor communication skills of doctors, her theses. At that time she realised that most trials mainly involved males, rather than females. She heard reasons such as ‘women’s ECGs are different,’ or they had ‘a different physiological way of reacting from men’. From the realisation that there was very little research on any gender differences, and believing there was ‘much to be done’, her involvement grew. Carrying out research has not been easy. The professor had to work alone, with virtually no funding. However, today, perhaps if these gender differences are at least acknowledged, if not understood, the professor has two fellows to undertake her research agenda. Nonetheless, obtaining funding for this particular field of work is still a difficult task, she added.

The professor mentioned one Swedish development that has helped raise awareness – the 1.6 Million Club, an organisation, but has more women than men. Apart from more research on women and the heart, and certainly more seminars on the subject, Professor Swahn said her hopes for the future include having ‘... an informed population – both doctors and people. Then they will question what doctors think. Even if it’s only a small change, cardiologists do not realise, because they are used to dealing with the male psyche. That has to change.’

USA - The effectiveness and safety of a new drug for treating bloodstream and heart infections caused by Staphylococcus aureus bacteria has been demonstrated by researchers at Duke University Medical Centre, in an international clinical trial. The research results were published in the British Journal of Medicine (17/8/06).

In 2003, this drug, daptomycin, received Food and Drug Administration (FDA) for the treatment of infections caused by S. aureus. However, it was not known whether the drug could effectively treat bloodstream and heart infections.

Because many strains of S. aureus have developed resistance to all penicillin-related antibiotics, treating the infections they cause is difficult, the researchers point out. Among these strains is methicillin-resistant S. aureus (MRSA) - some have now shown resistance to the drug vancomycin.

In their study, the researchers tested the drug's effect on two specific kinds of infection caused by S. aureus, as well as MRSA strains - bacteremia and infective endocarditis. In the later, if caused by S. aureus, the infection is extremely severe; it can affect either the heart, central, or aortic valves. It frequently occurs in patients with pre-existing heart disease. In a randomised, controlled trial, 246 patients in 44 centres in four countries, had bacteremia, with or without endocarditis. The patients were randomly placed in one of two treatment groups, one receiving daily intravenous injections of 6.5 milligrams of daptomycin per kilogram of body weight, and the other given standard antibiotic therapy - initially, over five days, gentamicin, then a full course of either an anti-staphylococcal penicillin or vancomycin depending on bacteri- al susceptibilities.

During these treatments and up to hospital discharge, the researchers evaluated the patients, but also, because up to 10% of S. aureus infections can recur after antibiotics are stopped, all patients were again evaluated six weeks later. Daptomycin proved as effective as standard therapy, showing a 44.4% success versus 31.8% in eliminating disease. However, in the meantime, the standard therapy did slightly outperformed daptomycin for S. aureus without drug resistance (46.8% vs. 44.8%).

Neither of those differences was statistically significant, the researchers concluded.

The treatment periods took about the same - eight or nine days - to clear an MRSA infection.

In a second, smaller, studies, carried out prior to the FDA approval for the drug's use for skin infections, had suggested that daptomycin might cause significant side effects, and this study's sub- jects received higher doses than those in the skin infections (four milligrams per kilogram of body weight), the researchers also evaluated whether the drug was easier to the kidneys than standard therapy, which, the researchers suggest was seen mostly in use of gentamicin in the study, which has potent renal toxicity. Patients treated with daptomycin experienced fewer adverse kidney events (6.7% vs. 18.5%).

In addition, measuring the organ's ability to filter creatinine protein from the bloodstream indicated that kidney perfor- mance was less affected by the drug than by the standard therapy.
Morphology and function in the management of heart disease

Possibilities and opportunities offered by new PET/CT systems for cardiac research and diagnoses will be an important topic at the ESC in Barcelona this year. During the event, Paolo Camici, Professor of Cardiovascular Pathophysiology at Imperial College School of Medicine, in London, will lecture on this development, which he outlined during an interview with Daniela Zimmermann of European Hospital.

I would not say so. Certainly this combination is very useful for research, but it is also of interest for clinical practice. Clinically, PET has applications for the assessment of viability in combination with FDG and for the diagnosis of coronary artery diseases when used in combination with rubidium-82. Furthermore, PET/CT now allows us to image coronary arteries in a way similar to angiography, but without the need of a catheter. In your ESC lecture, will highlight any other aspect? Yes, the fusion of PET and MRI taking research aspects into consideration, this will be a very promising combination. MRI can provide a lot of functional parameters without radioactivity, with important ethical advantages. In addition, MRI is very flexible and has a lot of important applications in the fields of cardiology. PET and MRI are very complementary; together they can provide information on regional ventricular anatomy and function, on coronary anatomy and tissue perfusion, on tissue viability and metabolism.

No matter how different the patient, the care is the same.

Large or small, short or tall, old or young: with GE’s compact Ventri™ nuclear cardiology camera, you’ll be able to image virtually all of your patients regardless of body type. Ergonomically designed, Ventri offers improved efficiency and diagnostic confidence. With Ventri, you have them all covered.

Nuclear Medicine Re-imagined

Come and visit us at World Congress of Cardiology, Barcelona. 2-6 September, GE booth no. F500, Hall 2.

To learn more visit www.gehealthcare.com/re-imagine

Massive gathering of cardiologists promises vital knowledge exchange

I n Barcelona, this September (12–16), the World Congress of Cardiology will offer, under one roof, the European Society of Cardiology (ESC) Congress 2006 plus the 15th World Congress of Cardiology World Heart Federation. Thus the event promises more than a lively exchange of scientific research results and innovative cardiology solutions. Professor Raimund Erbel, of the West German Heart Centre Essen, Duessberg University Hospital, Germany, forecasts and discusses the likely ‘hot’ topics.

‘Imaging procedures will be a main focus at the World Congress. Currently, 64-slice and 128-slice CT are very topical – and now we are also expecting images from a 256-slice. It remains to be seen how accurate and detailed images produced by the 256-slice are and whether we will gain any diagnostic benefits from them.’

‘Imaging via MRI is also becoming more important in cardiology. Developments in this area are also rapid – some manufacturers have already moved from Tesla 3 to Tesla 7.’

‘There are also some very new developments in radiographic techniques for heart catheterisations. At the University Hospital in Duessberg-Essen we were the first in Europe to install a procedure that combines conventional radiographic technology with ultrasound scanning technology. This brings us a big step closer to the modular development of a catheter system. We will present our first experiences and evaluations at the Congress.’

‘We have been closely involved in this development for years. Before, we had been asked for the development of modular systems for cath labs. Now we have finally succeeded in integrating not only X-ray diagnostics into the cath lab, but also ultrasound diagnostics. The difficulty with this combination has long been the correct “match” between the two diagnostic systems – the fusion of two types of images in a way that ensures a meaningful overall image for diagnosis.’

‘The first system of this kind results from GE Healthcare partnering with the Volcano Corporation (see box). The X-ray and ultrasound diagnostics combination gives a cardiologist inimmunately clear images of the coronary and peripheral vascular morphology. The images achieved by merging data from X-rays and ultrasound scans significantly ease the evaluation of the severity of cardiovascular diseases.’

‘This puts cardiologists in a position where they can make decisions on the appropriate therapy options much faster - and safer. This new state-of-the-art technology enables us to show short, fatty, dark areas surrounding the causes and progression of coronary and peripheral arterial diseases. Other medical companies also aim to achieve this type of combination. The next step for cardiology will now be to equip catheter systems in such a way that the X-ray images produced can be directly aligned with CT or MRI images.’

‘This call for intelligent IT solutions. We are currently working on a solution based on the upgrading of a PACS system, and which enables the combination of different imaging systems at the catheter workplace. There has been a lengthy demand for this combination, but the technical realisation, up to now, has not been possible. The PACS itself offered no solution here, because the programme was only designed around data and image archiving. However, this type of archiving, without access to the entire medical history, is already in use within the hospital. For this reason, we have been working closely with GE Healthcare and Volcano Corporation have taken the first steps towards a solution. We are currently working on this development and already, for years, we have had our IT department at the Volcano booths demonstrated the prototypes of the new investigational device. The result of this procedure is to make sure that, in the future, we can combine and communicate closely with the radiologist to achieve comprehensive diagnostic system.’

‘ Asked whether imaging procedures, previously the realm of radiologists, are increasingly entering the realm of cardiology, and whether this causes conflict, Professor Erbel said a similar situation occurred in the past. ‘Heart catheterisation used to be the responsibility of radiologists, and, for example in Sweden, this is still the case. However, the worldwide trend is towards an exchange between different medical fields, which then results in new specialisation diagnosis and diagnosis, together. The aim of this procedure is to fit the cardiologist who knows the patient to communicate closely with the radiologist to achieve comprehensive diagnostic system.’

‘In the area of drug eluting stents, research is concentrated around finding materials that can form vascular surfaces quicker and more complete and resolve after wards. We are trying to get away from the type of stent that remains in the body as a foreign object. Two developments in this field look promising – magnesium-stents and those made from polyethylene instead of HLD, leads to a regressive or progression of the disease) for this advance to be published this autumn.’

‘This is done with the help of a cholesterol transport system inhibitor. The result of this study could give a real boost to preventing the cardiovascular problems. So, overall we can look forward to some important developments and innovations at the Congress.’

‘On the wall in his office is a certificate stating that he is “Man of the Year 2005” because of his numerous publications.’

Further details: www.escardio.org/congresses/World_Congress_Cardiology_2006/WC_C_2006.html

Combining imaging techniques

The first combination of digital X-ray and ultrasound scanning procedures result from a partnership between GE Healthcare and the Volcano Corporation, which merged GE’s digital X-ray system for catheter laboratories with Volcano’s new, PC-based, intravascular ultrasound imaging system (IVUS) platform. The product is a mobile, heavy machine that delivers very sharp images, allowing more accurate diagnosis of cardiovascular diseases and their severity. The image quality also promises to make interventions easier, such as the insertion of stents, safer and more accurate.

GE Healthcare and Volcano Corporation have combined GE’s innovative digital X-ray cath lab system with Volcano’s new PC-based IVUS platform to provide a single view of coronary and peripheral vessel morphology. The companies report that the resulting image clarity will help doctors catch earlier signs of disease and extend the extent of the cath lab to diagnosticians, and to other areas beyond the daily pattern of the cath lab. The integrated user interface set apart from current stand-alone systems that impose many practical limitations on the regular use of IVUS, Volcano points out. Further, with more than 1900 Innova all-digital x-ray systems installed worldwide, GE and Volcano are poised to facilitate a greater utilisation of IVUS to further guide patient management.

‘The combination, if not out, that an increase in the use of IVUS has increased, particularly with the recent innovations in IVUS based on-line tissue characterization and IVUS-stenting, so too has the technology market need for an integrated, easy-to-use system.’

‘The agreement between the two companies is a milestone towards the development of a fully integrated imaging platform and practical for a wide array of physicians.’

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The digital cath lab imaging system with fully-integrated IVUS

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That Philips has a long history might be generally known, along with its products: light bulbs, TV sets and other electronic devices. Less known is the fact that, since 1918, Philips has applied its skills and knowledge to the manufacture of medical products. In that period, Philips Research began investigations into X-rays and in 1927 the firm bought the German company Müller & Co, which had specialised, since 1899, in X-ray applications. From X-ray technologies other techniques slowly developed to image the inside of the human body. Since acquiring some large medical companies, Philips has become one of the top three players in the manufacture of medical equipment. Cardiology Philips is even number one.

During our interview, Gert van Santen speculated that Philips is highly motivated. A device is not just ‘to make money’ - although no one in the present period of the firm believes in the human being, who should benefit from their activities. Philips tries to understand the real needs of patients, as well as the medical specialist. To meet those needs it creates integrated, innovative solutions. Among these is the ‘cardiovascular care cycle’, which aims to detect cardiac defects at a very early stage: from screening or early diagnosis, via diagnostics to treatment and follow-up.

The fact, that these stages need all kinds of equipment, from monitors and CT scanners to defibrillators and IT equipment, is a nice consequence for Philips. This made the firm an international market leader in cardiology.

Cardiology and future

According to the Dutch Heart Association, the Netherlands has more than 1,000,000 cardiovascular patients. The latest study from The American Heart Association revealed that one in three Americans has some form of vascular or heart disease (http://circ.ahajournals.org/cgi/content/short/113/6/e85). A great threat to the heart is vulnerable plaque, deposits of fatty substances, cholesterol and other substances build up in the inner lining of an artery.

Considering the enormous numbers involved in these problems, it is vital to energetically attack them. This requires a multiple approach, which appears possible due to modern imaging techniques and medication: molecular healthcare, which makes it possible to trace and attack potential problems, such as plaque, at an early stage.

Overseas

It is thought that heart problems resulting from the high percentage of cholesterol, are typically problems of the West. In this respect one points at far Americans and Europeans – just waiting for heart attacks.

‘Oriental people don't have such problems, so there's no market for Philips’, or so it was thought. However, the West has increasingly influenced oriental culture and lifestyle – including nutrition. A remarkable result is Japan's currently very high cholesterol percentages. These hardly existed until around five years. Then the first American fast-food hamburger restaurants arrived!

At home

Philips recognises that people are hospitalised through necessity, not by choice. That stay might begin in a cardiac care ward, and finally a general ward. Philips reasoned that a hospital stay could be shorter, and began to study how to do that. Line connections between the hospital and the patient's home were devised to monitor the patient. Now, via a simple line connection (e.g. TV) a patient's data can be recorded daily, so that a hospital cardiologist can observe his/her condition. The doctor can decide whether there are problems and if another hospital admission is necessary, from answers given by a patient to questions such as: What is your weight? Have you taken your medication? How do you feel generally?

Although this programme, named Motiva, is in the test stage in Europe, in the USA the first commercial application is on the market. It has also won the Medical Design Excellence Award and has been nominated for the Top-5 Disease management Ideas 2005.

Results from studies of Motiva’s use will be presented at September’s World Congress of Cardiology in Barcelona.

The system might provide the answer to ever-increasing healthcare costs. Shortening a hospital stay is not only good for insurers, but also hospitals.

Philips today and in the future

Worldwide, about 30,000 people work in Philips Medical Systems departments, which include Imaging Systems, Ultrasound and Monitoring, Healthcare Informatics, New Ventures and Global Sales and Service – the latter in 63 countries. The company’s production plants are in the Netherlands, Germany, Finland, Israel and the USA.

That Philips has confidence in a glorious future can be heard in the words of its CEO Gerard Kleisterlee, who said, in a speech in Berlin this March: ‘I am very confident that, over the next few years, Philips will enter into many more mutually beneficial business relations and partnerships with healthcare providers’.

Let the patient profit from that!
Siemens is participating in the foundation of the first European Institute of Molecular Imaging (EIMI) at the Westphalian Wilhelms-University in Muenster, following a contract signed by Siemens AG Board Member Professor Erich Reinhardt, and Professor Jürgen Schmidt, Vice chancellor of the Westphalian Wilhelms-University Muenster. When the institute begins work this October, the university expects a further boost for key competencies in molecular imaging, particularly the opportunity to work with the latest molecular imaging systems.

The University and the University Hospital Muenster are international pioneers in molecular imaging research. In June 2005 the university set up an interdisciplinary special research field called ‘Molecular Cardiovascular Imaging’ (MolBi), which involves four faculties, including the first Centre of Competency for Molecular Imaging, financed by the German Research Foundation. This interdisciplinary project will boost the competency of our fields of research. Medical, mathematical, chemical and physics researchers work together with scientists from Siemens,’ explained Professor Jürgen Schmidt. Siemens is gaining access to specialist knowledge in cardiovascular diseases and to the planned new developments at the EIMI, such as biomarkers and planned new developments at the vascular diseases and to the future of medicine of the future, which considers working interdisciplinarily: Preventive screening and early diagnosis are to gradually replace the wait for the occurrence of symptoms and their often invasive treatment once a disease has manifested itself.

The new EIMI comprises two fields of work: One will concentrate on the development of specific, target-oriented substances – the biomarkers – whose distribution within a patient’s body can be viewed through imaging procedures. These molecules point to certain pathological changes. The focus of the second field of work will be the development of technological potential, as well as their pre-clinical evaluation.

Professor Erich Reinhardt said: ‘Demographic changes require a rethink in the healthcare sector. A central point is the increasing demand for health services can be better controlled through improved quality in medical care.’

Research results from molecular medicine and innovative diagnosis procedures are calling for a change from the extremely evidence-based, reactive type of medicine of the past to a knowledge-based medicine of the future, which considers working interdisciplinarily: Preventive screening and early diagnosis are to gradually replace the wait for the occurrence of symptoms and their often invasive treatment once a disease has manifested itself.

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Professor Omar Schober, speaker for the special research programme 636, at Westphalian University Muenster said: ‘We want to get to the bottom of a particular problem within the European population. In Western culture groups cardiovascular diseases are responsible for every third fatality; cancer only for every tenth. Moreover, the chances of curing cardiovascular diseases are significantly higher.’

Early diagnosis of diseases, as well as individualised therapies, can make a significant contribution towards improving the quality of healthcare, whilst lowering costs.

**The European Institute of Molecular Imaging**

In the August issue of The Lancet, dedicated to cardiology, an editorial strongly calls for ‘A full and frank discussion at the upcoming World Cardio Congress’ to gain more interest from the world research regarding the most neglected of neglected diseases, the most profound cardiac consequences – Chagas' disease -- on a one-to-one basis.

Among the research articles published in this issue, are some surprising results and statements. Here we present synopses of a few, which include the effects of tobacco – one of the main discussion subjects at the international gathering of cardiologists in Barcelona, this September.

### Tobacco

*All forms of exposure are bad for the heart*

Previous studies have shown that tobacco smoking increases the risk of heart disease. However, to date most of those studies have been done in developed countries, and few large studies have been carried out to examine the effects of tobacco in other geographical regions. Results from the INTERHEART study have led Professor Salim Yusif, of Hamilton General Hospital-McMaster Clinic, Hamilton, Canada, and colleagues, to conclude that all forms of tobacco exposure, including smoking, chewing or inhaling second hand smoke, increase the risk of heart attack up to three times.

The team calculated the risk of heart attack for various forms of active tobacco use (both smoking and non-smoking) and second hand smoking (SHS) in all areas of the world. The study included data from over 27 000 people in 52 countries. The investigators adjusted their calculations to exclude the effect of other lifestyle factors that could affect heart attack risk, such as diet and age.

They found that tobacco use in any form, including sheesha smoking, which is popular in the Middle East and beedie smoking, common in South Asia, was harmful. ‘Chewing tobacco also increased the risk of a heart attack two fold, indicating that all forms of tobacco use or exposure are harmful,’ added Dr Koon Teo.

Compared with people who had never smoked, smokers had a three-fold increased risk of a heart attack. Even those with relatively low levels of exposure (8 – 10 cigarettes a day) doubled their risk of heart attack.

However, the researchers did find that the risk of heart attack decreased with time after smoking cessation; among light smokers (<10 cigarettes a day) there was no excess risk 3–5 years after quitting.

By contrast, moderate and heavy (20+ cigarettes a day) smokers still had an excess risk of around 22%, 20 years after quitting.

The team also found that exposure to second hand smoke increased the risk of heart attack both in former and non-smokers. The findings suggest that individuals with the highest levels of exposure to SHS (22 hours or more per week) may increase their risk of heart attack by around 45%.

‘Since the risks of heart attack associated with smoking dissipate substantially after smoking cessation, public-health efforts to prevent people from starting the habit, and promote quitting in current smokers, will have a large impact in prevention of heart attack worldwide,’ Professor Yusif concluded.

### BMI does not predict outcome for HD patients

*Physicians know that obesity is a risk factor for developing heart disease. However, just how obesity affects people with established heart disease has remained unclear because studies have produced contradictory results, until now.*

According to new study results reported by Francisco Lopez-Jimenez, and colleagues at the Mayo Clinic College of Medicine, in Maryland, USA, body mass index (BMI) - a number calculated from a person’s height and weight, which is commonly used as a measure of obesity - cannot reliably predict the outcome for patients with heart disease, because BMI is an unreliable indicator of obesity.

To investigate, the researchers combined data from 40 studies, involving about 230 000 people with heart disease; the average follow-up was four years. Most of the studies used BMI as a measure of obesity. The investigators found that patients with a low BMI had a higher risk of death than those with a normal BMI. Overweight patients had better survival and fewer heart problems than those with a normal BMI. Obese people who had had bypass surgery had a higher death rate when compared with people with a normal BMI, while severely obese people had a higher risk of a heart-related death but not death from other causes.

The better outcomes for overweight people might be because they have more muscle than normal weight people, the authors said. They concluded that the results therefore demonstrate the inability of BMI to discriminate between body fat and lean muscle. ‘Rather than proving that obesity is harmless,
The tasks ahead call for interdisciplinary competencies. Muenster is offering the very best conditions in the field of cardiovascular imaging. A select committee, the ‘Joint Review Committee’, made up of representatives from both partners, aims to develop studies, co-ordinate research activities and exchange research data.

Knowledge-based medicine offers doctors a network with access to all patient data and disease information so that the best possible diagnosis can be ensured. Siemens can make a considerable contribution here, due to the company’s expertise in integrated networking technology. At the same time, the company is offering the Wilhelms-University Muenster researchers access to the very latest imaging procedures, such as the MR-PET scanner, a hybrid system with elements of magnetic resonance imaging and positron emission tomography, which the firm is due to roll out this September.

According to Professor Erich Reinhardt, the planned take-over of the diagnostics division at Bayer constitutes a further building block on the way towards an integrated diagnostic company that will combine imaging systems, laboratory diagnostics and clinical information technology. This puts the company in a strong position in the three areas that are due to see the most innovations within healthcare in the future: knowledge-based care, molecular imaging and in-vitro diagnostics. Report: Guido Gebhardt

**BMI categories**

- Underweight = <18.5
- Normal weight = 18.5 - 24.9
- Overweight = 25 - 29.9
- Obesity = BMI of 30 or greater

Further details of these articles and other new cardiology findings: www.thelancet.com
The King and Queen of Spain, accompanied by the Minister of Health and over 100 institutional and corporate authorities, inaugurated the new Madrid headquarters of the country’s National Centre for Cardiovascular Research in February. Dr Eduardo de la Sota, our correspondent in Spain, reports on the structure and aims of this research enterprise.

The Spanish National Centre for Cardiovascular Research

The objective of the CNIC is to lead cardiovascular research in Spain and establish the country as a leading international centre. The scientific management of the CNIC is under the direction of Spanish born Dr Valentín Fuster who serves as Chief Scientific Officer of the Mount Sinai Hospital in New York, and President of the World Heart Federation. Sixteen universities throughout the world have granted Dr Fuster honorary titles. His publications include over 400 articles on the coronary artery disease, atherosclerosis and thrombosis.

Discussing the CNIC, Dr Fuster said: ‘Today, research is a synonym of well-being and progress for any developed country, but even more so in the case of biomedical research, where the knowledge gained is translated into an immediate, substantial improvement in the health and quality of life of citizens. In this respect, the CNIC has the major challenge of establishing a new two-way translational research model, which enables both the application of basic knowledge to the diagnosis, treatment, prognosis or prevention of cardiovascular diseases and which contributes to answering the scientific questions arising in the daily clinical practice at the patient’s bedside. Research at the CNIC falls into these categories:
- Vascular Biology and Inflammation
- Atherothrombosis and Cardiovascular Imaging
- Regenerative Cardiology
- Cardiovascular Developmental Biology
- Cardiovascular Epigenetic and Population Genetics
- Translational Cardiovascular Research of Novel Technologies and Therapeutics.

Financing

The CNIC has been designed as a flexible entity, in terms of its organisation as well as financing, with significant participation from the private sector. Through the ProCNIC foundation, and in conjunction with the objectives of the Government’s Programa Ingenio 2010 (‘ Talent Development Programme’), thirteen of the principal Spanish companies (Ascensa, Banco Santander, BBVA, Endesa, Fadisa, Fundación Abertis, Fundación Ramón Areces, Gas Natural, Grupo Prisa, Inditex, La Caixa, Repsol YPF and Telefonica) have agreed to participate in the ambitious CNIC project. This corporate commitment, which is open to new companies, began last December following the Prime Minister, José Luis Rodríguez Zapatero, signed a co-operation and constitution agreement for the Pro CNIC foundation, which will contribute 100 million euros up to 2012.

Headquarters in Madrid

Spread over 23,000 m² the new building, costing over 50 million euros, has the capacity to house 300 scientists. From 2000, through an agreement signed with the Ministry of Health, the pharmaceutical industry has made several contributions to this expenditure. The building has four floors above ground and three below. The laboratories, which occupy most of the Centre, are equipped with services and facilities necessary to perform world-class biomedical research, and provide an open environment designed to encourage maximum collaboration and communication.

Collaborations

The following institutions are involved:
- Consejo Superior de Investigaciones Científicas, Instituto de Biomedicina de Valencia
- El parque científico de Madrid
- The European Molecular Biology Laboratory
- The Francesc Xavier Institute for Biotechnology
- La Fundación Centro San Rafael de Alcalá
- The University of Yale

A pool of researchers

One of the key objectives of the CNIC will be to create a strong pool of multidisciplinary researchers. Therefore, as well as attracting the best cardiovascular specialists, the centre will pay considerable attention to training young scientists, with seven pioneering projects in Spain that will be carried out jointly with the Instituto de Salud Carlos III, an entity affiliated with the Ministry of Health. Interestingly, the CNIC international programme is intended for young doctors from any of the biomedical areas and includes training abroad as well as the possibility of returning to the Spanish centre after the training period. Specialists who have finished their MIR (specialty) training in the cardiovascular field will be offered the possibility of participating in a translational research project designed by de CNIC, which lasts between 12 and 24 months, together with the possibility of collaborating with the Mount Sinai Hospital in New York.

Technical units

Currently, the CNIC has four technical units, with the possibility of more in the future. Each unit maintains advanced facilities in their specialist area, and is set up to incorporate new technologies as they emerge. Researchers can thus take advantage of the latest technologies without having to divert their own resources. As independent units, the services are equally available to all users, and the economies of scale and competitiveness with external suppliers help to stretch research budgets.

Technologies covered:
- Cytometry
- Proteomics
- Genomics

The CNIC - general information address: Centro Nacional de Investigaciones Cardiovasculares, Melchor Fernández Almagro, 3 28020 Madrid, Spain
- Telephone: (+34) 91 453 12 00
- Fax: +34 91 453 12 45
- E-mail: info@cnic.es; Website: www.cnic.es

A stretcher with hydraulic lifting system

Italy’s smart, innovative design enjoys a worldwide reputation. This also applies to the country’s healthcare products.

To meet demand for a stretcher that can automatically rise up one metre - frequently necessary when moving patients from bed to stretcher and transferring them between hospitals - Spencer Italia S.r.l. has produced a completely new corollary.

Its potential uses are many. For example, many X-ray tables are about a metre above floor level, so a stretcher is produced in that height. Thus patients have had to be lifted, creating risks for patient and operator safety. The Spencer Alto unites an excellent level of comfort for the patient with the reduction of effort on the part of the operator. It is simple in its substance but with a balanced relation between comfort and cost,’ the company reports.

The intelligent lifting system for raising patients to a height of one metre is the fruit of an advanced project that has established new standards of the X-frame stretcher in terms of agility and reduction of effort required.’

Stability

The system continuously verifies stability, adapting itself to a necessary height. The ‘flexible’ distribution of the two axes allows the wheels to achieve a maximum traction and to make the most of the thrust. ‘Therefore, the stretcher always offers an optimal stability and gear dynamics,’ Spencer points out.

Ergonomics

The comfort and the ergonomics of the stretcher have been raised and this allows for a reduction in the effort expended, an increase in safety and therefore improved performances of the operators. The firm also reports that the stainless steel, welded framework with aluminium and polycarbonate inserts guarantees this equipment’s durability. In addition, a polished finish and easy access to all parts enables efficient maintenance and cleaning.

Control

Optimisation of the position of the controls and centre of gravity, enables absolute control and command of the stretcher. ‘But we are not dealing only with

24 September

WORLD HEART DAY

In the lead up to this year’s World Heart Day campaign - motto ‘How Young is Your Heart?’ - Professor Valentín Fuster, President of the World Heart Federation, observed many people’s efforts to keep looking young and said: ‘If we put as much effort into keeping our hearts young we would see a tremendous reduction in the number of premature deaths from heart disease and stroke each year.’

The WHO international ‘heart days’ encourage a healthier lifestyle, focusing on diets, physical activity and stopping smoking, and are used not to late to start living a healthy lifestyle.’ said Professor Sidney Smith, of the University of North Carolina, who is also Chairman of the World Heart Federation’s Scientific Advisory Board. ‘By asking everyone to think about the age of their hearts on World Heart Day, we are encouraging the world’s population to adopt a heart healthy lifestyle.’

For the day, the Federation’s member organisations in 100 countries will promote activities that include health talks, walks, runs, jump rope, fitness sessions, public talks, stage shows, scientific forums, exhibitions, concerts and sports tournaments. Details: www.worldheartday.com
Revised ACC/AHA/ESC guidelines on atrial fibrillation

Stoke risk should determine anti-clotting treatment for people with irregular heartbeat

Risk factors for stroke should be used to determine whether anti-clotting therapy is given to people with atrial fibrillation (AF), according to revised Guidelines for the Management of Patients with Atrial Fibrillation released by the American College of Cardiology, American Heart Association and the European Society of Cardiology. (Authors: Amy Murphy at ACC, Bridgette McNeill at AHA, and Lisa Abdolalian at ESC).

Atrial fibrillation (AF), the most common heart rhythm disturbance, increases the risk for stroke, heart failure and all causes of death, especially in women. Presently AF affects over 4.5 million Europeans, a number expected to increase even more due to aging populations, a rising number of people with chronic heart disease and improved diagnostic possibilities.

Previous guidelines published in 2001 recommended using several patient characteristics - age, gender, heart disease risk and concurrent conditions - to decide proper anti-clotting therapy for these patients. The new approach recommends that the risk for stroke should be the main factor, said Valentin Fuster MD PhD, co-chair of the guidelines writing committee, followed by all three associations and professor of medicine and director of the Mount Sinai Cardiovascular Institute in New York. ‘We focused on stroke risk because AF is associated with increased long-term risk for stroke,’ he said. ‘About 15-20% of strokes occur in people with AF, and those strokes are especially large and disabling.

Incorporating existing recommendations on anti-clotting therapy from the stroke primary prevention guidelines will streamline patient care and make recommendations clearer for physicians.’ During the last two decades, hospital admissions in the USA and Europe increased by 66%, Total costs approach $13.5 billion in the European Union.

The revised guidelines also recommend daily aspirin therapy ($1-325 mg) to guard against blood clots in AF patients with no stroke risk factors. Aspirin or warfarin is recommended for those with one ‘moderate’ risk factor (over age 75, high blood pressure, heart failure, impaired left ventricular systolic function or diabetes). Warfarin is recommended for people with any ‘high’ risk factor (previous stroke, transient ischaemic attack (TIA), systemic embolism or prosthetic heart valve) or more than one moderate risk factor.

According to co-chair Lars E Ryden MD PhD, also a fellow of all associations and professor emeritus at Karolinska Institute, in Stockholm, the guidelines help physicians to prioritise the objectives of patient care according to the following steps: 1) controlling heart rate, 2) preventing clots, and, if possible, 3) correcting the rhythm disturbance. Rate control usually involves achieving a ventricular rate (HR) of 60 to 80 beats per minute at rest and between 90 and 115 beats per minute during moderate exercise. Also new in the guidelines, catheter ablation - the procedure to correct irregular heartbeat with radiofrequency energy - is considered ‘a reasonable alternative to drug therapy to treat AF patients with little or no left atrial enlargement, and in whom drug treatments did not stop the rhythm disturbance,’ Dr Fuster said. Depending on symptoms, controlling the heart rate may be the reasonable therapy in elderly patients with persistent AF who have hypertension or heart disease, according to the authors. For people under age 70, especially those with recurrent AF and no evidence of underlying heart disease, rhythm control may be the preferred approach, starting with drugs and by means of catheter ablation if medication fails to stop the attacks. Drs Fuster and Ryden emphasised: ‘Regardless of the approach, the need for anti-clotting therapy should still be based on stroke risk and not on whether proper heart rhythm is maintained.’

Other writing committee members: David S Cannon MD; G Neal Kay MD; Harry J Crijns MD James E. Lowe MD; Anne B Curtis MD; S Bertil Olsson MD PhD; Kenneth A Ellenbogen MD; Eric N Prystowsky MD; Jonathan L Halperin MD; Juan Luis Tamargo MD; Jean-Yves Le Heuzey MD; and Samuel Watt MD. The European Heart Rhythm Association and the Heart Rhythm Society collaborated on the statement.


ESC GUIDANCE ON CARDIAC RHYTHM MANAGEMENT PRODUCTS

Reporting on the performance and adverse events of Cardiac Rhythm Management (CRM) device technology is significantly different in European Union and non-EU countries. This, according to results from a policy conference held by the ESC’s European Heart Rhythm Association (EHRA), could cause problems for the general public if steps are not taken to minimize them.

Variations in regulatory requirements and approval processes mean that a new CRM product is frequently clinically tested and commercialised much earlier in Europe than in other regions. EHRA document states that active monitoring of these products in Europe is therefore necessary and should be conducted independently from international monitoring or registry activities, although data sharing should be encouraged.

National Competent Authorities should be encouraged to work with clinicians and scientific societies to improve event reporting on national levels. Specifically, EHRA recommends the creation of a single, standardised multi-lingual incident notification sheet that can standardise the process of reporting incidents or near-incidents. Additionally, a confidential forum for informal discussions of product performance issue should be established to help improve communication about devices.

EHRA also proposed a novel approach for assessing individual hazard analysis. This risk model takes into account the condition of an arrhythmic patient and the current indication for the devices, i.e. primary or secondary prevention of sudden cardiac death (for patients with implantable cardioverter-defibrillators).

This approach will help prioritise patients who should be contacted in case of a field safety corrective action, as well as provide the best advice to patients.

Finally, EHRA envisages a role for itself in explaining scientific and medical issues associated with such advisory communications to the media and other interested persons.

These observations and ideas outline a framework for future actions on the regulatory and the public policy front and a basis for formulating clinical guidelines. Full text: EUROPEAN Journal (5/06).

ARGUS PRO LiteCore
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Cardiac centre raises hygiene standards

The number of cardiology examinations are increasing by 20% annually - largely due to aging populations, the rise in obesity, and cardiac and circulatory diseases - according to the latest analysis of the European Cardiology PACS Market (Ref: B8390 - 50) produced by Martin Bryant, at the medical imaging division of the global growth consultancy Frost & Sullivan (www.frost.com).

The mounting incidence of heart disease has been paralleled by the retire-ment of the affluent baby boomer population, a group that is increasing and willing to pay for services not provided by public health authorities, the F&S report points out. ‘This has resulted in an urgent need for some form of image and data management in the realm of cardiology to effectively cope with the huge volumes of information generated by these new studies.’ Accordingly, healthcare providers are boosting investments in cardiology PACS systems.

However, despite access shown towards these systems, financial pres-sures felt by the end users is likely to reduce investments in the infrastructure needed to house a cardiology PACS, the report continues. ‘Cardiologists sometimes find it harder to make a case for the necessary investment this entails, as, unlike the radiology department, cardiology does not serve the rest of the hospital, and other departments do not use cardiology PACS as extensively as they do radiology PACS.’

Martin Bryant explained that, in Europe, the distinct lack of healthcare investments will be felt most acutely in the cardiology PACS market, purchase of which signifies incurring substantial upfront costs. ‘This problem is exacerbated by the predominance of the capital investment model in Europe, with many providers reluctant to take out leasing options.

Designing a cardiology PACS system based on an open architecture, with sufficient flexibility will be the key to overcoming this restraint, he suggests. ‘End users with existing radiology PACS infrastructure will be able to opt for cardiology PACS and OS modules that suit their needs, and fit onto existing radiology networks andarchiving.’

The ‘European Cardiology PACS Market’ analysis is part of the Medical Imaging Subcription, which also includes research on European PACS and PACS Professional and Technical Services, European Catheterisation, and 3-D and 4-D Imaging in Europe. All research included in subscriptions PACS Professional and Technical Services, European Cardiac Catheterisation, Imaging Subscription, which also includes research on European PACS and radiology networks and archiving.

The European PACS market gained $73.6 million revenues in 2005 and could rise to $200.5 million in 2012

Will bypass surgery soon be a thing of the past? Cardiac surgeons are increas-ingly discussing this question not only by doctors, but also patients. There are two reasons: With ever-improving surgical techniques, interventional cardiologists can deal with even more complex cases – and achieve more media attention, even in this publication. This increased attention results from many ran-domised, controlled studies that com-pare coronary artery bypass grafting (CABG) with percutaneous coronary intervention (PCI), i.e. surgical care with cardiac care, neither of which show any significant differences in morbidity rate or mortality. Therefore, people assume that the two pro-cedures are on a par among cardio-logists, the most significant advan-tage of the operation – the low rate of repeat procedures required – will soon be a thing of the past due to new, drug-eluting stents.

However, most of the studies do not reflect reality, according to experts in the Guideline Commission of the Company of Thoracic and Cardiovascular Surgery. ‘No one doubts the accuracy of the stent-studies,’ said Professor Hans-Reinhard Zorn, chairman of the Guideline gen-eral meeting in Hamburg. ‘But they just do not reflect patient reality!’ In 13 studies analysed, only four percent of screened patients were actually included in the studies – a selection that does prompt the question as to whether the results discovered in this way are actually likely to apply to the ‘remaining’ 96% of patients. ‘It is also noticeable that up to 70% of patients included in these studies suffered from one- vessel or two-ves-sel coronary disease with normal heart pump function – a combination for which it has long been known that these patients don’t actually benefit from bypass surgery’ (Yusuf et al, Lancet 1994;344:563-70).

This criticism of the selective per-ception was backed up by the pro-pensity analysis carried out by the cardiology department at the Cleveland Clinic, Ohio, USA (Berent et al, Circulation 2004;109:2290-5). This study looked at the long-term survival of 6,338 patients who had to be revas-cularized at the clinic between 1995 and 1999. Where the mortality for PCI patients was 5% at one year, it was only 4% among CABG patients. ‘After five years this ratio was 16% versus 14%, i.e. the difference had increased to two percentage points – and this with significantly increased co-mor-bidity among the patients left to the care of the surgeons. After the risk adjustment this advantage became statistically highly significant (p<0.001)! The observation study carried out by Hannan (N Engl J Med 2005;352:2174-83) goes one step further and, with 59,314 patients of the New York Registry for CABG and PCI with stent involved, gives us the most realistic and comprehensive pic-ture of short-term and long-term results. ‘There is a significantly higher proportion of inter-ventions among the PCI group, in the long term – after risk adjustment in all morphological constellations – there is a significant increase in the survival advantage for CABG. For one-vessel or two-vessel coro-nary diseases without stem stenosis and without involvement of the proximal LAD there are no prognostic differences between CABG and PCI. With three-vessel coronary disease, with one vessel to proximal LAD stenosis, CABG offers patients a clear survival advantage compared with PCI – no media reality does not reflect the reality for patients.

CORONARY HEART DISEASE

Media image versus patient reality

By Holger Zorn
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LIVER TRANSPLANTS

Primitive cells might become an alternative therapy

Scotland - A liver transplant is the only treatment for a patient with acute and chronic liver failure. However, the supply of donor livers is insufficient to meet demand. Now, however, certain newly identified primitive liver cells might have the potential to mature into different cell types and help repair a failing liver, according to findings published in The American Journal of Physiology - Gastrointestinal and Liver Physiology by a team of scientists at the University of Edinburgh.

Dr James Ross, who heads the research team at the Department of Surgery and the Tissue Injury & Repair Group, Centre for Regenerative Medicine, said: “Potentially, cell replacement therapies could provide innovative treatments that would avoid difficulties associated with obtaining sufficient donor organ transplants. We have now identified primitive cells with the potential to mature into different cell types within and without the liver. It is possible that these cells lie dormant in the adult liver and may be the source of repair cells that are activated by severe liver injury.’’

The liver is often able to repair and heal itself following injury or damage and this occurs in one of three ways. Dr Ross pointed out: “First, mature liver cells have a well recognised and extensive capacity to divide in response to injury. Second, in response to massive loss of functioning liver tissue, a population of primitive liver stem cells is stimulated to proliferate and develop into mature liver cells. The third mechanism of liver repair involves circulating stem cells originating from other sources, such as the bone marrow, and it is possible that these cells may be recruited into the liver and form new liver cells.”

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CENTRALISED OPERATING THEATRE CONTROL PROVIDES MANY BENEFITS

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Germany - The unique Cyberknife Robotic Radiosurgery System, which we have featured in our European Hospital magazine in previous issues, has delivered 400 treatments in its first year of use, according to a report from the Cyberknife Centre, which operates with the collaboration with University Hospital Munich.

The system, the first on only one of its kind, was designed to treat tumours, anywhere in the body, with sub-millimetre accuracy, the maker reports. ‘‘Using image guidance technology and computer controlled robotics, the CyberKnife System is designed to continuously track, detect and correct for tumour and patient movement throughout the treatment. Due to its extreme precision, the system does not require invasive head or body frames to stabilise patient movement, vastly increasing the system’s flexibility. In the first year, 450 patients have been treated in the Cyberknife Centre, in Munich. The main indications were brain and spine tumours. Just recently the centre began its’’ breath triggered radiosurgical programme to also irradiate lung and liver tumours in a radiosurgical approach, which means a single session out-patient procedure that lasts about 1-2 hours. The indication for the procedure is discussed beforehand, with specialist surgeons and radiation oncologists. It can be an addition or alternative for a surgical procedure. Our patient Cyberknife treatment does not lead to limitations in normal daily life. One day after the treatment the usual activities can be resumed.”

Further details: www.cyber-knife.net

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VASCULAR SURGERY

‘Alles im Fluss’ is the slogan of the 22nd Annual Congress of the German Society for Endovascular & Vascular Surgery, to be held from 6-9 September, in Muelheim an der Ruhr. On the last day of this event a session that focuses on the discrepancy between economics and ethics will take place. Here, Professor Klaus Balzer, Head of the Vascular Surgery Department at Evangelical Hospital, Mülheim an der Ruhr, sums up the dilemmas facing health professionals today - especially those who work in vascular surgery.

BETWEEN ECONOMICS AND ETHICS - WHAT HAS HEALTHCARE REFORM DONE TO US?

The beginning – The German Social Security system is based on the concept of solidarity. Those who are healthy and able to work pay for the sick and needy. As is known, this system can no longer be financed. The reasons are several.

The birth rate is declining and therefore the number of those able to potentially make financial contributions. Thanks to advances in medicine, people live longer and longer. Illnesses, however, occur particularly in old age so that fewer and fewer people must pay for more and more sickness. The number of those able to pay financial contributions into the system is decimated through high unemployment and the social funds are stretched to the limits to support the unemployed. Medical advances are rapid; modern methods of treatment are very effective but also expensive.

With ever declining income there is an ever-increasing amount of expenditure to cover. This was previously addressed through raising the compulsory health insurance contributions. Even years ago, emergency brakes were put on ancillary wage costs that could no longer be financed and the contributions for the various costs were ‘budgeted’. This meant nothing, other than that a fixed amount was put aside for medication, GPs and hospital doctors. To a point, this made it possible to relieve expenditure, but the income situation has not improved at all.

The situation in hospitals – Hospitals face the additional problem that we have a dual financing system where the running costs are paid for by medical insurers, and hospital upkeep and construction costs are paid for by the state with tax monies. As the state has not actually been able to supply these monies for quite some time we basically have a situation where hospitals are dependent on just one source of income, i.e. payments received by patients – who have been reimbursed by their medical insurers. The German system, where the costs are divided by the number of days spent in hospital, which led to a higher and higher daily flat rate, has become absurd. It has now been superseded by a system that classifies every illness to be treated as an individual entity, which is divided into many different groups then reimbursed, independent of the course the disease takes in the individual patient. The so-called diagnosis related groups (DRGs) were introduced as an important contribution towards curbing spending in the healthcare system, but they only work under certain conditions. Moreover, we are experiencing a phase of transition, i.e. the pressure of competition for hospitals is significant and it appears that inefficient hospitals will actually be better off during this transitional phase until the year 2009, because they are advantaged by a higher budget, higher flat rates and therefore a better income situation than hospitals that have been thrifty and economical in the past.

The doctors’ situation – The largest percentage of hospital expenditure goes towards personnel costs – particularly doctors’ salaries. A specialist department must be ready for action 24/7 for all types of illness. A specific part of a hospital doctor’s work is therefore to be available to patients during the night and also at weekends. This system of on-continued on page 20

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Klaus Balzer MD PhD is President of the German Society for Vascular Surgery as well as President of the European Board of Vascular Surgery. He is also a member or corresponding member of many societies in other countries. The professor’s scientific investigations include: angiopathological problems, measurements on haemodynamics, plaque morphology, histopathology, vascular imaging (especially angiography), vascular imaging by endovascular techniques, particularly on the supra-aortic branches, the abdominal aorta and the femoral artery, vascular grafts, endo-vascular techniques, endo-vascular grafting, clinical trials on vaso-active drugs, especially precapitular. Around 200 of his articles have appeared in books and scientific publications.

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Your Vision, Our Future
Quality control in minimally invasive surgery

Minimally invasive surgery (MIS) has, after the introduction of anesthesia and aspersion, appropriately designated as the third patient-friendly revolution in surgery. It dramatically changed the face of surgery by not only minimising the access trauma, but also by introducing a new methodology for a less traumatic method of operating. In over 3,000 studies - which include about one third compiled clinical and about 200 randomised controlled trials, as well as meta-analysis of these results - were analysed and compared with those of conventional surgery. In terms of the criteria of evidence-based medicine, significant advantages of MIS methods were described, regarding all pain associated parameters, duration of hospitalisation and period of complete physical and mental rehabilitation, compared with conventional techniques. Moreover, several authors observed a reduction in the complication rate, as well as an improved oncological long-range prognosis.

Indeed, MIS advantages only appear in conditions that the surgery is performed with a low complication rate. Patients with complications generally recover much slower, especially when deciding to open technique became necessary, show worse results throughout than those operated on conventionally in the first place.

Whereas it was initially assumed that learning new techniques to adapt the new technique without difficulty, laparoscopic surgery turned out to evolve a substantial learning curve, especially concerning the ‘video-eye-hand-coordination’. Learning the new technique appeared to require not only time, but also patience, mental strength and endurance. Among standardisation of a technique, the main concern about a structured education came to the fore, with the objective of both differentiation as well as certification as possible on the advantages of MIS, as well as appropriate avoiding complications. Subsequently, in 2000, the German Society of Visceral Surgery founded an association of minimally invasive surgery (CAMIC). By organising many meetings, including video demonstrations and live operations, CAMIC fulfilled its obligation to training education and further development of minimally invasive surgery. In addition, a network of clinics was established to enable training in the new technique. These clinics need to provide a defined catalogue of structural and process quality requirements, as defined by CAMIC. External audits with adequate certification are planned for the future. Admittedly, extensive financial resources are required to realise this idea.

As a further step to improve quality, CAMIC introduced ‘minimally invasive surgery’ curriculum, as a certified additional qualification. To obtain this additional certification applicants must verify a certain training, as well as a specific operating catalogue done. CAMIC is continually - and this is absolutely new world wise - they need to submit three uncut original videos of different, self-performed operations. CAMIC’s so-called ‘video-eye-hand-coordination’ tool is created that enables estimation of the surgical abilities of an applicant comparatively in an objective way. An expert opinion points out, in detail, the applicants’ strength and weaknesses.

In our opinion, the implementation of the curriculum is a great opportunity to standardise the technique and minimise complications in MIS. Till now, unfortunately, on a few surgeons (about 60%) have used this opportunity, not least because the concept is voluntary. Further acceptance may be expected if hospital administrators do not merely assume a ‘knowledge in minimal invasive surgery’ but also demand mandatory minimally invasive surgery curricula for surgeons who want to achieve a leading position.

In the future, as MIS is on the process, the efforts of other scientific and medical associations are needed. Thus, the minimally invasive surgery could be viewed as a surgical innovation. Broad fields of surgery and surgical techniques will be affected by this phenomenon. Particularly the surgical ability of the surgeon will become the determining factor in the proliferation of MIS, such as the advent of smaller cameras, and have made it possible for surgeons to peer into every section of the human body.

The advent of high definition (HD) technology is providing surgeons with greater levels of accuracy in MIS procedures. By combining the use of MIS techniques and HD displays with a workflow system, surgeons acquire a wealth of rich visual information that allows them to view keyhole procedures with the same clarity as open surgery. This results in improved success rates, fewer infections, shorter hospital stays and faster patient treatment.

The increasing trend towards minimally invasive surgery (MIS) is helping to reduce patient trauma and, as a result, is shortening recovery times dramatically. Advances in medical technology can be credited to the proliferation of MIS, such as the advent of smaller cameras, and have made it possible for surgeons to peer into every section of the human body.

The introduction of MIS technology has been vital to the proliferation of MIS, as the advent of smaller cameras, and have made it possible for surgeons to peer into every section of the human body.

As European hospitals become increasingly networked with information technologies so these recorded operations can be shared by doctors and students. Professor Bill Heald, a leading UK cancer surgeon has been filming his pioneering procedures in HD for over a year now and explains the advantages, “When you’re broadcasting your images on a huge screen to 200 people in a lecture theatre, you really need the extra resolution that is only possible in Sony HD cameras that I use provide such high quality pictures that what is being seen on the screen is never in doubt - and that has to be good news for our patients.”

As European hospitals experience the richness of image provided by high definition they will see that this sets the framework for the future of healthcare. Further research and the work of pioneering surgeons in this field, developments are being made that will transform the way the doctors and hospitals treat their patients.

For further information, or to receive a Whitepaper, please contact David Dowse of Sony Healthcare Europe, david.dowse@usa.sony.com, Source: Sony
unleashed the prospect of High Definition Television (HDTV) as a practical reality in medicine.

As with all advances, there has been considerable argument about which of the various HDTV formats would become used globally. Today, in Europe, Japan, and most of the rest of the world, a display known as 1080i has become the choice. In each frame 1080i produces an image that contains about five times more information than PAL, yet it is practical for digital broadcasting because a similar number of channels can still be fitted into the space occupied by today’s analogue TV broadcast bands. TV screens can now become larger and offer greater detail, while LCD technology means they can be wall-mounted in a living room, ready to receive cinema quality images beamed into the home. Thus NTSC and PAL soon will become history.

HDTV in medicine
In the operating theatre evidence is growing that advanced minimally invasive surgery (MIS) is facilitated by the integration of theatre equipment, the video endoscopic system and surgical devices. Equally, practical benefits arise from seamlessly linking the operating theatre to the hospital information system (HIS) and picture archiving and communications system (PACS), while facilities for teleconferencing have made this kind of consultation an expected part of surgical practice, rather than a rare privilege. The advent of HDTV could make much of today’s video equipment installed in operating theatres obsolete.

It may be found that HDTV does not fundamentally change practice, but its potential to improve surgical precision, and protect against errors, inevitably will increase pressure on hospitals to replace their existing equipment with new HDTV equipment. Nonetheless, scientific studies are needed to reveal the potential clinical benefits of this new technology, to ensure that a transition from SD (Standard Definition) to HD video signals in the future operating rooms is clinically evidence-based, rather than a strictly commercially driven transition ‘too early and too expensive’.

As reported in European Hospital in April 2005, in the future operating room at St. Olav’s Hospital in Trondheim, Norway, we are conducting such a study based on a HDTV video laparoscope system (Olympus). It is important for companies that today supply medical and surgical video optic systems, to lead the way in collaboration with hospitals and clinicians during this transition; their motivation to do so may seem obvious, but history is littered with examples where dominant companies failed to recognise fundamental change and fell by the wayside.

For vendors of such equipment, the transfer of video-endoscopic systems to HDTV has priority within product development programmes. Commercial firms already know that HDTV goes far beyond the video system. As a result Olympus, for example, has redesigned lens and optical relay systems set up so that products such as laparoscopes are widely available and meet the more stringent requirements of HDTV even before the more expensive video systems are introduced.

Furthermore, such technological developments are tightly linked with integrated designs for theatre refurbishment or new build planning. All such work requires extensive feedback and development collaboration with expert users. At Trondheim’s National Centre for Advanced Laparoscopic Surgery we are working closely with industry to accomplish these tasks. In addition, industry partners, Olympus, Sony and Siemens, work together with scientific researchers at the research institute SINTEF to examine how technologies such as HDTV will influence surgical practice.

Most importantly, as High Definition technology becomes available for adoption within the operation environment, commercial partners should assist the medical community to ensure the benefits of HDTV are clarified early and brought into practice sensibly.

Come and see High Definition Healthcare in action at the 10th World Congress of Endoscopic Surgery, 13-16 September, Berlin, Germany hosted by EAES*

“I firmly believe that Sony High Definition offers a quantum leap in improving the outcome of surgical procedures.”

Professor Bill Heald OBE, M. CHIR. FRCS
The Pelican Cancer Foundation, North Hampshire Hospital

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*European Association for Endoscopic Surgery
Steroid sparing

A QUIET REVOLUTION IN TRANSPLANT SURGERY

By Ian Mason PhD

A quiet revolution is underway in transplantation surgery. Within five years almost all renal transplants will be steroid free, say leading transplant specialists. 'This may not sound a staggering innovation, but the implications are profound,' according to Dr Taube Tabeil, Renal and Transplant Unit, St Mary's Hospital, London. Since the 1960's steroids such as prednisone have been an integral part of post-transplant anti-rejection regimens. But steroids have numerous unpleasant side effects, including: nausea, vomiting, mood swings, thin skin, easy bruising, slow wound healing, bone and muscle problems, facial shape change, cataracts, and insomnia - to name a few. Steroids also have detrimental effects on cardiovascular risk factors such as hypertension, hyperglycaemia, hyperlipidaemia, and post-transplant diabetes mellitus.

'For these reasons, we have been trying to withdraw steroids for many years. The first serious attempts started in the late 1990s with the availability of new immunosuppressive regimens such as tacrolimus, mycophenolate mofetil (MMF) and induction agents,' Dr Taube explained. Early results had suggested that risk of acute rejection and deterioration in graft function might result if corticosteroids were removed from the immunosuppressive cocktail. 'More recently, studies have shown that steroids can be withdrawn from a tacrolimus-based regimen, or even avoided,' he added.

Dr Taube recently completed a five-year audit of steroid withdrawal in more than 150 five-year audit of steroid withdrawal at St Mary's Hospital, London. The results, he said, were reassuring. 'Early and late steroid withdrawal in patients receiving tacrolimus-based immunosuppression resulted in excellent patients and graft survival, with a low incidence of post-transplant diabetes mellitus,' he pointed out. Across Europe, something like one in ten renal transplants are currently steroid free. This proportion will increase rapidly as more centres become aware of the advantages of steroid sparing, he pointed out - but added that, for this to happen, surgeons and purchasers must appreciate the benefits, and be reassured their budgets will not suffer. Faced with reluctance from some healthcare purchasers to embrace this new approach due to the increased cost of steroid-free immunosuppressive regimens, he pointed out that the total annual costs of steroid free immunosuppressive regimens are less than one year of the Erythropoetin therapy given to dialysis patients pre-transplant to avoid anaemia.

'There is no doubt that in the UK, and in some other parts of Europe, we are dragging our feet about adopting this new technology. But you only have to ask most patients with renal failure whether they want steroids, and the answer is a resounding 'no' - they will do anything to get off steroids. I really think it is time we put a stop to steroids, and in five years I am sure we will have done.' Dr Julio Pascual, Head of the Kidney Transplantation Programme, Ramon y Cajal Hospital, Madrid, Spain, agreed. Dr Pascual has been evaluating three steroid avoidance protocols: Complete steroid avoidance, steroid minimisation (give steroids for a few days and then withdraw), and steroid withdrawal after several months of treatment. His conclusion, presented at ESOT, was that modern tacrolimus-based regimens make it possible to minimise metabolic complications by eliminating corticosteroids without adversely impacting acute rejection rates or graft loss. In low immunological risk patients steroid-sparing strategies are advantageous in terms of reducing cardiovascular risk factors as well as improving bone mass loss. When receiving ciclosporin or tacrolimus + MMF, steroid withdrawal after the first months is associated with an increased incidence of mild acute rejection, but is effective and well-tolerated after 1-3 years of follow-up. Steroid avoidance or minimisation after anti-H2 antibody induction and treatment with tacrolimus/MMF is an efficacious and safe option, at least during the first post-transplant year,' he said.

An additional reason for avoiding steroids is the increasing age of the many transplant recipients. 'In some areas of Spain, France, Italy and England, the percentage of renal allograft recipients who are over 60 years old, is growing exponentially, leaving us with a tremendous number of high risk patients in terms of cardiovascular morbidity and mortality - problems that are clearly exacerbated by steroid treatment,' said Dr Pascual. 'A final reason why we should embrace steroid-free regimens is because we are short of donor organs, and one of the most important causes of graft loss is the death of the recipient with a functioning graft. These deaths are mostly due to cardiovascular disease, so we must improve the cardiovascular risk profile of immunosuppressive regimens to save the patient and save the graft.'

'Ten years ago steroid sparing was more of a wish than a reality, but today there is good evidence to support a steroid sparing strategy - the trouble is that many transplant surgeons, steroids are a life-long companion. They know them, and know how to use them. They think they are non-toxic (for the patient) despite clear evidence to the contrary,' Dr Pascual pointed out. 'They need to appreciate how much better drug therapy for non-compliance is driven by steroid-avoidance. Many young adults do not know which of their pills is giving them a hairy face, making them fat, and thinning their skin, so they stop all treatment. The result - the kidney is lost - an avoidable tragedy. Thank goodness things are starting to change.'

Five years ago, surgeons at the Lukas Hospital in Neuss, Germany, used water jet dissection for visceral surgery for the first time. Dr Bernard Lammers, head of the hospital's General and Visceral Surgery Department, describes subsequent experiences with this procedure and possible future developments.

WATER JET DISSECTION

'Bernard Lamers

‘Water jet dissection enables us to separate organ structures using a water jet of around 0.1 cm diameter. This anatomically suitable tissue penetration allows for different physical characteristics, for example, structure, firmness and elasticity of the organs,’ Dr Lammers explained. ‘For instance, the liver, with its soft parenchyma, is dissected with a water jet pressure of 30 bar, which means the blood vessels in this area are preserved and can be supplied separately. Depending on the type of tissue the water jet pressure can be varied from 10 to 40 bar. In the beginning we hoped to use this method for the clean, blood-conserving dissection of neoplastic tumours, particularly in resections of the liver, kidney and rectal tumours. But in the course of time we have found that it is so precise and gentle that we can now use these methods for different aspects of visceral surgery. Across Europe, we are dragging our feet about adopting this new technology. But you only have to ask most patients with renal failure whether they want steroids, and the answer is a resounding ‘no’ - they will do anything to get off steroids. I really think it is time we put a stop to steroids, and in five years I am sure we will have done.’

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Waterjet surgery supplements ERBE's operating theatre product range

ERBE's core competence is electrosurgery. For about five years ERBE Elektromedizin GmbH has extended its product portfolio to include waterjet technology, which enables surgical interventions with optimised preservation of the viability of the vessel wall. Waterjet surgery has become established in many surgical disciplines and offers not only extremely selective dissection but many other advantages. In addition to atraumatic dissection, protective blood loss, operating times are reduced, particularly in general, vascular and orthopaedic surgery.

‘One advantage lies in surgery for liver metastases. With many metastases in the left and right lobes of the liver we can now carry out larger resections, thanks to this tissue-preserving type of dissection, and we therefore can remove more liver metastases. The incredible precision in the cutting of malignant cells and preservation of healthy tissue achieved with the water jet has astonished us. The fact that out of a total of 110 operations the blood supply to the liver had to be stopped during only one of those operations is further proof of precisely the method,’ said Dr Lamers. ‘A further positive effect has been seen in surgery on rectal carcinoma. In the narrows are protected during this type of surgery, 97% of patients who underwent resection of the rectum with total excision did not require a colostomy. Before the introduction of water jet dissection around 40% of patients left hospital with a colostomy! We can say with confidence that due to water jet dissection the healing process is faster and patients are mobilised sooner. Apart from the obvious health benefits to the patients, there is also a cost-saving effect. In patients' hospital stays are reduced.’

The future

‘Over the last few years this method, and its uses, have developed completely. So far especially in visceral surgery, the method is now also increasingly used in urology, for example, for prostate surgery. We continuously exchange information and experiences with colleagues in different medical fields, so there are other developments as well. We are always curious to see what other positive surprises this procedure will have in store for us!’

Interview: Denise Hennig, European Hospital

PHOTOGRAPHS: IAN MASON

AWARDS

BROTHERS RECEIVE DGAI'S THIEME TEACHING AWARD

Germany - Anaesthesiologists Peter Iblher and Hanns Iblher, who work in the anaesthesiology departments of the Schleswig-Holstein University Hospital, Lubeck, and the Frauenfelder District Hospital respectively, have received the Thieme Teaching Award from the Deutsche Gesellschaft für Anästhesiologie und Intensivmedizin* (DGAI). The 100 euros award, sponsored by the medical publisher Thieme, was presented to the brothers in recognition of their efforts to organise emergency medical seminars held by medical students for medical students.

* The German Society of Anaesthesiology and Intensive Care Medicine
Many suffered obesity-related co-morbidities, usually asthma, depression and dyslipidaemia. Surgery averaged 35 minutes. Most patients were discharged within 24 hours.

There were no acute re-admissions or repeat surgery. In post-surgery follow-ups, which began three months later and continued for four years, the patients’ weight loss steadily progressed. After a year, average weight dropped from 300 to 211 pounds (average loss: 57%) and BMI had reduced by 18 points. In addition, Dr Fielding reported that, although two cases needed antidepressants, all co-morbidities resolved in that year.

The programme’s study also suggests this surgery is safe. Only two lap band slippages occurred, there was one case of leakage and two of hiatus hernia.

Also presented at the meeting, another study showed similar results from using Roux-en-Y gastric bypass surgery. In this Brazilian study, involving 42 obese youngsters, aged 13-18 years, also had a several co-morbidities, which included diabetes, high serum insulin, depression, hypertension, asthma, cholelithiasis, arthropathy, and reflux disease - the average hospital stay averaged 30 hours. No intra-operative revisions were needed. There were no intra-operative complications, conversions or deaths.

48 months later, the patients’ average BMI had dropped from 45 kg/m2 to 23.5 kg/m2. Weight did not rise, nor was any malnutrition observed.
PULMETION
EU MULTIDISCIPLINARY LUNG RESEARCH PROJECT AIMS TO CURE PULMONARY HYPERTENSION

Pulmonary hypertension (PH) describes a group of chronic, prolonged crippling and fatal vascular diseases. It is characterized by high blood pressure in the lung vessels, which are diseased. PH often affects young or middle-aged patients, who suffer progressive loss of exercise capacity and dyspnoea. As a result, this serious lung disease represents a major burden on our healthcare systems.

At the beginning of this year, the multidisciplinary lung research project Pulmetion was granted European Union (EU) funding of 11.4 million euros, over a four-year period to better understand and find a cure for this major European health problem. Pulmetion integrates 31 institutions at leading EU centres, in association with industrial partners in 12 European countries. This pan-European initiative allows the collaborating researchers to investigate basic scientific questions in terms of clinical applicability and provides a unique potential for scientific breakthroughs, technological advances and new treatments for pulmonary hypertension. 'In this translational research concept the clinical trials. This is a huge but thrilling organizational challenge for us,' said Hans-Joachim Hafner, Head of the European Pulmonary Hypertension Network (EUPHN), during the Pulmetion launching conference in London. The combined expertise in Pulmetion extends from the initial discovery of gene mutations in PH to the establishment of new therapeutic regimens of PH. These include the discoveries of BMPR2 mutations in PH, an effort led by Professor Richard Trembath (King’s College, London, UK) or the introduction of sildenafil (Viagra) into the treatment of PH by a team of physicians led by Professor Friedrich Grimminger (UGLC, Germany).

Community acquired pneumonia

Community-acquired pneumonia (CAP) is a major health problem globally with estimated mortality rates as high as 30%. For most CAP patients, the main problem is that the causative organism is unknown. Although early, correct identification could result in immediate, appropriate, targeted therapy – reducing the number of streptococcal antibiotics that could lead to resistance if overused - this usually involves lengthy laboratory investigation and therefore considerably increases costs of treatment. Unipath, which produces the BinaxNOW range of tests, reports that these are simple, highly sensitive tests to rapidly detect CAP and other respiratory infections. 'Streptococcus pneumoniae and <em>M. pneumoniae</em> are easy to partially culture within a few days, but complete culture, give results within 15 minutes and require urine samples.' Other BinaxNOW tests for respiratory infections include influenza A & B, Mycoplasma pneumoniae and Legionella (Group A Strept).

Asthma

Bavaria's novel care programme for youngsters

Thousands of children are hospitalised annually due to acute asthma attack. Special treatment, adapted to their individual needs, could prevent such emergencies.

To that end, a new care programme for asthmatic patients, aged 2-18, has been set up by Techniker Krankenkasse (TK), a German public health fund, in partnership with paediatricians in the Pneumzentren-Bayern association; the asthma centre CJD Berchtesgaden, and the Santa Maria Clinic in Bad Hindelang-Oberjoch.

Within this integrated care programme paediatricians also offer patient's parents special training courses in relevant techniques for inhalation and tension release, as well as the use of technical aids. In the event of an acute attack, children can visit so-called asthma camps with their parents and siblings. Beside trainings courses, the patients participate in special sports programmes where they learn how to ideally train up their recreational activities.

The centres also provide schools, so that children do not miss their education during their stay.

Details: www.tk-online.de/bs-bayern and www.paeendte.de

The extracorporeal lung

Acute lung failure results in a 30-40% mortality rate. Along with this, the use of conventional mechanical ventilation could result in damage to lungs and other organs, which might take years to heal.

German medical technology firm Novalung GmbH (est. 2002) produces extracorporeal artificial lungs - such as the 'Interventional Lung Assist' (iLA) device, which 'breathes' for a patient, taking the strain off diseased/damaged lungs and giving them time to recuperate.

Recently, Novalung invited about 40 leading international lung specialists to attend its first lung symposium, to discuss new treatment methods for lung failure. Clinical, economic and ethical aspects of artificial ventilation for diseased/damaged lungs were discussed, along with measures and techniques to assist their regeneration. Professor Luciano Gattinoni, intensive care specialist at Milan University, said: 'The potential for treating lung failure has not yet been fully realised.' This, he added, is particularly true of lung protection using extracorporeal ventilation by means of an artificial lung, still used far too little despite its obvious benefits.

Dr Stefan Fischer, of the Hanover Medical School (MHH), reported on the use of the Novalung iLA extracorporeal ventilation system for patients on the lung transplant waiting list who had gone into potentially fatal lung failure. 'Without this technology,' he said, 'it is highly likely that those patients would have survived until a transplant could be performed.'

At Regensburg University Clinic over 130 of these artificial lungs have helped patients following acute lung failure, Dr Fischer said. The option of inserting cannulae into the bloodstream to connect the artificial lung must be weighed up against the risk of conventional ventilation methods.

In preparation for the second symposium in November, three working groups were formed to prepare suggestions regarding indicators for the use of artificial lungs (e.g. acute lung failure; acute infections in chronically diseased lungs; bridging the period up to lung transplantation).

The European Respiratory Society is holding its annual meeting in Munich this summer. Germany hosted the football World Cup. Likewise, it is going to host a worldwide event in respiratory medicine. There should be a link between the two events! Perhaps it is the following message that makes us think positively. To play football at a high-quality level one needs very good lung health, which can be obtained by stopping smoking (e.g. never smoking) and by the best disease treatment (e.g. asthma treatment).

European Respiratory Society Congress

At a meeting co-ordinated by Professor Werner Seeger, Head of the University of Giessen Lung Centre (UGLC) at Justus-Liebig-University, reports from the participating institutions established a networking committee and initiated regional clinical trials and a European PH Trice Bank and Registry.

Community acquired pneumonia

BinaxNOW tests quickly identify pathogens

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Safety

Beta-agonist inhalers questioned

USA – Of two commonly-used inhalers for patients suffering chronic obstructive pulmonary disease (COPD), one has been found to reduce respiratory-related hospitalisations and deaths of COPD patients by 68%, whereas the other to have increased respiratory deaths, according to a study published in the Journal of Internal Medicine. The observation results from a systematic analysis of astrophysicist and statistician Edwin Salpeter, J.G. White Distilled Professor of Pulmonary and Critical Care Medicine at Stanford University. The meta-analysis of 22 trials involving 15,272 participants showed that, compared with a placebo, common bronchodilators (anticholinergics) had reduced severe respiratory events by 33% and respiratory deaths 22%, whereas regularly inhaled beta-agonists increased the risk of respiratory deaths by 74%. Only two patients among 4,036 who took anti-cholinergic inhalers died, whereas 12 among 3,845 participants in the placebo group died of respiratory ailments. When patients inhaled beta-agonists, 21 respiratory deaths occurred among 1,320 patients. Eight among 1,084 participants in the placebo group suffered respiratory deaths.

25th anniversary related to ERS prede-essor

President Giovanni Viegi pointed out. They will also learn to control.

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High-tech plaster for analgesic therapy

VitaClip, the ‘pain pump’

It sticks to the skin like a plaster, but this credit-card sized innovation contains an entire patient-controlled drug-delivery system. Developed for post-operative pain management, Ionsys, manufactured by Jannsen-Cilag, was the product highlight at the 53rd German Anaesthesia Congress, in Leipzig. Holger Zorn reports.

Intravenous patient-controlled analgesia systems (IV PCA) are the current gold standard for post-operative pain management. This pre-programmed and electronically controlled pump system, called a ‘pain pump’, allows the patient to push a button to intravenously administer small doses of analgesic. The patient can repeat this procedure as often as he wishes, until an acceptable level of medication has been reached. Certain risks are associated with this system, in particular incorrect programming of the machine, an incorrect analgesic solution, or problems with the intravenous access.

A new procedure aims at reducing these risks: the patient-controlled transdermal analgesia (PCTA) system. The credit-card sized system (Fig. 1) is applied to the patient’s arm or chest and functions like an IV PCA – however without an IV access. The system comes pre-filled with the analgesic fentanyl and is pre-programmed. By pushing a button, 40 micrograms of the medication is transported through the skin over a period of ten minutes. During that time, the system does not respond to further prompts for medication release. Thus, an increase of the dosage by the patient is excluded. 80 doses total can be administered. The number of doses administered is identified semi-quantitatively and displayed via an LED.


Stefan Grond, Professor of Anaesthesiology at Martin Luther University in Halle, Germany, considers this system ‘…an important step towards empowerment of the patient’. Nurses and physiotherapists will also welcome this innovation because it facilitates and increases mobility of the patients - since an infusion pump is no longer required. Vita-Clip (Figure 2) - developed and produced by Serumwerk Bernburg - is another innovative plaster that can simplify the work of personnel. This plaster induces external vascular occlusion and consists of a silicone support, with a silicone lens in the centre and a reservoir under this, with a foil at the base, to which skin adhesive has been applied. The skin is no longer directly punctured - but the silicone lens. If the needle is removed at the end of treatment, the reservoir under the lens fills up with a little blood from the puncture canal. This causes an extracorporeal haematoma, which presses the foil against the skin and stops bleeding, without having to be pressed by hand. Professor Reinhard Wedhase, Manager for Innovation and Registration, considers this to be particularly advantageous for dialysis patients. The silicone lens increases the visibility of the puncture site, so that a dialysis shunt is hit more precisely and not damaged. The puncture needle is stabilised, reducing pain. Subsequent bleeding from the shunt is reliably avoided. The side of puncture remains sterile for a longer period and infections are reduced. Last but not least, time is saved, as neither the personnel nor the patient has to apply pressure by hand. The first users have reported that the skin tolerability is very good, particularly when it is thin and atrophic.

They say that it is very comfortable to wear, as they can take a shower or bath after dialysis (Sources: Dialyse aktuell 2006; 10 (3): 52-53).
An all-out attack on auto-immune disease

Although auto-immune diseases are the third most common cause of death after cardiovascular diseases and cancer, there has been a lack of focused, results-oriented fundamental research and collation of interdisciplinary knowledge at an international level. However, the foundation of the AESKU.KIPP Institute, based in Wendelsheim, Germany, presents a platform to initiate and co-ordinate international auto-immunity research projects. As the main initiator of this organisation, and Chairman of the Board of the interdisciplinary auto-immunity research association AIRA e.V, Dr Torsten Matthias describes the Institute’s foundation and objectives.

AESKU Diagnostics, founded in 2000, now offers, the largest product range of innovative test systems for autoimmune diagnostics, worldwide. Dr Torsten Matthias explained. ‘The development of innovative and market-driven products for auto-immune diagnostics was, and still is our clear objective. At the same time we are involved in the development of new therapy procedures and in fundamental research, because we are convinced that you can only really develop effective methods for diagnosis, prognosis and therapies if you understand all aspects of a disease and actively use the synergies between different medical disciplines. We wanted to set up an independent research institute, on an international level, to promote further developments in this area.’

Will the Institute’s research be oriented around the requirements of healthcare organisations for diagnoses and therapy procedures? ‘Definitely not. The Institute will work independently, with the objective of continuously, interdisciplinary and internationally collating and developing the basic findings on auto-immunity. Auto-immune diseases are very complex. The previous diversification of research in the field of auto-immunity presents a significant problem for research. Some researchers specialise in T-cells, others carry out research on B-cells, whilst other researchers focus on certain organs, such as the liver. We want to bring together all these researchers - doctors, biologists and biochemists – together, because each is such an extremely complex field that they sometimes find it difficult to look beyond their own specialist fields.

The Institute will streamline this research and information, and our findings will offer new impulses for diagnoses and therapies, as well as comprehensive data. This will happen through international research co-operation and developmental projects, for which we can offer the necessary premises and staff. The main aim of our activities will be research into the causes of auto-immune diseases. Building on this, we aim to develop new therapy concepts and test systems for the early diagnosis and prognosis of auto-immune diseases through clinical research co-operation.

‘A further focus is intensive knowledge management and advanced training for doctors, in the form of seminars or PhD degree courses. There will also be information events for patients, to promote the general awareness around auto-immune diseases.’

You mentioned the complexity of auto-immune diseases. What is the clinical picture? ‘A healthy body has a defence mechanism against viruses and bacteria, the immune system. If this system is in tact, such intruders are recognised by antibodies and destroyed. With auto-immune diseases the organism of those affected are reprogrammed: The antibodies lose their ability to distinguish between our own and foreign tissue, so they begin to attack the body’s own tissue or organs. Some auto-immune diseases are directed against certain organs such as the thyroid. The more severe auto-immune diseases are systemic, such as Lupus Erythematosides. With this type of the disease it is not just certain organs that can be affected but also blood vessels and the brain. Further, it is sometimes not known why this reprogramming of the immune system occurs and it is one of the clearly defined objectives of our research institute to discover this.

How do you finance such a project? ‘The Institute is financed as a public-private partnership. Apart from my involvement on the financial side, we also have the support of our Swiss private investor Dr Karl-Heinz Kipp, which has secured the future of the institute for the first few years. The motivation for both of us is not just our belief in the need for such an institute but also our belief in the success of this project.

‘The Rhineland-Palatinate’s Ministry of Economics is also supporting the establishment of the laboratory at the Institute, depending on its current needs at any given time, in medium and long term, public funds, donations and co-operation with various private companies will also go towards financing the Institute. Finally, and as soon as possible, we hope to present the results of our research into practice by developing new products that can be licensed for market use. ’

‘Through Dr Kipp’s support, as a first step towards developing the Institute, we have been able to set up the first professorship for auto-immunity, at Tel Aviv University. This chair has been awarded to Professor Nihda Schoenfeld, who has made a name in the field of auto-immunity through numerous publications and invited guest professorships. We are also glad to have Professor Schoenfeld on our scientific advisory board. The board is made up of ten of the world’s best researchers and therefore represents an international network of competency.’

A current trend is to draw together laboratory, bioscientific research and imaging fields. Might companies, such as Siemens, which is expanding its activities to focus on the area of molecular diagnostics, show interest in the Institute? ‘Siemens would definitely be an interesting partner, because it is trend-setting. The company has purchased the Diagnostic Products Corporation, in Los Angeles, as well as Bayer Diagnostics, which has a focus on auto-immune diseases. In return, our organisation can work very promptly, and our research can be licensed at an early stage, under the assumed niches. Assumed because many of these “niches” have already been occupied, because of the focus of attention - such as rheumatoid arthritis, which affects one percent of the entire world population. Within these niches we research the parameters that are decisive for diagnosis.’

‘There are still no reliable test systems for the diagnosis and prognosis of many auto-immune diseases. We are therefore in responsibility to develop these, so that in the future we can achieve an early and clear diagnosis, because the earlier a disease is diagnosed the earlier it can be treated. This sounds logical, but up until a few years ago wasn’t always acknowledged as a matter of course.

‘We hope to continuously improve diagnosis and therapy standards with innovative products such as research co-operation and knowledge management. This way we aim to improve awareness and understanding of the medical and economic importance of auto-immune diseases through the AESKU.KIPP Institute.

Interview: Daniela Zimmermann

DISEASE PREVENTION

BAVARIAN HEALTH POLICY AIMS TO CUT COSTS

The cheapest patient is a dead patient - cynical but true. If we cannot subsidise smoking for ethical reasons, then we have to increasingly invest in prevention - and not only for smokers. This begins with every individual, ideally during childhood. Education at school is the starting point for the symposium Preventive Medicine - Costs, Uses, Technology, organised by the Informatik, in Nuremberg.

Representatives from the world of politics, health, industry, government, pharmaceutical and medical technology industries, as well as representatives from doctors, engineers, agreed on an immediate need for action and discussed the best ways to proceed. What is clear is that the stresses of work and daily life, in terms of demographic developments, are calling for preventative measures to maintain health.

The Bayerian Ministry of the Environment, Public Health and Consumer Protection came up with a concept for a health initiative with four priority objectives: smoke-free life, responsible alcohol consumption, healthy diet and exercise, as well as healthy working environments. Children and adolescents are one of the target groups, but influence is also to be exerted via health education. Up to now, preventive measures in the healthcare system have always been tied to curative procedures with cut-off measures, due to the timeframes involved - no profitable, private company will invest money for preventive measures only possibly being able to see a return on their investments in thirty years time. Politicians need to come up with an affordable framework for healthcare. But even in acute medicine, where prevention is helpful - the recognition of people’s predisposition for illnesses, and therefore the possibility of taking action at an early stage, risks need to be addressed. Taking strokes as an example, Professor Dietrich Lomo, from Bavarian Hospital Rechts der Isar, at Munich’s Technical University, explained that, in Germany, in 1990, 150,000 - 200,000 people suffer strokes. This makes the problem the third most major cause of death after coronary heart disease and tumours. However, the risk factors for patients are not sufficient addressed by doctors as the Euroaspe-II and -II studies proved. These involved examinations on 3,000 patients in nine European countries between 1995 - 1996 and 1999 - 2000. In both studies, the risk factors smoking, hypertension, and pressure and obesity occurred unabatedly - and this in view of the fact that in the meantime, new treatment options, there are also numerous evidence-based, non- medicinal treatment options for primary and secondary prevention of strokes, such as diet, surgery for cardiac disease, increased levels of physical activity.

From a cost-benefit aspect it is important that these preventive measures are aimed at already diagnosed patients who are at risk as early as possible. Professor Sander named two important, easily applicable and non-invasive preventive measures for the early detection of arteriosclerotic vascular changes - the duplex scan of neck vessels and assessment of the thickness of the walls, and the Doppler scan for the determination of the Arterol Brachial Index (ABI) as parameters for asymptomatic peripheral arterial disease. For cancerous diseases, Professor Heinrich J. of the Lat. Nose and Throat Clinic, University of Erlangen-Nurnberg, named immunological markers, such as symptoms and infections as additional, possible causative risk factors, if these are not interpreted in preventive measures. Vaccinations are still the top choice when it comes to prevention, however in the last decades among the general population are currently decreasing. This may partly be because patients are not sufficiently informed that many people need to take more a active role in ensuring that vaccinations are kept up to date. Furthermore, an opinionated tomography makes a contribution towards prevention through delivering ever more accurate and detailed images, which helps with the early detection of diseases. Costly because highly invasive, these examinations on patients through its focus on the individual, is laboratory diagnostics. However, the costs in this area can turn out to be misguided and expensive, because treatment costs in the immediate future of patients are not being given the correct medication from the beginning of illness, as proposed by Dr Thoma Batz, of Roche Diagnostics, in Peningen, explained. He complained that: ‘...in addition to the diagnostic methods in vitro have been allocated a payment code for the last six years’. However, patients can only be prescribed the appropriate medication at an early stage if a tumour is analysed for immune biomarkers, which are not biologically, which in turn will lower treatment costs.
Canada Health Infoway is a not-for-profit organisation founded by the Canadian government in 2001. Its mission is to promote and accelerate the adoption of electronic health information systems for the purpose of improving healthcare throughout its provinces and territories. Infoway has been allocated $1.02 billion (Canadian dollars) in federal government funding to assist local health regional agencies and provincial health ministries in the creation of a national electronic health record (EHR). Canada’s goal is to establish an interoperable EHR for 50% of its population by the end of 2009.

As one component of this initiative, Canada is in the process of implementing provincial interactive PACS infrastructures between 2003 and 2009. Canada Health Infoway is providing $310 million (Canadian dollars) of the funding to create enterprise PACS that unifies centralised electronic archives within each province. To date, Newfoundland and Nova Scotia have achieved 97% filmlessness.

Diagnostic imaging is a core component of the Canadian EHR. Because PACS is complex to plan and implement, Infoway funded the development of a ‘Diagnostic Imaging Toolkit’. The DI Toolkit is designed to share the knowledge and practical experiences of individual and multi-facility PACS implementation. This information can help minimise the risk, time, mistakes and expense of future PACS projects.

The Internet-accessible DI Toolkit contains over 200 items: business cases, strategic and project planning documents, forms and templates, work requirements, testing protocols, ‘how to’ documents, and detailed case study reports of experiences in all aspects of the process of planning and implementing a PACS. Jane Van Essen, the DI Toolkit’s project manager, said ‘Much of the process of implementing PACS is the same, regardless of the healthcare institution or the PACS vendor selected. By sharing transferable information that otherwise would need to be created over and over again, it is possible to significantly reduce the project cost to implement a PACS.’

All documents contained in the toolkit are published in English and French. They are designed for use by hospital and health authority executives, project managers, financial managers, and technical personnel, responsible for recommending and establishing the infrastructure and PACS applications environment. Detailed information is available for use by systems analysts, architects, database administrators, quality assurance and performance testing managers and security specialists. While some of the processes described are specific to the Canadian health system, most of the material is useful to any healthcare institution.

Canada is making this extraordinary resource available free of charge to any publicly (government) owned hospital or government health agency in the world. It is necessary to first complete a free registration at E-Health KnowledgeWay (http://knowledgeinfoway-inforoute.ca/CHI/Pages/UserRegistration.aspx?Lang=en). After registration is accepted, it is necessary to enter the E-Health KnowledgeWay website and submit a new registration for access to the DI Toolkit.

Why is Canada making this valuable information that is sold by professional consultants available free of charge? ‘The faster that digital technology can be adopted for healthcare, the more rapidly spin-off benefits will be,’ Van Essen said. ‘The DI Toolkit was an expensive resource to develop. Canada Health Infoway would like to see it utilised by any healthcare organisation that can benefit from it. We think that the DI Toolkit is truly unique and will help others save money and time as they convert to PACS. Infoway is proud to share this resource with the world.’

By Cynthia E Keen

seca closes the gap.

seca 657 – digital platform scale for stretchers
(with integrated and separate undercarriages
(dimensions: 800 x 1,470 mm)

seca 677 – digital wheelchair scale with handrail
and roller casters

What a wonderful feeling to have found the last piece of the puzzle! You, too, can experience the same wonderful feeling with the seca range. Because the new platform scales perfectly round off the range for hospitals, rehabilitation centers, homes for the elderly and nursing homes. The new seca 657 – with its large platform – has been specially designed for weighing patients on stretchers whilst the seca 677, with its useful handrail, is easy to transport and stow away. See for yourself: How wonderful it is when the many parts fit perfectly together to form a harmonious picture!
The IMEC transport system

For the past 12 months the 20SG intensive care unit (ICU) at Nuremberg Hospital North, Germany, has been testing the IMEC (Interdisciplinary Medical Equipment Carrier) transport system, made by TRUMPF Kreuzer Medical Systems. The ICU recently concluded that the system has made intensive care transport considerably safer and saves up to 40% in time in the pre-op and post-op phases, as well as during other relocation transports. Overall, the intensive care station documented 31,700 transport minutes in 2005 – initial savings through IMEC included.'

Doctors and nurses at the Nuremberg ICU are not only pilot users of IMEC, they are also contributing to the current quality and functionality of the transport system. The Puchheim-based manufacturer customised it in close collaboration with the users and in accordance to their needs.

Since October 2005, the ICU has been using two IMEC solo transport units for transporting all equipment-dependent patients from the intensive care unit to exam rooms or to the OR. The system is designed to function as a connector between ceiling-mounted and mobile medical supply units, to be compatible with medical and technical equipment of all types and machine brands – from IV management to respiration systems and monitoring systems – and to dock onto every conventional ICU bed. All supply lines and cables are protected against strong pulls or even breakages; the patients remain securely connected to the IV and life support devices during the entire transportation. (The system even provides space for the emergency bag, gas bottle holder and suction system).

Despite a loading capacity of up to 65 kilograms, the unit – consisting of bed and IMEC – that can be securely connected in any situation - can be comfortably moved by two people. It can be maneuvered in tight space and fit into any 3-metre-long elevator.

TRUMPF Medizin Systeme has subsidiaries in Great Britain, France, Italy, the USA, China, and Singapore.

One-touch testing for electromedical equipment

UK – As an international centre of excellence London’s Great Ormond Street Hospital (GOSH) treats about 100,000 children annually. To ensure all electromedical equipment is available, safe and effective, the hospital’s Biomedical Engineering department is using an innovative ‘braincell’ concept developed by Rigel Medical, as part of a formal preventive maintenance protocol that covers around 18,000 electromedical devices.

The braincell technology is linked to the Rigel 277 electromedical tester and uses smart RFID data tags – extending the concept of traditional bar code test systems for the automatic identification and testing of medical equipment.

At GOSH, a central medical equipment management system automatically identifies devices due to periodic safety testing in line with the IEC technical standards. When the braincell, attached to a device is scanned with a read/write probe, the Rigel 277 tester automatically recalls all previous test information and prompts the engineer to repeat the required test sequence, which reduces test time significantly and eliminates the possibility of errors.

New anaesthetic face mask enhancements

EcoMask, produced by the UK-based firm Intersurgical, is a range of single-use non-PVC anatomical anaesthetic facemasks that are lightweight and clearer versions of the reliable rubber facemasks. The company reports that this range has been enhanced by introducing non-slip rings around the full circumference of the mask shell to allow more grip, enabling a gentle but firm downward pressure to facilitate the seal. At GOSH, a central medical equipment management system is in use, and the Rigel braincell has been introduced on the mask seal to correspond with the mask size, speeding selection.

Details: www.intersurgical.com

VoluCount monitors entire gas usage

Draeger Medical predicts that VoluCount – its new system that accurately measures the consumption of all installed medical gases in all hospital areas, will not only clarify individual departmental usage and identify potential savings, but also determine hosting of others who use those facilities. The system is also said to make the detection of leaks easier. The VoluCount is simply integrated into the valve box of the gas management system control unit in a specific area. No additional installations are necessary. Gas management systems ensure that medical gases are available in the right quantity and quality, while valve boxes monitor the gas pressure and vacuum in every hospital zone. The VoluCount records the gas consumption at shut-off valve for an area and identifies the type and quantity of gas used in each hospital zone. Measurements are then sent automatically to the hospital’s control center.

The system can also be connected to the hospital’s central alarm management system, which controls the supply of gases.

Each covering a different measurement range (up to 50 or 450 litres per minute), to monitor gas flow, the complete gas line and gas used in the valve boxes. The sensors are calibrated for air, O2, N2O and air by bar. A menu provides access for setting the counter for each gas and to adjust the alarm thresholds for monitoring flow.

One-touch Catheter for In Vitro Fertilisation

Exhibited during National Infertility Day this June, Sure-Pro and Sure-Pro Ultra is a newly launched range of advanced embryo replacement catheters for in vitro fertilisation. These catheters are an evolution in supported catheters, offering clinicians the softer handling of the classic Wallace design with the added benefits of a supporting element and a pre-formed outer sheath, the manufacturer Smiths Medical explained, adding: The new catheters are also visible by ultrasound when used with existing SureView technology. ‘Recognising the need for better-designed catheters in this field, Smiths Medical conducted exhaustive customer surveys among IVF specialists to identify their precise clinical requirements as well as those catheter features that could provide supplementary benefits,’ said Sally Rogers of Smiths Medical. ‘Sure-Pro and Sure-Pro Ultra are the culmination of this work and the most sophisticated IVF catheters available today.’

ADDITIONAL CATHETERS FOR IN VITRO FERTILISATION

The Sure-Pro Embryo Replacement Catheter

The new range is supplied in various procedural trays and caters for the following embryo transfer options:

- Single-stage transfer – embryo replacement catheter comprising a supported soft inner catheter and a preformed outer sheath.
- Elective two-stage transfer – includes a flexible tipped obturator loaded inside a preformed outer sheath. Once in position, this can be removed and the supported soft inner transfer catheter can be advanced through the outer sheath.
- Two-stage set for difficult transfers – includes a preload outer sheath with a formable stylet, ready for shaping as necessary to negotiate a difficult cervix. The stylet can then be replaced with the soft supported inner transfer catheter.
**The 9th European Health Forum Gastein (EHFG)**

*4 – 7 October Gastein, Austria*

“Bringing together experts and politicians is something which should be a matter of course but in reality occurs far too rarely,” says Günther Leiner, President of the European Health Forum Gastein - considered a European think tank for health politics and health administration. Quite the contrary will be the case in October, when both experts and politicians will gather to take part in the 9th EHFG. Here he discusses some of the key challenges for healthcare provision that will be the focus of the 2006 EHFG approach to legislation in healthcare, which should be legally binding in some areas, whereas the open method of coordination seems more appropriate in other cases. The rules for reimbursement of care provided in another member state should also be clarified.

The initiative is said to be backed by a number of member states, including France, the UK, Germany, Luxembourg, Spain, Portugal and Sweden.

Health sans frontières = will provide the first opportunity to discuss this and other current developments in EU healthcare with representatives of the European Commission (EC) member states and other stakeholders in a parallel forum session hosted by DG SANCO. Research results will be presented by the Europe for Patients project and the Health and Consumer Powerhouse will look into the responsiveness of systems to patients. The EC will introduce the audience to the future orientations of European policy on health services. The session is designed to provide delegates with sufficient opportunities for discussion and interaction with speakers.

The EHFG has developed into the leading health policy platform in the EU since its beginnings in 1998, attracting close to 600 high-level participants annually. The importance of this opportunity is highlighted by the EHFG’s most prominent participant, EU Commissioner for Health Markos Kyprianou, who said: ‘Health threats are no respecters of borders. But if we work together, we can achieve a positive vision of health without borders – health for all throughout Europe. I hope that this forum will once again help us to achieve that aim.’ While increasing patient mobility offers new opportunities for service providers, the World Health Report 2006 predicts that staff shortages will be a serious challenge for many countries in coming decades. Aided through Single Market legislation, health professional migration will become an important issue in virtually all EU member states. Whilst some countries are actively recruiting staff from abroad, others are finding themselves understaffed due to the outflow of health professionals. The UK, for instance, has experienced significant nursing shortages in recent years, leading the Department of Health to set nurse staffing increase targets to recruit 35,000 additional nurses between 2004 and 2008. This also involved intergovernmental agreements to recruit actively in some countries. Already in 2002, one third of the total 70,000 NHS hospital medical staff came from other countries. On the other hand, a survey conducted among physicians in 2006
EU structural funds, especially the European Regional Development Fund (ERDF), will be eligible to fund investment in healthcare from 2007, giving the new member states the power to be more active in sectors that has remained somewhat under-invested. The EHFH offers the opportunity for companies to implement a parallel in product forum session, designed as a follow up to last year’s satellite event, and to discuss how to take the right decisions in future. Under the convergence objective, the ERDF will seek to support sustainable regional and local economic development and employment by focusing on a number of priorities. The Council’s Common Position of 12 June 2006, which has been approved by the European Parliament, lists ‘investments in health and social infra-structure which contribute to regional and local development and increasing the quality of life’ as one of the main areas. EU-funded equipment, physical conditions in health institutions as well as the specific health challenges of individual countries require considerable improvement to reach levels comparable to those of the old member states. Other sessions will discuss innovation in health policy, European HFA, HIV/AIDS, chronic and rheumatic diseases and pandemics. The Forum Europe Presidency will present its ‘Health in all Policies’ strategy, based on the enhanced inclusion of health in policies into other policy areas. The upcoming German EU Presidency will also hold a ‘Health in all Policies’ conference and present its agenda. DG SANCO will host a session to report on developments on nutrition and physical activity since the Commission’s parallel forum on Nutrition at the 2005 EHF. In addition, there will be workshops on cross-border exchange of best practices, paediatric pharmaco-therapy, and on air pollution and health. The 15th International Medical Trade Fair for Components, Parts and Raw Materials for Medical Manufacturing, the target is primarily the international trade fair for medical devices, biomedicine and medical imaging. No other trade fair in the world showcases such a diverse palette of products for use, for example, ultrasound diagnosis. Visitors will also be able to test, on volunteers, the latest innovations for improved picture quality. Whether optimised hard- and software, the latest generation of contrast media or the newest transducers, visitors will see the entire range of products at MEDICA. One latest innovation, for example, is a new laser-based endoscopic method that enables, for the first time, microscopic examination of the digestive tract. This procedure, known as endo-microscopy, provides images magnified up to 1,000 times. Until this, the maximum possible level of magnification was 100 times. With these images to be generated at cell level – a tremendous advantage in diagnosing problems where, ten years ago, mucosa and its vessels, and one that would enable considerable reduction in surgery to be performed on patients with chronic intestinal complaints. Such innovations underline why the imaging market is growing at a rapid rate. Experts estimate the global market to be between 12.5 billion euros and five further annual growth rates of at least 4%. The world market for ultra-sound alone is expected to grow from almost 1 billion euros (Philips Medical and LBWW). Anyone visiting an ultrasound provider’s booth will hear that interest in this topic is not restricted to Germany (with 40,000 machines already in use), but also in those countries with a relatively low cost of the procedure are attracting interest globally. The demand is anything to go by, supply is as global as demand – and not only for medical imaging. Together with the medical products sector, this is a field that clearly demonstrates the technical maturity of the market, even in those developing markets. Ten years ago, manufacturers were still exhibiting relatively simple products and equipment. The German medical technology and products industry has the opportunity to measure itself against high-performance medical imaging. Together with the most diverse range of data applications, these firms no longer sell merely on this year’s winner and their achievements. The Lab Technology and diagnostics sector: 650 exhibitors What began with simple applica- tions for blood and urinalysis has become an area of such importance that, today’s products and equip- ment are considerably easier to operate. The new equipment for now enable blood, plasma or serum on reagent carriers, or to test blood and sera, using the most diverse range of data from organs (even the pancreas), and validity of results are no longer questioned. Increasingly, the time-consuming and costly transport of biopsy material to a central lab can be dispensed with: analysis data is available immedi- ately at the treatment location. The ‘Lab-on-a-chip’ concept of biotech industry will be high- lighted. Molecular medical tech- niques enable biochips to be used in complex cancer diagnoses and treatments and to determine patients’ responses to particular medications. Biomedical tumour marker tests are now available from all leading diagnostics manu- facturers. While current tests are designed primarily for diagnosis during illness, in the future, molecular-markers applications could provide impor- tant clues for early detection. Mass spectrometry techniques can increase success in screening blood and other bodily fluids for proteins indicating their relevance as indicators of cancer. Bearing such advances in mind, no wonder the lab diagnostics market is extremely dynamic. Although wary by world region, its growth lies between 4 - 7%, with a total volume of around 24 billion euros (Euroapprox, 9 billion euros, Germany 1.9 billion euros. Source: VDI). Ti: Going digital MEDICA is again the annual trend-setter. Today, experts estimate that hospitals could save up to 30% by using it, and increasing number of Your MEDICA 2006 and ComPaMED pass The pass will be valid for MEDICA, ComPaMED and many events during the German-speaking MEDICA Congress, which includes 200 seminars and courses and over 500 internationally-renowned speakers, making this Germany’s most interdisciplinary medical gathering. Details: http://www.medica.de/compassmed
38th World Forum for Medicine
International Trade Fair with Congress

www.medica.de

Düsseldorf,
15.–18. Nov. 2006