

The 43rd Middle East Medical Assembly

The 43rd Middle East Medical Assembly **Presentations and Abstracts**

Editors

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Chairperson, MEMA 2010

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The American University of Beirut and the
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The 43rd Middle East Medical Assembly

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Messages



A Message from the Chairperson of the Assembly

As part of AUB's grand tradition in continuing medical education in Lebanon and the Region, and on behalf of all my colleagues in the various MEMA committees, it is my pleasure to announce that the 43rd Middle East Medical Assembly will be held at AUB April 22-25, 2010. In line with MEMA's traditions, the program will continue to be basically multidisciplinary in order to provide the participants with state-of-the-art presentations that are relevant to more than one medical specialty.

The 3-day scientific program of MEMA 2010 includes a number of internationally recognized guest speakers from USA, Europe and the region who will address new aspects in dentistry, diabetes, emergency medicine, GI endoscopy, neurosciences, ob-gyn, hand surgery, otology/neurotology, pediatrics, primary care, stem cells, basic science research, infectious diseases and vascular surgery.

In addition, there will be five special memorial plenary lectures on contemporary subjects in medical sciences.

Colleagues from Lebanon and the region are welcome to attend.

We hope to see you at the 43rd MEMA.

Respectfully

Ibrahim Salti, MD, Ph-D

Chairperson, 43rd Middle East Medical Assembly



A Message from the President of the American University of Beirut

I am delighted to have this opportunity to welcome you to the 43rd meeting of the Middle East Medical Assembly (MEMA) that AUB is jointly sponsoring with the Cleveland Clinic Foundation Center for Continuing Education. I am especially sorry that my schedule prevents me from joining you this year—but my wife, Kathy, will be welcoming you personally to the reception at our home at Marquand House on Thursday evening.

MEMA is one of AUB's great traditions—an extraordinary event during which we highlight some of the many strengths and resources of our Medical Center and Faculty of Medicine. It is also an opportunity for doctors and researchers from Lebanon, the Middle East region, Europe, and the United States to explore issues, share experiences, discuss their research, learn about the latest medical advances, and to forge professional collaborations and personal friendships.

Although MEMA targets primarily physicians, residents, and medical students, there are also many interesting presentations for those who work in nursing, public health, social work, counseling, and physical therapy—and even for those of us who have “only” an interest in these topics.

In addition to special sessions on stem cell research, orthodontic dentistry, endoscopy, hand surgery, vascular surgery, and otology, the three-day program also features memorial lectures on different topics, an extensive scientific exhibit by more than 20 pharmaceutical and medical related companies, and a gala dinner that will benefit the medical students scholarship program.

Although the MEMA program promises to be richly rewarding, I hope you will also make time to explore Beirut and Lebanon. As many of you know, these explorations are also richly rewarding—whether you live here, are visiting for the first time, or are returning after a long absence.

Peter Dorman
President of the American University of Beirut



A Message from the Vice President for Medical Affairs

The 43rd Middle East Medical Assembly (MEMA) features this year creative firsts associated with the American University of Beirut Medical Center (AUBMC). In 1866 the Syrian Protestant College became the first American style four-year college in the Middle East-renamed in 1920 the American University of Beirut. One year later the college established its department of medicine, giving birth to what has today grown into the Faculty of Medicine and the AUBMC.

Another early first for medicine at AUB was the creation of MEMA itself, the Middle East Medical Assembly, which began almost one hundred years ago when the Medical Alumni Association organized the first Medical Conference in 1911 to encourage physicians to come together to discuss their own experiences and the rapidly growing developments in the field of medicine, especially for doctors practicing far from the "academic" atmosphere of the University. Continuing education was the motivator.

This Medical Conference took place every other year, excluding the years of World Wars I and II, until, in the late forties more international expansion was sought, and the First Middle East Symposium was organized in 1951. Three years later the name "symposium" was dropped in favor of "assembly." MEMA was thus born in 1954.

Since its earliest days MEMA has been marked by the thrust of education, and opportunities for continuing education have grown over the years until today MDs can earn academic credits in a broad variety of medical disciplines offered-yearly described as "a panoply of high standard educational activities for participants." Attendees can enhance their clinical skills, explore practice performance issues, present their own research or clinical experience, benefit from new and most advanced techniques, participate in sessions addressing specialty and multidisciplinary topics, and interact with internationally renowned experts."

In order to maintain its constructive pursuit of opportunities for education, AUBMC recently created the Continuing Medical Education Office (AUBMC-CME).



A Message from the Vice President for Medical Affairs

This very month, only a few days ago on April 15, AUBMC signed an historic partnership with the Cleveland Clinic Foundation (CCF) Center for Continuing Education (CCE).

The partnership authorizes AUBMC CME to operate as "an extension of the CCF CCE and certify educational activities (e.g. courses, grand rounds, etc.) in Lebanon and the Middle East, including Gulf Cooperation Council countries (the Region) according to the educational needs in the area and to the curriculum designed by the AUBMC Post Graduate Education Council."

Not only does the partnership give an enormous thrust to continuing medical education, but by the terms of the agreement, the CCF CCE will assist in the operation of the new AUBMC Continuing Medical Education Office, help it become an independent Accreditation Council for Continuing Medical Education (ACCME) provider, and afford access to all CCF CME policies. The CCF CCE and AUBMC-CME will exchange regular visits and will continue mutual sponsorship of MEMA.

As we celebrate these innovations, I wish you all rewarding participation in the 43rd Middle East Medical Assembly.

Mohamad Sayegh, MD
Vice President for Medical Affairs
Raja N. Khuri Dean of the Faculty of Medicine and the Medical Center



A Message from the President of the Medical Alumni Chapter

And the tradition goes on...

MEMA is still flourishing; sometimes it is a record of speakers, of participants, of workshops, or of all the above. But the spirit is the most important aspect, and we all work hard to maintain the same spirit and foster the objective of MEMA that counts most—continuing education.

This year and under the new leadership we launched the Continuing Medical Education (CME) office which is the first in the nation and the region. As with every CME office, the aim is to become CME providers and through the collaboration with the Cleveland Clinic Foundation (CCF), we will be able to conduct all kinds of conferences and educational activities that will offer category PRA I credits to most medical doctors in almost all fields. All these CME credits will be granted by the AMA, the ultimate source of medical education.

But MEMA remains the flagship of this new office and its pride. This is a tradition that has been offering CME credits with the collaboration of the CCF who, over the last decade, were of enormous help in making us raise the standards to the highest level of education by making sure all topics tackle the most advanced issues in medicine. We were simply at the forefront of medical research, advances, and the newest guidelines.

This year is no exception, since MEMA programs expose the participants to a wide variety of topics and enhance the tradition of getting the best in the fields from the authorities and professionals considered as references in their respective subspecialties.

The Alumni Medical Chapter has been deeply involved in all MEMA congresses and tries yearly to assemble a considerable number of alumni who gather to exchange scientific and social ideas as well as rekindle old friendship ties. The chapter is keen to honor yearly one person with what is known as the Gold Award, granted to one alumnus who stands out as stellar in the academic field through his or her contribution to teaching and research, and the opportunities he or she creates for the junior physicians to enhance their careers and helps them enroll in renowned centers in North America and Europe at large. This activity, as part of MEMA, takes place during a luncheon or a dinner where all faculty members are invited.

On behalf of the Alumni Medical Chapter I invite you all to attend this year's MEMA and celebrate once again the anniversary of the best medical knowledge given in the best possible spirit.

“Education is a lifelong process,” Plato

George Abi Saad, MD, FACS
President, Alumni Association Medical Chapter



Committees



XLIII MEMA Committees

Organizing Committee:

Dr. Ibrahim Salti	Chairperson
Dr. Fuad Jubran	Co-Chairperson
Dr. Georges Abi Saad	Treasurer and President Medical Alumni Chapter
Dr. Mohamed Sayegh	Vice President and Raja N. Khuri Dean of Faculty of Medicine and Medical Center
Dr. Aghiad Al Kutoubi	
Dr. Mahmoud Choucair	
Dr. Ghassan Hamadeh	
Mr. Ibrahim Khoury	
Dr. Bassem Safadi	
Dr. Alaa Sharara	
Dr. Khalid Yunis	
Dr. Ghazi Zaatari	

Scientific Committee:

Dr. Bassem Safadi	Co-Chairperson
Dr. Alaa Sharara	Co-Chairperson
Dr. Marc Bassim	
Dr. Ali Bazarbachi	
Dr. Ahmad Beydoun	
Dr. Lama Charafeddine	
Dr. Mahmoud Choucair	
Dr. Joseph Ghafari	
Dr. Fadi Haddad	
Dr. Shady Hayek	
Dr. Souha Kanj Sharara	
Dr. Amin Kazzi	
Dr. Marwan Najjar	
Dr. Anwar Nassar	
Dr. George Nemer	
Dr. Ibrahim Salti	
Dr. Assaad Soweid	
Dr. Khalid Yunis	

CME Committee:

Dr. Georges Abi Saad	Chairperson
Dr. Ghassan Kanazi	Co-Chairperson
Dr. Georges Zaytoun	



XLIII MEMA Committees

Business Committee:

Dr. Georges Abi Saad Chairperson

Publication Committee:

Mr. Ibrahim Khoury Chairperson

Public Relations Committee:

Mr. Hikmat Beaini Chairperson

Social Committee

Dr. Nuha Nuwayri Salti Chairperson

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Mrs. Nabila Firzli
Mrs. Batul Ghazzal
Mrs. Mona Hraoui
Mrs. Nuha Kaddoura
Mr. Ibrahim Khoury
Mrs. Mona Lahoud
Mrs. Sawsan Maktabi
Mrs. Zahira Makkawi
Mrs. Liliane Moutran
Mrs. Amal Nasrallah
Mrs. Maysam Skaff
Mrs. Rihab Uri
Mrs. Balkis Zaatari
Mrs. Fadia Zaynoun

MEMA Office

Mrs. Dalya Nehme
Ms. Tania salem



Objectives



Objectives

Diana Tamari Sabbagh Memorial Lecture

- Define autism behaviorally.
- Describe methods for human gene mapping and mutation identification.

Dentistry

- Appraise the latest evidence supporting the anatomic and biologic conditions favorable for immediate loading and long-term stability of osseointegrated implants.
- Construct a diagnosis and treatment plan combining attention to facial esthetics and proper oral function, and implementing treatment that aims at enhancing the patient's body image.
- Appraise the evidence and corresponding application of new technologies of tooth coverage by veneers and their effect on smile esthetics.
- the latest evidence and current practice of the "Invisalign" system of tooth movement with focus on its potential and limitations.
- Assess the latest research and state of the art timing and sequencing of cleft lip and/or palate treatment.
- Analyze the services provided to patients who need maxillofacial facial prostheses to restore portions of the mouth, head and neck.

Emergency Medicine

- Discuss essential recommendations in Poly-Trauma & Mass Casualty management in the Emergency Department.
- Describe different management strategies exist to deal with cardiac complications due to toxicological emergencies than what is recommended or listed in ACLS.
- Discuss the most common and valuable sedating agents used in the ED for proper procedure completion, including indications, side effects and contraindications.
- Discuss the evaluation and management of Snake Bite injuries in Lebanon.
- Recognize challenges faced by Lebanese clinicians in securing and administering snake bite antivenin.
- Identify subtle or rare ECG findings indicative of ischemia or infarction.
- Discuss the difference between symptomatic and asymptomatic hypertension, hypertensive urgencies and emergencies & discuss proper management strategies dealing with each.
- Discuss challenging cardiovascular emergencies emergency physicians must face.
- Explain the role and impact of evidence based early therapeutic interventions in sepsis.
- Discuss updates in the management of wound infections and unusual forms of cellulites.



Objectives

Emergency Medicine Workshop

- Describe the initial assessment, evaluation, and documentation of the Chief Complaint.
- Demonstrate the essential opportunity to prioritize care.
- Create an opportunity to provide first aid procedures.
- Describe protocol-based initiation of: diagnostic work and treatment.

Epilepsy

- Define when a patient should be considered pharmaco-resistant and referred to an epilepsy center for pre-surgical evaluation.
- Describe the pre-surgical evaluation of patients with medically refractory epilepsy, including semiology, CCTV/EEG monitoring, and neuroimaging findings.
- Discuss updates on the neuro-imaging findings in lesional epilepsy as well as on the value of PET and SPECT in the evaluation of drug resistant epilepsy.
- Review the clinical, semiological, interictal and ictal findings in patients with temporal lobe epilepsy.
- Discuss abnormalities in cortical development as a cause of pharmaco-resistant epilepsy and the non invasive and invasive evaluation of those patients.
- Review the various surgical techniques available to treat patients with refractory epilepsy.
- Describe the predictors of success and failure in patients undergoing epilepsy surgery.
- Relate the outcomes of patients undergoing epilepsy surgery at the American University of Beirut Hospital.
- Discuss the pharmacoeconomic of epilepsy surgery and its long term cost effectiveness for patients with medically intractable epilepsy.
- Review treatment alternatives for those medically refractory patients deemed not to be candidates for epilepsy surgery.

GI Endoscopy

- Select the appropriate applications of gastrointestinal endoscopy in the management of premalignant and malignant lesions of the esophagus.
- Discuss the latest trends in endoscopic management of gastroduodenal and colonic obstruction.
- Recognize the role of EUS in the management of biliopancreatic and GI malignancy.
- Update and refine knowledge of the advances in endoscopic sedation and monitoring.
- Describe the new technique of Natural Orifice Trans-luminal Endoscopic surgery (NOTES) and its evolving applications.
- Identify the endoscopic techniques of the future.



Objectives

GI Endoscopy Workshop

- Apply endoscopic ocam (ENS/FNA) on pigs.
- Provide hands on experience for Gastroenterologists to perform endoscopic ocam on pigs.

Hand Surgery

- Review the assessment and management of complex nerve injuries/pathologies of the upper extremity.
- Review up-to-date literature about management of complex fractures of the distal radius and scapholunate area
- Review updated management of complex fractures of the hand and upper extremity.

Hans Zellweger Lecture

- Describe the latest discoveries in terms of new treatments and treatment perspectives for inborn errors of metabolism.

Infectious Diseases

- Discuss major concepts in infection control in the region, especially hand hygiene initiatives.
- Discuss new advances in the area of device-related infections: catheter-associated urinary tract infection, ventilator-associated pneumonia, catheter-related bloodstream infection.
- Describe the management of the H1N1 pandemic during Hajj: preparations, approach to prophylaxis, treatment, and vaccination.
- Define risk factors, diagnostic methods, and outcome of fungal infections in high risk patients .
- Analyze data on prophylaxis, pre-emptive and empiric treatment of fungal infections in high risk patients.
- Appreciate the magnitude of drug resistance in fungal infections and define the parameters around clinical and direct drug resistance.

Naji Sahyoun Memorial Lecture

- Review the immunopathogenesis of MS
- Review the basis of clinical disease progression in MS and EAE
- Review the cellular and molecular correlates of chronic disease
- Illustrate experimental approaches to reverse chronic inflammation



Objectives

OB-GYN

- Develop the ability to debate the pros and cons of several controversial issues in obstetrical care (steroids in preterm labor, oral hypoglycemic for gestational diabetes and management of a short cervix).
- Recognize evidence-based management strategies in Obstetrics and Gynecology.
- Review the importance of pregnancy as a window for future health.
- Identify new techniques for gamete, ovarian tissue and stem cell freezing.
- Identify novel applications in prenatal diagnosis.

Otology / Neurotology

- Discuss the evaluation of the hearing impaired child.
- Explain the different options for rehabilitation of hearing loss.
- Describe the pros and cons of different modalities for the management of acoustic neuromas.
- Discuss the evaluation and differential diagnosis of dizziness in children.
- Recognize common pitfalls in stapes surgery.
- Identify future prospects in Otology and Neurotology.

Pediatrics

- Describe the side effects and benefits of the HPV vaccine and its impact on cervical cancer.
- Discuss the very controversial subject of Swine Flu H1N1 including the virus and the vaccine.
- Discuss adolescent vaccination as many adolescents are not fully vaccinated.
- Discuss the etiologies and acute management of metabolic emergencies such as acidosis, hypoglycemia and hyperammonemia commonly seen in sick neonates.
- Indicate the diagnosis and management of lactic acidosis which is frequently encountered in various pediatric diseases ranging from mild to serious.

Neonatal Resuscitation Workshop

- Review the neonatal resuscitation principles set by the International Committee on Cardiopulmonary Resuscitation (ILCOR)
- Describe the neonatal resuscitation diagram step by step
- List the neonatal resuscitation devices
- Review special considerations and resuscitation of premature infants
- Review the ethics of newborn resuscitation
- Apply neonatal resuscitation



Objectives

Primary Care

- Describe update on some of the common and hot issues encountered in the daily clinical practice
- Discuss practical and updated information on different topics in the daily practice of ambulatory medicine.
- Discuss information related to Pediatrics, Cardiology, Diabetes, Osteoporosis, Vascular Medicine, Liver diseases and Hormonal replacement therapy.

Stem Cells and Basic Science Research

- Discuss the scientific evidence for screening of common diseases
- Identify the specific populations that should be targeted for screening.
- Describe the specific methods utilized for screening for each specific disease.
- Review the latest advances in stem cell research and their potential in treating non-neoplastic human diseases (regenerative medicine).
- Describe the role of cancer stem cells in chemotherapy resistance and cancer relapse. Review the latest advances in the specific targeting of leukemia initiating cells.

Vascular Surgery

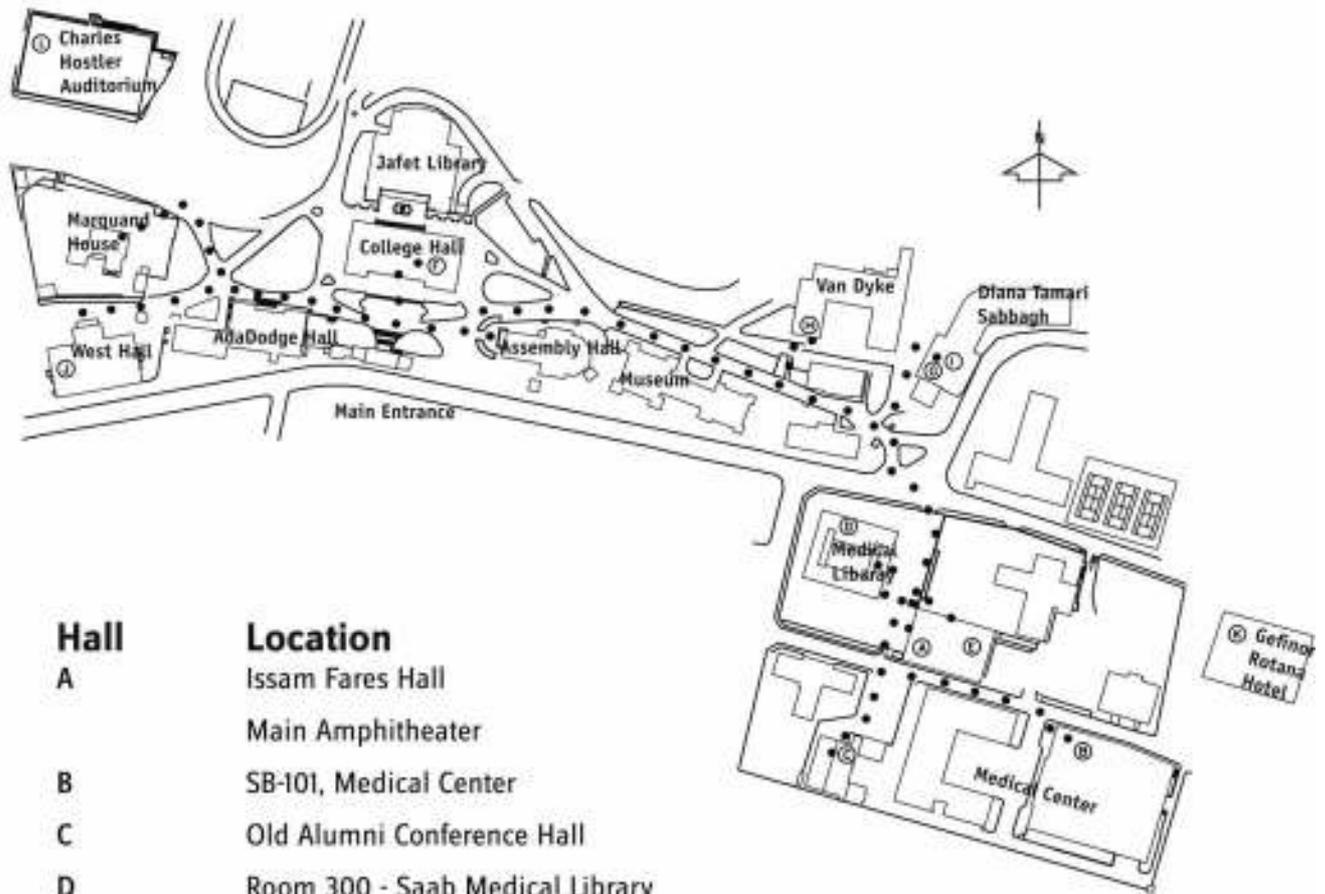
- Distinguish the different type/extent of aortic dissection.
- Identify the timing and indications for intervention on Type B dissection.
- Discuss the role of Endovascular treatment of dissection based on the available data.
- Recognize and treat complications of dissection, notably organ ischemia.
- Familiarize with the current outcomes in TEVAR.
- Recognize the technical challenges of the thoracic aorta.
- Differentiate between the available devices and major device specific outcomes.
- Recognize the current role of EVAR based on the available data.



Schedule



Schedule at a glance



Hall	Location
A	Issam Fares Hall Main Amphitheater
B	SB-101, Medical Center
C	Old Alumni Conference Hall
D	Room 300 - Saab Medical Library
E	Issam Fares Hall Workshop Rooms
F	College Hall B1 Conference Room
G	Diana Tamari Sabbagh Laboratories
H	Van Dyke Health Sciences Auditorium
I	Diana Tamari Sabbagh Classroom (B-11)
J	Bathish, West Hall Auditorium
K	Gefinor Rotana Hotel
L	Charles Hostler Auditorium



Thursday April 22 , 2010

Hall D: Room 300

Workshop: Emergency Medicine (Separate Registration Fees)

- 2:00 PM 3:00 PM** Emergency Department Triage: Overview of Concept, Different Systems around the world, Applications, and Challenges
Dr. Amin Kazzi
- 3:00 PM 3:30 PM** ESI Triage (Emergency Severity Index Triage System - the 5 point systems advocated and supported by national US emergency physician and nurses associations)
Dr. Amin Kazzi
- 3:30 PM 6:00 PM** Case Presentations and discussions
Dr. Amin Kazzi



Friday April 23 , 2010

Hall A: Issam Fares Hall

Updates in Dentofacial Therapy: Esthetic and Implant Dentistry

Moderator(s): Dr. Nabil Barakat, Dr. Elie Zebouni and Dr. Antoine Cassia

9:00 AM 9:10 AM Opening remarks
Dr. Joseph Ghafari

9:10 AM 10:10 AM Implant dentistry esthetics: minimally invasive implant protocols and management of risk factors in esthetic therapy - success by design (1)
Dr. Henry Salama

10:10 AM 10:20 AM Discussion

10:20 AM 10:40 AM COFFEE BREAK

10:40 AM 11:40 AM Implant dentistry esthetics: minimally invasive implant protocols and
management of risk factors in esthetics therapy - success by design (2)
Dr. Henry Salama

11:40 AM 11:50 AM Discussion

11:50 AM 12:05 PM Coffee break

12:05 PM 12:50 PM Maxillofacial prosthetics: update on maxillofacial prosthetics
Dr. Michael Huband

12:50 PM 1:00 PM Discussion

1:00 PM 2:15 PM LUNCH BREAK

Moderator(s): Dr. George Tawil and Dr. Mohamad Itani

2:15 PM 3:20 PM Implant dentistry: implant site enhancement. Multidisciplinary approach for achieving optimal function and esthetics
Dr. Henry Salama

3:20 PM 3:30 PM Discussion

3:30 PM 3:50 PM COFFEE BREAK



Friday April 23 , 2010

- 3:50 PM 4:55 PM** Implant prosthesis and gingival esthetics: esthetic strategies and soft tissue contours in anterior tooth replacement
Dr. Henry Salama
- 4:55 PM 5:05 PM** Discussion
- 5:05 PM 5:10 PM** Closing remarks
Dr. Joseph Ghafari



Friday April 23 , 2010

Hall B: SB-101

Chafic Haddad Memorial Lecture

Moderator(s): Dr. Ibrahim Salti

9:00 AM 10:00 AM Pathways to immunological tolerance: insights from autoimmune polyendocrinopathy syndromes
Dr. Talal Chatila

Controversial Issues in Obstetrical and Reproductive Medicine Management: Controversies in Obstetrical Care

Moderator(s): Dr. Joe Suidan and Dr. Roland Tannous

10:00 AM 10:25 AM Fetal surgery: what should the general obstetrician know?
Dr. Jan Deprest

10:25 AM 10:45 AM Steroids for fetal lung maturity - single or multiple doses: a call for consensus
Dr. Anwar Nassar

10:45 AM 11:05 AM Gestational diabetes: do oral hypoglycemics have a role?
Dr. Ihab Usta

11:05 AM 11:20 AM Questions and discussion

11:20 AM 11:40 AM COFFEE BREAK

Updates in Reproductive Medicine

Moderator(s): Dr. Ghina Ghazeeri and Dr. Toufic Nakad

11:40 AM 12:05 PM Influenza A (H1N1) in pregnancy: an update
Dr. Ziad Memish

12:05 PM 12:30 PM Diagnosis and prenatal follow up of the monochorionic twin: what to screen for and when?
Dr. Jan Deprest



Friday April 23 , 2010

12:30 PM 12:55 PM Cord blood stem cells: cryopreservation techniques and clinical applications
Dr. Hassan El Solh

12:55 PM 1:00 PM Questions and discussions

1:00 PM 2:00 PM LUNCH BREAK

Fuad Farah Lecture

Moderator(s): Dr. Abdul Ghani Kibbi

2:00 PM 3:00 PM Reconstructing skin
Dr. Yann Barrandon

Controversial Issues in Obstetrical and Reproductive Medicine Management: Long Term Consequences of Pregnancy

Moderator(s): Dr. Toufic Eid and Dr. Zulfkar Hashash

3:00 PM 3:20 PM The developmental origins of adult disease
Dr. Labib Ghulmiyyah

3:20 PM 3:45 PM Pregnancy as a window to future health
Dr. George Saade

3:45 PM 4:10 PM COFFEE BREAK

Evidence-Based Applications

Moderator(s): Dr. Samir Abu Rustum and Dr. Mary Chammas

4:10 PM 4:30 PM Management of the short cervix: an evidence-based approach
Dr. Abdalla Adra

4:30 PM 4:50 PM Cesarean delivery: approaches in the 21st century
Dr. George Saade

4:50 PM 5:10 PM Volume sonography: clinical applicability of current and future trends in obstetrics
Dr. Reem Abu Rustum



Friday April 23 , 2010

- 5:10 PM 5:30 PM** Fetal cardiac imaging: implications in diagnosis and management
Dr. Karim Diab
- 5:30 PM 5:50 PM** Prenatal care: an eye towards the future
Dr. George Saade
- 5:50 PM 6:00 PM** Questions and Discussion



Friday April 23 , 2010

Hall C: Nursing Auditorium

Vascular Disorders, Established and Innovative Practices: Aortic Diseases

- 10:00 AM 10:15 AM** Outcomes of thoracic EVAR: a new gold standard?
Dr. Peter Taylor
- 10:15 AM 10:30 AM** Challenging arch: hybrid, branched or open surgery?
Dr. Alan Lumsden
- 10:30 AM 10:45 AM** Thoraco-abdominal aneurysm: organ protection and outcomes
Dr. Hazim Safi
- 10:45 AM 11:00 AM** Acute type B dissections: is the available data in favor of change in paradigm?
Dr. Michel Makaroun
- 11:00 AM 11:15 AM** Endovascular management in acute type B dissection: technical considerations, organ ischemia
Dr. Alan Lumsden
- 11:15 AM 11:30 AM** Questions and discussion
- 11:30 AM 11:50 AM** COFFEE BREAK

Abdominal and Thoraco-Abdominal Aortic Aneurysm

- 11:50 AM 12:05 PM** Long term follow up after abdominal EVAR
Dr. Peter Taylor
- 12:05 PM 12:20 PM** Extreme EVAR: access issues, occlusive disease, angulations...how to proceed and when to decline
Dr. Piergiorgio Cao
- 12:20 PM 12:35 PM** Current management of endoleaks after EVAR
Dr. Michel Makaroun
- 12:35 PM 12:50 PM** Challenging landing zones: open surgery or fenestrated/branched techniques
Dr. Eric Verhoeven



Friday April 23 , 2010

12:50 PM 1:00 PM F/U after EVAR: do we have a consensus?
Dr. Jamal Hoballah

1:00 PM 1:10 PM Thoraco abdominal aneurysms: how do I do it?
Dr. Hazim Safi

1:10 PM 1:20 PM Questions and discussion

1:20 PM 2:00 PM LUNCH BREAK

Peripheral Arterial Disease

3:00 PM 3:15 PM Challenges in the treatment of aortoiliac occlusive disease
Dr. Daniel Clair

3:15 PM 3:30 PM Politeal aneurysms: update
Dr. Eric Verhoeven

3:30 PM 3:40 PM Salvage of failing bypass, endovascular approach
Dr. Fady Haddad

3:40 PM 3:55 PM Infrapopliteal recanalization angioplasty for critical limb ischemia: technical considerations and current evidence
Dr. Daniel Clair

3:55 PM 4:05 PM Limitations for endovascular treatment: when is open surgery a better option?
Dr. Piergiorgio Cao

4:05 PM 4:20 PM Questions and discussion

4:20 PM 4:40 PM COFFEE BREAK

Status on Carotid Artery Stenting

4:40 PM 4:50 PM Carotid artery stenting vs carotid endarterectomy: the recent trials
Dr. Michel Makaroun

4:50 PM 5:00 PM Recipe for an uneventful carotid case! How to avoid complications
Dr. Piergiorgio Cao



Friday April 23 , 2010

5:00 PM 5:10 PM Carotid endarterectomy:is it time to let go?
Dr. Ismail Khalil

5:10 PM 5:20 PM Questions and discussion

Renovascular Disease

5:20 PM 5:35 PM Renal artery stenosis: practice guidelines based on the latest evidence
Dr. Peter Taylor

5:35 PM 5:50 PM Renal artery stenosis: technical pearls
Dr. Daniel Clair

5:50 PM 6:00 PM Questions and discussion



Friday April 23 , 2010

Hall D: Room 300

Complex Injuries in Hand Surgery: Peripheral Nervous System

Moderator(s): Dr. Imad Kaddoura and Dr. Ahmad Zaatari

- 10:00 AM 10:15 AM** Unusual neurologic conditions in hand surgery
Dr. Raja Sawaya
- 10:15 AM 10:20 AM** Questions
- 10:20 AM 10:35 AM** The management of complex peripheral nerve injuries
Dr. Julia Terzis
- 10:35 AM 10:40 AM** Questions
- 10:40 AM 10:55 AM** Free muscle transfers for elbow reconstruction in adult plexopathies
Dr. Julia Terzis
- 10:55 AM 11:00 AM** Questions
- 11:00 AM 11:15 AM** COFFEE BREAK
- 11:15 AM 11:30 AM** Shoulder reconstruction options for patients with brachial plexus injury
Dr. Julia Terzis
- 11:30 AM 11:35 AM** Questions
- 11:35 AM 11:50 AM** Tendon transfer for shoulder in BP injuries
Dr. Bassem El Hassan
- 11:50 AM 11:55 AM** Questions
- 12:00 PM 1:00 PM** Saw bone session I workshop (NON-CME)
- 1:00 PM 2:00 PM** LUNCH BREAK



Friday April 23 , 2010

Fractures and Dislocations - Afif Nsouli Lecture

Moderator(s): Dr. Bishara Atiyeh and Dr. Sami Roukoz

- | | |
|------------------------|--|
| 3:00 PM 3:15 PM | Scapholunate ligament injuries
Dr. Bassem El Hassan |
| 3:15 PM 3:20 PM | Questions |
| 3:20 PM 3:35 PM | Scaphoid fractures and nonunions
Dr. Bassem El Hassan |
| 3:35 PM 3:40 PM | Questions |
| 3:40 PM 3:55 PM | Distal radius fractures: update of best practice
Dr. Steven Moran |
| 3:55 PM 4:00 PM | Questions |
| 4:00 PM 4:15 PM | COFFE BREAK |
| 4:15 PM 4:30 PM | Complex hand fractures and dislocations
Dr. Steven Moran |
| 4:30 PM 4:35 PM | Questions |
| 4:35 PM 4:50 PM | Pediatric hand and upper extremity fractures
Dr. Steven Moran |
| 4:50 PM 4:55 PM | Questions |
| 5:00 PM 6:00 PM | Saw bone session II workshop (NON-CME) |



Friday April 23 , 2010

Hall G: Diana Tamari Sabbagh Animal Lab

Workshop: GI Endoscopy - EUS Workshop (Separate Registration Fees)

3:00 PM 6:00 PM EUS (Endoscopic Ultrasound) workshop: hands-on training on porcine model for the techniques of EUS and FNA (fine needle aspiration).
Dr. Paolo Giorgio Arcidiacono and Dr. Assaad Soweid



Friday April 23 , 2010

Hall H: Van Dyck Auditorium

GI Endoscopy Evidence-Based Practices, Today and Tomorrow: Gastrointestinal Malignancy

Moderator(s): Dr. Fadi Murad and Dr. Fouad Zaarour

- 10:00 AM 10:25 AM** Endoscopic management of esophageal premalignant and malignant lesions
Dr. Samer El Dika
- 10:25 AM 10:55 AM** Endoscopic ultrasound in the evaluation of pancreaticobiliary malignancies
Dr. Paolo Giorgio Arcidiacono
- 10:55 AM 11:15 AM** Colonic polyp screening: gastroenterologist or radiologist?
Dr. Rita Slim Karam
- 11:15 AM 11:45 AM** COFFE BREAK

Endoscopy Tomorrow

Moderator(s): Dr. K Barada and Dr. E Makhoul

- 11:45 AM 12:15 PM** Natural orifice trans-luminal endoscopic surgery (NOTES) is it for real?
Dr. Nagheshwar Reddy
- 12:15 PM 12:35 PM** Capsule and small bowel endoscopy
Dr. Salem El Khoury
- 12:35 PM 1:00 PM** The future of endoscopy
Dr. Nagheshwar Reddy
- 1:00 PM 2:00 PM** LUNCH BREAK

Infectious Diseases and Infection Control:Infection Control

Moderator(s): Dr. Souha Kanj Sharara and Dr. Sami Ramia

- 3:00 PM 3:25 PM** Infection control initiatives in the region
Dr. Ziad Memish



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3:25 PM 3:50 PM Device related infections: new advances
Dr. Issam Raad

3:50 PM 4:15 PM H1N1 influenza: the Hajj experience
Dr. Ziad Memish

4:15 PM 4:30 PM Questions

4:30 PM 4:45 PM COFFEE BREAK

Fungal Infections in High Risk Patients

Moderator(s): Dr. Zeina Kanafani and Dr. Zuhayr Tabbarah

4:45 PM 5:10 PM Invasive candida infection in ICU patients
Dr. John Perfect

5:10 PM 5:30 PM Invasive mould infections in cancer patients
Dr. Issam Raad

5:30 PM 5:50 PM Why do we fail in treatment of infections? The use of fungal infections
as models of drug resistance
Dr. John Perfect

5:50 PM 6:00 PM Questions



Saturday April 24 , 2010

Hall A: Issam Fares Hall

Naji Sahyoun Memorial Lecture

Moderator(s): Dr. Ghazi Zaatari

9:00 AM 10:00 AM Neutral stem cells for treatment of demyelinating diseases: fantasy or real prospect
Dr. Samia Khoury

Normal and Malignant Stem Cells/Basic Science Research: Tribute to Dr. Usama Khalidi Stem Cells and Translational Research

Moderator(s): Dr. Rami Mahfouz and Dr. Samia Khoury

10:00 AM 10:30 AM Controlling stem cells in health and disease
Dr. Ronald McKay

10:30 AM 11:00 AM A novel approach to organ-specific differentiation of stem cells
Dr. Marwan El Sabban

11:00 AM 11:15 AM COFFE BREAK

11:15 AM 11:45 AM Stem cell research in cardiology
Dr. Marc Penn

11:45 AM 12:15 PM Stem cell research in multiple sclerosis
Dr. Bassem Yamout

12:15 PM 12:30 PM Questions

12:30 PM 2:00 PM LUNCH BREAK

Stem Cells and Basic Research

Moderator(s): Dr. Ghassan Dbaibo and Dr. Raya Saab

2:00 PM 2:40 PM Acute promyelocytic leukemia
Dr. Hugues De The

2:40 PM 3:10 PM Adult T cell leukemia / lymphoma
Dr. Ali Bazarbachi



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3:10 PM 3:40 PM Cancer stem cells as therapeutic target
Dr. Rihab Nasr

3:40 PM 4:00 PM Breast cancer
Dr. Hugues De The

4:00 PM 4:15 PM Coffee Break

Basic Science Research: Tribute to Dr. Usama Khalidi

Moderator(s): Dr. Georges Nemer and Dr. Julnar Usta

4:15 PM 4:30 PM Welcome remarks and presentation of award to Dr. Usama Khalidi
Dr. Mohamed Sayegh and Dr. Ghaleb Daouk

4:30 PM 5:00 PM I am allergic to cheese and my skin itches
Dr. Raif Geha

5:00 PM 5:30 PM Metabolomics: how drug treatment is becoming personalized
Dr. Rima Kaddurah Daouk

5:30 PM 6:00 PM Warding off autoimmunity: Usama's rabbits and the guardian FOX
Dr. Talal Chatila

6:00 PM 6:30 PM Role of TREM2 in pure early-onset dementia
Dr. Eliane Chouery

6:30 PM 6:45 PM COFFE BREAK

Moderator(s): Dr. Marwan El Sabban and Dr. Rihab Nasr

6:45 PM 6:50 PM Welcome remarks and LeMISC-SCOME brief introduction
Ms. Fatima Ghaddar

6:50 PM 7:10 PM Rewiring cocaine addiction: N-acetylcysteine persistently prevents reinstatement of cocaine seeking by reversing cocaine-induced plasticity in cortico-striatal pathways
Dr. Khaled Moussawi

7:10 PM 7:20 PM Cyclin D1 activates the DNA damage response in pineal cells resulting in p53-dependent senescence
Dr. Hassan Zalzali

7:20 PM 7:30PM The combination of arsenic trioxide and interferon-alpha eradicates leukemia initiating cells in TAX-driven murine adult T cell leukemia
Dr. Hiba El Hajj



Saturday April 24 , 2010

Hall B: SB-101

Pediatrics

10:00 AM 10:25 AM HPV vaccine controversies
Dr. Kenneth Alexander

10:25 AM 10:50 AM The role of fetal echocardiography in outcome measures
Dr. Karim Diab

10:50 AM 11:15 AM Swine flu H1N1 pandemic: surveillance, treatment and vaccination
Dr. Kenneth Alexander

11:15 AM 11:35 AM COFFEE BREAK

11:35 AM 12:00 PM Neonatal metabolic emergencies
Dr. Vassili Valayannopoulos

12:00 PM 12:25 PM Updates on adolescent vaccination
Dr. Kenneth Alexander

12:25 PM 12:50 PM Treating febrile children: the dark side of antipyretics
Dr. Mona Nabulsi

1:00 PM 2:00 PM LUNCH BREAK

Hans Zellweger Memorial Lecture

Moderator(s): Dr. Khalid Yunis

2:00 PM 3:00 PM Treatment strategies in inherited metabolic diseases: past, present and future
Dr. Vassili Valayannopoulos

Pediatrics

3:10 PM 3:35 PM Update on the genetics of congenital heart disease
Dr. Georges Nemer

3:35 PM 4:00 PM What pediatricians need to know about echocardiography
Dr. Karim Diab



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- 4:00 PM 4:25 PM** Lactic acidosis
Dr. Vassili Valayannopoulos
- 4:25 PM 4:55 PM** COFFEE BREAK
- 4:55 PM 5:20 PM** Update on pharmacologic treatment of Autism
Dr. Fadi Maalouf
- 5:20 PM 5:55 PM** Response interruption and redirection (RIRD) as a treatment for
stereotypy in children with autism
Dr. Lina Slim Topdjian
- 5:55 PM 6:00 PM** Closing Remarks



Saturday April 24 , 2010

Hall C: Nursing Auditorium

Diana Tamari Sabbagh Memorial Lecture

Moderator(s): Dr. Jean Rbeiz

9:00 AM 10:00 AM Recent innovations and advances in intracranial aneurysm treatment and research
Dr. Bernard Bendok

Neuroscience – Epilepsy, Pharmaco-Resistant Epilepsy: Approaches in Diagnosis and Management

Moderator(s): Dr. Kamal Kallab and Dr. Abdallah Rahbani

10:00 AM 10:30 AM Defining pharmacoresistance
Dr. Mohamad Mikati

10:30 AM 11:00 AM Presurgical evaluation of medically refractory patients
Dr. Naji Riachi

11:00 AM 11:30 AM Neuroimaging in epilepsy
Dr. Roula Hourany

11:30 AM 11:50 AM COFFEE BREAK

11:50 AM 12:25 PM Temporal lobe epilepsy: clinical and electrophysiological characteristics
Dr. Ahmad Beydoun

12:25 PM 1:00 PM Abnormalities of cortical development and related lesions
Dr. Prakash Kotagal

1:00 PM 2:00 PM LUNCH BREAK

Wilder-Penfield Memorial Lecture

Moderator(s): Dr. Rose-Mary Boustany

2:00 PM 3:00 PM Disentangling the genetic diversity of childhood brain diseases
Dr. Christopher Walsh



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Neuroscience – Epilepsy, Pharmaco-Resistant Epilepsy: Approaches in Diagnosis and Management

Moderator(s): Dr. Kamal Kallab and Dr. Abdallah Rahbani

- 3:00 PM 3:30 PM** Resective surgery for intractable epilepsy
Dr. Youssef Comair
- 3:30 PM 4:00 PM** Predictors of outcome in epilepsy surgery
Dr. Wassim Nasreddine
- 4:00 PM 4:30 PM** Vagus nerve stimulation and other disconnective procedures
Dr. Marwan Najjar
- 4:30 PM 4:50 PM** COFFE BREAK
- 4:50 PM 5:25 PM** Cost effectiveness of surgery in the management of intractable epilepsy
Dr. Prakash Kotagal
- 5:25 PM 6:00 PM** New developments in evaluation of medically refractory patients
Dr. Mohamad Mikati



Saturday April 24 , 2010

Hall C: Nursing Classroom

Open Vascular Forum – NON CME

Moderator(s): Dr. Fady Haddad

10:00 AM 12:30 PM Short presentations, fast paced papers, discussions and interaction with the experts



Saturday April 24 , 2010

Hall D: Room 300

Poly-Trauma in the ED

Moderator(s): Dr. Imad Hajj, Dr. Nisrine Bazarbachi and Dr. Amin Kazzi

10:00 AM 10:30 AM Poly-trauma management in the ED
Dr. George Abi Saad

10:30 AM 11:30 AM Mass casualty management in the ED: lessons learnt in Beirut
Dr. Amin Kazzi

11:30 AM 12:00 PM The FAST exam (focused assessment sonography in trauma): do you need it in your ED?
Dr. Mark Langdorf

12:00 PM 1:00 PM An evidence-based review of the recent emergency medicine literature
Dr. Edward Panacek

1:00 PM 2:00 PM LUNCH BREAK

Moderator(s): Dr. Dany Raad, Dr. Eveline Hitti and Dr. Joe Khazen

3:00 PM 3:30 PM Procedural sedation in the ED
Dr. Mark Langdorf

3:30 PM 4:00 PM Snake bite injury in Lebanon
Dr. Ziad Kazzi

4:00 PM 4:40 PM Difficult ECGs: where can the diagnosis of ischemia and infarction hide?
Dr. Mark Langdorf

4:40 PM 5:00 PM Soft tissue infections in the ED
Dr. Bisan Salhi

5:00 PM 5:30 PM The pulseless patient: an update
Dr. Eveline Hitti

5:30 PM 6:00 PM Toxicology and ACLS: where do they meet? where do they not?
Dr. Ziad Kazzi

6:00 PM 6:40 PM Sepsis update: 2010
Dr. Edward Panacek

6:40 PM 6:45 PM Closing remarks
Dr. Amin Kazzi



Saturday April 24 , 2010

Hall H: Van Dyck Auditorium

Updates in Otology: Vestibular Dysfunction

Moderator(s): Dr. George Zaytoun and Dr. Suheil Tohme

- 10:00 AM 10:10 AM** Introduction
Dr. Nabil Fuleihan
- 10:10 AM 10:30 AM** Migraine related vertigo: an underdiagnosed entity?
Dr. Soha Ghossaini
- 10:30 AM 10:50 AM** Reading a VNG: a practical application
Dr. Kim Abou Chacra
- 10:50 AM 11:20 AM** Evaluation of the dizzy patient: beyond videonystagmography
Dr. Jack Wazen
- 11:20 AM 11:40 AM** Surgical treatment of dizziness
Dr. Marc Bassim
- 11:40 AM 12:00 PM** COFFEE BREAK

Surgery of the Middle Ear and Mastoid

Moderator(s): Dr. Abdallah Kanaan and Dr. Marc Bassim

- 12:00 PM 12:30 PM** Endoscopic management of cholesteatoma
Dr. Muaaz Tarabichi
- 12:30 PM 1:00 PM** Surgery for chronic ear disease: the House Clinic experience
Dr. Jose Fayad
- 1:00 PM 2:00 PM** LUNCH BREAK

Vestibular Schwannoma and Hearing Loss

Moderator(s): Dr. Mohammad Natout and Dr. Antoine Nehme

- 3:00 PM 3:30 PM** Decision making in the management of acoustic neuromas
Dr. Jose Fayad



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3:30 PM 4:00 PM Updates on cochlear implants
Dr. George Zaytoun

4:00 PM 4:30 PM Implantable middle ear devices
Dr. Jack Wazen

4:30 PM 4:50 PM Coffee Break

Hearing Loss

Moderator(s): Dr. Bassam Tabchy and Dr. Salah Mansour

4:50 PM 5:20 PM Bone anchored hearing aids: expanding applications and techniques
Dr. Soha Ghossaini

5:20 PM 5:50 PM Office procedures in otology
Dr. Jack Wazen

5:50 PM 6:00 PM Closing remarks
Dr. Marc Bassim and Dr. George Zaytoun



Saturday April 24 , 2010

Hall L: Charles Hostler Auditorium

Updates in Dentofacial Therapy: Esthetic and Implant Dentistry

Moderator(s): Dr. Najj Abou Chebel, Dr. Joseph Ghafari and Dr. Fayez Saleh

- 9:00 AM 9:05 AM** Opening remarks
Dr. Joseph Ghafari
- 9:05 AM 9:50 AM** Esthetics and maxillofacial prosthetics: esthetic and functional rehabilitation in multidisciplinary treatment of cleft palate and facial defects
Dr. Michael Huband
- 9:50 AM 10:00 AM** Discussion
- 10:00 AM 10:50 AM** Smile esthetics: Problem solving with invisalign - aligner treatment - the art of the impossible (1)
Dr. Timothy Wheeler
- 10:50 AM 11:00 AM** Discussion
- 11:00 AM 11:25 AM** Coffee break
- 11:25 AM 12:15 PM** Smile esthetics: the future of invisalign - aligner treatment - the art of the impossible (2)
Dr. Timothy Wheeler
- 12:15 PM 12:25 PM** Discussion
- 12:25 PM 12:30 PM** Closing remarks
Dr. Joseph Ghafari



Sunday April 25 , 2010

Hall A: Issam Fares Hall

Primary Care in collaboration with The Lebanese Order of Physicians

Moderator(s): Dr. Georges Aftimos and Dr. Ibrahim Salti

- 9:00 AM 9:05 AM** Welcome Note - President of the Lebanese Order of Physicians (LOP)
Dr. Georges Aftimos
- 9:05 AM 9:35 AM** Update on pediatric fever
Dr. Robert Hoffman
- 9:35 AM 10:00 AM** The diabetic foot: A management primer
Dr. Jamal Hoballah
- 10:00 AM 10:25 AM** Determinants of outcome in CAD from lifestyle to invasive strategies
Dr. Samir Alam
- 10:25 AM 10:50 AM** Hormonal replacement therapy: state-of-the-art
Dr. Muhieddine Seoud
- 10:50 AM 11:15 AM** Headache is not one disease, so is the treatment
Dr. Samir Atweh
- 11:15 AM 11:30 AM** Coffee Break

Moderator(s): Dr. Samir Arnaout and Dr. Pierre Bou Khalil

- 11:30 AM 11:55 AM** Fracture risk assessment models and FRAX
Dr. Ghada El-Hajj Fuleihan
- 11:55 AM 12:20 PM** New trends in the screening and management of gestational DM
Dr. Ihab Usta
- 12:20 PM 12:45 PM** Fatty liver and the primary care physician: should you care?
Dr. Alaa Sharara
- 12:45 PM 1:10 PM** Ambulatory management of patients with thrombosis
Dr. Ali Taher



Sunday April 25 , 2010

Hall D: Room 300

Neonatal Resuscitation Course and Workshop (Separate Registration Fees)

- 8:30 AM 8:45 AM** Welcome and introductions
- 8:45 AM 9:05 AM** Self assessment pre-test
- 9:05 AM 9:30 AM** Overview and principles of resuscitation
Dr. Lama Charafeddine
- 9:30 AM 9:50 AM** Initial steps in resuscitation
Ms. Mariam Kayle
- 9:50 AM 10:15 AM** Performance checklist: demonstration and practice
- 10:15 AM 10:35 AM** Use of resuscitation devices for positive pressure ventilation
Dr. Alia Al Araj Safa
- 10:35 AM 11:10 AM** Performance checklist : demonstration and practice
- 11:10 AM 11:20 AM** COFFEE BREAK
- 11:20 AM 11:35 AM** Chest compressions
Dr. Marie-Claude Fadous
- 11:35 AM 12:00 PM** Performance checklist: demonstration and practice
- 12:00 PM 12:20 PM** Endotracheal intubation
Dr. Karim Mroueh
- 12:20 PM 12:45 PM** Performance checklist: demonstration and practice
- 12:45 PM 1:00 PM** Medications
Dr. Najwa Tfaily
- 1:00 PM 1:15 PM** Performance checklist: demonstration and practice
- 1:15 PM 2:00 PM** LUNCH BREAK
- 2:00 PM 2:20 PM** Special consideration and resuscitation of babies born preterm
Dr. Taleb Jammal and Dr. Karim Mroueh



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- 2:20 PM 2:40 PM** Ethics and care at the end of life
Dr. Lama Charafeddine
- 2:40 PM 3:10 PM** Cases in neonatal resuscitation : translating knowledge and skills into performance (DVD) – (NON CME)
- 3:10 PM 3:25 PM** Put it all together: video demonstration – (NON CME)
- 3:25 PM 4:30 PM** Megacode performance evaluation and self assessment post-test
Dr. Lama Charafeddine, Ms. Mariam Kayle, Dr. Alia Al Araj Safa,
Dr. Marie Claude Faddous, Dr. Karim Mroueh, Dr. Najwa Tfaily and
Dr. Taleb Jammal
- 4:30 PM 4:45 PM** Feed back and wrap up



Workshops at MEMA

Workshops at MEMA

	Title	Date	Max Attendees	Fee	Location
1	Emergency Department Triage	Thursday 22 April, 2010	50	USD 50	Room 300
2	GI Endoscopy EUS (Endoscopic Ultrasound) Workshop	Friday 23 April, 2010	10	USD 200	Diana Tamari Sabbagh – Animal Lab
3	Neonatal Resuscitation Course and Workshop	Sunday 25 April, 2010	30	USD 80	Room 300



Educational Presentations Abstracts



Thursday April 22 , 2010

Hall D: Room 300

Emergency Department triage

Dr. Amin Kazzi

American University of Beirut Medical Center



Friday April 23 , 2010

Hall A: Issam Fares Hall

Implant dentistry esthetics: minimally invasive implant protocols and management of risk factors in esthetic therapy - success by design (1)

Dr. Henry Salama

Clinicians have access today to an astounding array of new technology, tools and materials to utilize in their increasingly esthetically oriented dental practices. However, none of these developments can ensure success if the treatment design is inadequate. This comprehensive presentation puts an emphasis on identifying the risk factors to successful esthetic outcomes as well as on developing appropriate solutions to overcoming them. A clear blueprint to designing beautiful smiles will be outlined, which will incorporate synergistic surgical, restorative and orthodontic techniques aimed at overcoming esthetic challenges and predictably achieving successful results in various environments. In addition, a focus will be placed on the biological, clinical and biomechanical factors that may allow clinicians to simplify implant protocols with minimally invasive surgical protocols and CAD/CAM enhanced restorative dentistry. Course objectives include being able to answer the following questions: what are the risk factors in anterior implant therapy, what are the four most important diagnostic components leading to a successful treatment design for an esthetic implant supported restoration, how and when to successfully incorporate minimally invasive implant protocols?

These objectives will be developed under the separately scheduled lectures entitled:
1-Minimally Invasive Implant Protocols and Management of Risk Factors in Esthetic Therapy: Success by Design

2-Implant site enhancement: multi-disciplinary approach for achieving optimal function and esthetics

3-Esthetic strategies and soft tissue contours in anterior tooth replacement

Implant dentistry esthetics: minimally invasive implant protocols and management of risk factors in esthetics therapy - success by design (2)

Dr. Henry Salama

Clinicians have access today to an astounding array of new technology, tools and materials to utilize in their increasingly esthetically oriented dental practices. However, none of these developments can ensure success if the treatment design is inadequate. This comprehensive presentation puts an emphasis on identifying the risk factors to successful esthetic outcomes as well as on developing appropriate solutions to overcoming them. A clear blueprint to designing beautiful smiles will be outlined, which will incorporate synergistic surgical, restorative and orthodontic techniques aimed at overcoming esthetic challenges and predictably achieving successful results in various environments. In addition, a focus will be placed on the biological, clinical and biomechanical factors that may allow clinicians to simplify implant protocols with minimally invasive surgical protocols and CAD/CAM enhanced restorative dentistry. Course objectives include being able to answer the following questions: what are the risk factors



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in anterior implant therapy, what are the four most important diagnostic components leading to a successful treatment design for an esthetic implant supported restoration, how and when to successfully incorporate minimally invasive implant protocols? These objectives will be developed under the separately scheduled lectures entitled:

- 1-Minimally Invasive Implant Protocols and Management of Risk Factors in Esthetic Therapy: Success by Design
- 2-Implant site enhancement: multi-disciplinary approach for achieving optimal function and esthetics
- 3-Esthetic strategies and soft tissue contours in anterior tooth replacement

Maxillofacial prosthetics: update on maxillofacial prosthetics

***Dr. Michael Huband
Cleveland Clinic***

Maxillofacial Prosthetics is the art and science of restoring lost oral, facial, and associated head and neck structures. This multifaceted presentation will include a review and discussion of: indications for referral to a maxillofacial prosthodontist, traditional treatment modalities and emerging technologies, prosthetic and surgical options, trends in treatment and the future of maxillofacial prosthetics.

Implant dentistry: implant site enhancement. Multidisciplinary approach for achieving optimal function and esthetics

Dr. Henry Salama

Implant prosthesis and gingival esthetics: esthetic strategies and soft tissue contours in anterior tooth replacement

Dr. Henry Salama

Hall B: SB-101

Pathways to immunological tolerance: insights from autoimmune polyendocrinopathy syndromes

***Dr. Talal Chatila
University of California at Los Angeles***

Studies on genetic forms of autoimmune endocrinopathies, including autoimmune polyendocrinopathy type I (APS1), and Immune Dysregulation, Polyendocrinopathy, Enteropathy X-linked (IPEX), have revealed key pathways involved in the maintenance of immunological tolerance and mechanisms of their breakdown in autoimmunity. Autoimmune Regulator (AIRE), the gene mutated in APS1, is involved the elimination of autoreactive T as they develop in the thymus. In contrast, Foxp3, the gene mutated in IPEX, controls the differentiation and effector functions



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of CD4+CD25+ regulatory T (TR) cells, a lymphocyte subpopulation that are essential to the maintenance of immunological tolerance following the maturation of T cells and their migration from the thymus into the peripheral lymphoid tissues. Mutations in IL2RA and STAT5b also impair TR cell function and give rise to related autoimmune disorders. Methods to augment TR cell numbers and function by immunotherapy and pharmacologic agents are emerging as a promising strategy the treatment of autoimmune diseases.

Fetal surgery: what should the general obstetrician know?

Dr. Jan Depreest

UZ Leuven

Steroids for fetal lung maturity - single or multiple doses: a call for consensus

Dr. Anwar Nassar

American University of Beirut Medical Center

Single treatment courses with the corticosteroids betamethasone or dexamethasone are standard of care for women at high risk of preterm birth (PTB) before 32-34 weeks' gestation, as reaffirmed by the National Institute of Health (NIH) Consensus Development Conference in 2000. However, and based on accumulating literature, a recent Cochrane meta-analysis concluded that repeat courses of prenatal corticosteroids reduce the occurrence and severity of neonatal lung disease when compared with single courses, findings that support the use of repeat courses for women at risk of imminent PTB. On the other hand, the Canadian multicenter trial revealed no advantage of multiple courses of corticosteroids on neonatal morbidity and mortality. Contrarily, multiple courses were associated with significant reduction in neonatal birth weight, length and head circumference. Regarding the choice of the corticosteroid, another Cochrane meta-analysis concluded that dexamethasone may have some benefits compared with betamethasone, such as less intraventricular hemorrhage. Furthermore, evidence is emerging regarding the cost-effectiveness of administering corticosteroids beyond 34 weeks' gestation. This brings into question the appropriateness of applying the 2000 NIH recommendations in 2010. In view of the enormous number of recent published trials, there is a 'real' need for updated NIH guidelines on the effects of prophylactic corticosteroids for PTB taking into consideration that the type and dosing schedules for the antenatal treatments remains empiric. Therefore, future research should target the optimal dose-to-delivery interval, and other variations in regimens to better characterize the best corticosteroid formulation, effects of corticosteroids on multiple pregnancies, and their long-term effects into adulthood.

Gestational diabetes: do oral hypoglycemics have a role?

Dr. Ihab Usta

American University of Beirut Medical Center

Gestational diabetes complicates around 5% of pregnancies. Recently, revolutionary changes in the diagnosis and management of this disease entity have been introduced. Treatment options have also undergone dramatic changes. Traditionally, insulin has been considered the



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standard for management because of its ability to achieve tight maternal glucose control without the risk of transfer across the placenta. Given that pregnancy is a state of increased insulin resistance, insulin sensitizing agents, which have been previously regarded as unsafe for pregnancy, seemed to be a logical alternative to insulin. They are also more appealing since they are convenient, do not require intensive educational instruction at the time of initiation of therapy, and the noninvasive, cost-effective patient-friendly regimen lends itself more readily to potential patient compliance. However, questions remain regarding their efficacy and safety. Not so long ago, someone said 'It would be a brave, possibly foolhardy, person to do a controlled trial of metformin'. Recently, physicians have prudently defied conventional wisdom and showed the way to an alternative. Their studies, originally greeted with a degree of skepticism by practitioners entrenched in preconceived notions, have been pivotal in removing the taboo from the use of oral hypoglycemic agents in pregnancy and changing the therapeutic approach to gestational diabetes worldwide. Old habits often die hard, and some practitioners are still reluctant to abandon insulin in favor of oral hypoglycemic, but these holdouts seem to be an ever diminishing minority. The data presented will provide a firm scientific basis to justify this approach.

Influenza A (H1N1) in pregnancy: an update

Dr. Ziad Memish

King Saud University

Diagnosis and prenatal follow up of the monochorionic twin: what to screen for and when?

Dr. Jan Deprest

UZ Leuven

Cord blood stem cells: cryopreservation techniques and clinical applications

Dr. Hassan El Solh

King Fahad National Center for Children's Cancer King Faisal Specialist Hospital and Research Center (GenOrg)

Umbilical Cord Blood (UCB) is a source of Hematopoietic Stem Cells (HSC) with greater proliferation and colony forming capacity than peripheral blood and bone marrow stem cells. UCB contains cells that appear to be very similar to embryonic stem cells (expression of markers) and were able to develop into many different lineages including hepatic, cardiac, cartilage and other cells.

UCB is normally disposed and its use in clinical applications is acceptable in general as compared to the use of embryonic stem cells which is controversial.

There are several practical implications of the collection of UCB including logistical, technical, legal and ethical issues. There are many organizations (FDA, NMDP, JACIE, FACT/EURO CORD) that ensure the proper testing, cryopreservation, storage and quality of the UCB units in different centers.

Several cryopreservation techniques have been adopted for UCB Stem Cells Banking and novel techniques in this field increase the survival and cloning efficiency of stem cells. The BioArchive



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System is a computerized controlled liquid nitrogen cryopreservation and storage system that enables freezing and managing large number of stem cell units. Due to the great potential clinical applications, the National Cord Blood Stem Cells Bank Network in USA and NHS UCB Stem Cell Bank in UK were established.

UCB Stem Cells are used to treat several fatal diseases: leukemia, immune deficiencies, bone marrow failure, and inborn errors of metabolism with 40-60% cure rate. Recent research shows that there is potential for treatment of several diseases by UCB stem cells including neurologic, cardiac, diabetes, etc.

The developmental origins of adult disease

Dr. Labib Ghulmiyyah

American University of Beirut Medical Center

Many studies have provided evidence for the hypothesis that size at birth is related to the risk of developing disease in later life .Fetal programming is a fetal change in gene expression patterns that occurs in response to a stressor or stressors and leads to altered growth of specific organs during the most critical time of development. Links are well established between reduced birthweight and increased risk of coronary heart disease, diabetes, hypertension and stroke in adulthood. This led to the 'Fetal Origins Hypothesis,' later named 'The developmental origins of adult disease Hypothesis' which proposes that coronary heart disease, and the diseases related to it, originates through responses to under nutrition during fetal life and infancy. It is suggested that the fetus makes physiological adaptations in response to changes in its environment to prepare itself for postnatal life. These changes may include epigenetic modification of gene expression. Less clear at this time are the relevance of fetal programming phenomena to twins and preterm babies, and whether any of these effects can be reversed after birth. In addition, the postnatal period is as important especially the first 2 years of life. Many animal studies have shown the importance of the the postnatal period.

Much current active research in this field will be of direct relevance to future obstetric practice.

Pregnancy as a window to future health

Dr. George Saade

The University of Texas Medical Branch

Management of the short cervix: an evidence-based approach

Dr. Abdalla Adra

American University of Beirut Medical Center

Preterm birth (PTB) continues to be a major cause of perinatal morbidity and mortality, in both developed and developing countries. Much of the research in the past two decades has concentrated on the prediction and prevention of PTB. Cervical length measurement in pregnancy represents today the most powerful single predictor of preterm birth. Cervical length (CL) is a continuous variable with a mean of 35 to 40mm between 14 and 30 weeks of gestation. A single



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screening measurement of CL < 25mm (10th percentile for closed cervix) carries the best predictive accuracy of PTB. CL measurement using transvaginal ultrasound (TVUS) has been evaluated in different patient subpopulations. A statistically significant inverse relationship between mid-trimester CL on TVUS and the risk of PTB has been documented in both asymptomatic low-risk singleton pregnancies (Iams, N Engl J Med 1996) and in high-risk patients including those with prior PTB (Owen, JAMA 2001), uterine anomalies (Airoldi, Obstet Gynecol 2005), multiple gestation (Guzman, Am J Obstet Gynecol 2000) and symptomatic preterm labor (Vendittelli, Int J Gynecol Obstet 2001).

The detection of a short cervix on TVUS in the mid-trimester poses a significant dilemma for obstetricians. Different management plans have been proposed and evaluated with mixed results in different clinical scenarios. Some have resulted in a significant reduction in PTB < 34 weeks, like the use of daily vaginal progesterone in women with CL \geq 15mm, irrespective of other factors (Fonseca, N Engl J Med 2007). Others have shown no benefit, like the placement of cervical cerclage in asymptomatic women, who were found to have a short cervix (CL \geq 15mm) on routine mid-trimester screening (To, Lancet 2004), whereas some have even proven to increase the risk of subsequent PTB, like the use of cerclage in multiple gestations (Berghella, Obstet Gynecol 2005).

The various interventions used for a short cervix in pregnancy, in the different patient subpopulations, will be reviewed, including hospitalization, use of progesterone, indomethacin, antibiotics, and placement of cervical cerclage. Finally, an algorithm for management of women with short cervical length in pregnancy will be proposed, based on a recent review of the literature (Sinno, Am J Perinatol 2009).

Cesarean delivery: approaches in the 21st century

Dr. George Saade

The University of Texas Medical Branch

Volume sonography: clinical applicability of current and future trends in obstetrics

Dr. Reem Abu Rustum

Center For Advanced Fetal Care

Introduction:

Volume sonography (VS) is a world with added depth enabling us to visualize the 3D external surface of structures. Its' true value lies in the ability to obtain a volume of the entire fetus in the first trimester, or of a target organ in the fetus at any point in gestation. The volume contains within it all the anatomical planes necessary for off-line analysis of that area, in a multitude of modes, at any time.

Key Concepts:

There are three main concepts in VS: volume acquisition, display and manipulation.



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Benefits:

The benefit of VS lies beyond the striking portraits of the fetus. Its greatest potential has been in facial and skeletal deformities, CNS anomalies, and with the recent introduction of Abuhamad's automation, there is great promise in enhancing the detection of congenital heart defects. Its value in fetal bonding and in studying fetal behavior is being investigated. In addition, having a library of volumes for educational purposes is of great usefulness and facilitates consultation with world experts.

Pitfalls:

VS is far from perfect. Much remains to be done to enhance the images in the coronal plane. With the third dimension, an added dimension of artifacts is introduced. The learning curve is steep, requiring time and dedication.

Conclusion:

VS is only complimentary to 2D ultrasound and by no means replaces it. The gold standard remains a good 2D image from which we can obtain a good 3D image. The time is now to start looking beyond the 'pretty' surface of things and to start exploring this new world with its **unlimited potential**.

Fetal cardiac imaging: implications in diagnosis and management

Dr. Karim Diab

University of Arizona

Fetal cardiac defects continue to result in significant prenatal and postnatal morbidity and mortality. In addition, most cases of congenital heart disease potentially detectable prenatally still go undiagnosed till sometime after birth. Antenatal diagnosis of such life threatening forms of CHD may help improve survival and morbidity as well as allow parental choice and preparation. The diagnosis of CHD during fetal life can be made with a very high level of diagnostic accuracy in tertiary centers dealing with high-risk pregnancies. However, since most cases of CHD occur in low-risk groups, they would only be detected by screening at the time of obstetric ultrasound scans. This prenatal detection of congenital heart disease continues to improve, with the increasingly widespread incorporation of the four-chamber view and outflow tracts into the routine screening fetal ultrasound evaluation. This lecture discusses the technique of fetal echocardiography, the fetal and maternal indications for fetal echocardiography, and its impact on the management of the pregnant mother and the fetus with congenital heart disease. It also discusses some examples of specific cardiac lesions and new fetal cardiac interventions. It highlights the complimentary roles of team members in the different specialties of pediatric cardiology, obstetrics and perinatology in the care for the fetus with congenital heart disease.

Prenatal care: an eye towards the future

Dr. George Saade

The University of Texas Medical Branch



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Reconstructing skin

Dr. Yann Barrandon

Centre Hospitalier Universitaire Vaudois (CHUV)

Adult stem/progenitor cells hold great expectations for regenerative medicine. In that perspective, the skin is a superb model system as skin stem cells can be extensively expanded in vitro and used for autologous cell and gene therapy. Significant progress has also been made in characterizing epidermal and hair follicle stem cells, and in identifying key signaling pathways important for skin and hair follicle morphogenesis. There is now compelling evidence that the fate of an epithelial stem cell strongly depends on developmental cues provided by the underlying mesenchyme, suggesting that stem cells other than skin may possibly respond to skin morphogenetic signals. My laboratory has demonstrated that non hairy squamous epithelia e.g. the cornea, the oral cavity, the oesophagus, the vagina, contain clonogenic stem cells that can form epidermis, cycling hair follicles and sebaceous glands in response to skin developmental signals. Most importantly, this capacity is maintained in serial transplantation and is intrinsic to the stem cells, as cells that have never been exposed to cell culture behave in a similar fashion. Even more surprising, the thymus of endodermal origin contains a population of clonogenic epithelial cells that maintain a thymic identity in culture, but can acquire the functionality of bona fide multipotent stem cells of the skin when exposed to proper developmental signals. These experiments indicate that primary germ line boundaries can be crossed, that skin-responding stem cells may have a common genetic program that makes them prone to microenvironmental reprogramming. These findings are important to comprehend diseases (metaplasia) and for regenerative medicine.

Hall C: Nursing Auditorium

Outcomes of thoracic EVAR: a new gold standard?

Dr. Peter Taylor

Guy's and St. Thomas' NHS Foundation Trust

There is little randomised control evidence regarding the performance of endoluminal devices compared with open surgery. The EVAR trials from the UK provide the best current evidence of the efficacy of endoluminal repair. The EVAR I trial compared endoluminal repair with open surgery in patients fit for surgery. The results showed that endoluminal repair had a 3% lower mortality rate at 1.7% compared to the 4.7% of open repair. This difference in aneurysm related mortality was also found at 4 years although there was no difference in overall survival. The overall incidence of secondary intervention for open surgery in the EVAR trial was 7% over 4 years This is similar to our current experience at Guy's and St Thomas with the Cook Zenith device. Some complications are device specific. The early devices of many companies were prone to migration corrected by the addition of hooks, barbs and anchors. The Ancure device was prone to limb occlusion from twists in the fabric unsupported by stents. The first generation Excluder device had a high incidence of increase in sac diameter due to the porous nature of



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the fabric which has now been corrected. The Cook Zenith device is prone to limb occlusion if placed in tortuous iliac arteries.

It is important to detect Type I and type II endoleaks as they can lead to aneurysm rupture. These can usually be shown by both CT scan and duplex ultrasound examination. Proximal type I endoleaks may be treated with proximal cuffs, if there is sufficient room between the proximal covered part of the stent and the lowermost renal artery. If there is insufficient room, then a giant Palmaz stent may be deployed to force the existing stent into contact with the aortic neck. Banding can also be used to treat persistent type I endoleaks. A nylon tape is passed around the neck and tied snugly to the device. The only other option is to use a fenestrated device to move the sealing zone proximally, but this is currently an expensive option. Distal type I endoleaks can be treated with extension cuffs. The range of iliac limb diameters is increasing, allowing ectatic distal landing zones in the common iliac arteries to be treated. Another option is to use the external iliac artery as the landing zone which requires embolisation of the internal iliac. Extension grafts into the external iliac artery may be more prone to occlusion and this may be reduced by using bare stents at the distal end of the device to improve wall apposition to the external iliac artery.

Changes in the morphology of the sac may also lead to separation of the components of the modular devices causing type III endoleaks. They are usually treated endovascularly by interposition devices. Iliac limb occlusion may occur in patients with very tortuous iliac arteries. Kinking of the device may lead to thrombosis. This can be treated by thrombolysis, and stenting of any stenosed part of the iliac limb. Sometimes patients present late when the only option is extra-anatomic reconstruction with a femoro-femoral cross over graft. The Zenith device is particularly prone to this problem and bare stents (such as the balloon expandable Palmaz stent) and self-expanding stents (such as the Zilver stent) should be used to prevent this complication. Plain films taken at the completion of the operation with no stiff wires in situ will identify stenoses in the iliac limbs. Prophylactic use of the bare stents to treat such stenoses is much preferred to the alternative, which is a late presentation of an ischaemic limb. Some authorities have suggested using the limbs from the Gore Excluder device with the body of the Cook Zenith device for patients with tortuous iliac arteries as they are less prone to thrombosis from kinking. Very rarely, the endograft may become infected. This is a serious complication, which may require removal of the device and extra-anatomic reconstruction.

In conclusion, the third generation devices are consistent in their behaviour and require the same number of secondary procedures as open repair in randomised controlled trials. The majority of secondary procedures can be performed endoluminally, and are associated with a low mortality rate.

Challenging arch: hybrid, branched or open surgery?

Dr. Alan Lumsden

Methodist DeBakey heart and Vascular Center



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Thoraco-abdominal aneurysm: organ protection and outcomes
Dr. Hazim Safi
University of Texas Medical School

Acute type B dissections: is the available data in favor of change in paradigm?
Dr. Michel Makaroun
University of Pittsburgh School of Medicine

Endovascular management in acute type B dissection: technical considerations, organ ischemia
Dr. Alan Lumsden
Methodist DeBakey heart and Vascular Center

Long term follow up after abdominal EVAR
Dr. Peter Taylor
Guy's and St. Thomas' NHS Foundation Trust

There are currently six devices available in Europe to treat thoracic aortic pathology. These include the TAG (Gore), the TX2 (Cook), the Valiant (Medtronic), the Endofit (Le Maitre), the Relay (Bolton) and the Evita (Jotec).

The technical problems associated with the devices include the large size of the delivery sheath which requires open surgical access to the femoral vessels. The 24 F sheath for the largest devices can damage the iliac arteries and about 5-10% of patients require a conduit to the common iliac artery or the infrarenal aorta. In very tortuous arteries some devices might not have the pushability or trackability to attain the optimum position. Movement upon deployment can also be a problem with devices not held to the delivery system. Such devices may require the induction of hypotension, adenosine arrest or cardiac overpacing to ensure accuracy during deployment. Finally the curvature of the aortic arch can lead to poor apposition of the device to the inner curvature of the aorta which can lead to proximal endoleaks and occasionally the collapse of the device.

Thoracic aortic pathologies that can be treated include degenerative aneurysms, acute dissection, chronic dissection, penetrating ulcer, aortic transection, infected aneurysms and aneurysms related to coarctation or previous coarctation repair. Outcome measures include death, stroke, paraplegia and the incidence of endoleaks.

There is only one randomised controlled trial in the literature regarding the use of endoluminal treatment for thoracic aortic pathology and that was for stable uncomplicated chronic dissection. The INSTEAD trial showed that the mortality for endoluminal treatment with best medical treatment was 10% at one year compared to 3% for those treated with best medical therapy alone. The two year results confirm a higher mortality in the interventional group of 11.1% vs 4.4%.



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The ADSORB trial is a multicentre European study looking at the role of endovascular treatment in addition to best medical therapy for uncomplicated acute dissection. Recruitment is currently underway.

An attempt (the ACADEMIC trial) to compare endoluminal treatment with open surgical repair for complicated aortic dissection foundered as physicians did not want to treat or randomise patients into the open group. Only non-randomised controlled trials are available to assess the role of endoluminal treatment for degenerative aneurysms. The Gore pivotal trial compared endovascular repair with the TAG device with historical controls involving open surgery. Mortality was 2% compared to 12%, paraplegia was 3% versus 14% but stroke was 4% in both groups. The incidence of vascular injury was higher in the endovascular group at 14% compared to 4% in the open group. 5 year mortality was 32% in endovascular compared with 33% for open surgery but aneurysm related mortality was 3% compared with 12% for open surgery. Endoleak rate was 4.3%. The Cook pivotal trial compared with TX2 with historical open surgery controls. Mortality, paraplegia and stroke for endovascular treatment was 2%, 1.3% and 2.5% compared to 6%, 5.7% and 7% for open repair.

Only registry data is available for the Valiant.

The benefits for endovascular treatment are self-evident including no thoracotomy, no aortic cross-clamping, no full heparinisation, use of locoregional anaesthesia, minimal surgical insult, minimal blood loss etc. The increased use of endoluminal repair for thoracic pathology has limited open repair to young patients with a long life expectancy, those with connective tissue disease and those not technically suitable for endovascular repair. Endovascular treatment has become the gold standard for many thoracic aortic pathologies, but the level one evidence is lacking in every pathology except chronic uncomplicated dissection where the evidence is in favour of medical therapy.

Extreme EVAR: access issues, occlusive disease, angulations...how to proceed and when to decline

Dr. Piergiorgio Cao

University of Perugia

Current management of endoleaks after EVAR

Dr. Michel Makaroun

University of Pittsburgh School of Medicine

Challenging landing zones: open surgery or fenestrated/branched techniques

Dr. Eric Verhoeven

Klinikum Nurnberg Sud



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Feasibility of fenestrated endovascular stent-grafting has been established.1-3 CE mark for the fenestrated stent-graft has been obtained by William Cook Europe, and the FDA study has now been published.4 In our opinion, fenestrated stent-grafting will become the primary option in many patients with aneurysms that are not suitable for standard endovascular aortic repair (EVAR). Nevertheless, it is important to consider the alternative options: open repair and standard endovascular repair. Standard endovascular repair in short neck aneurysms is and will remain a discussion point for some time. There is something dual about treating short-neck aneurysms by EVAR. On one side there are difficulties getting EVAR accepted as a valid alternative to open surgery in suitable patients (read: patients with a neck of at least 15 mm in length), while on the other side manufacturers and users are eager to treat patients with aortic aneurysms including necks between 10-15 mm, and even 5-10 mm. This raises questions as some publications demonstrate a significant increase of proximal type I endoleaks in short-neck EVAR.5 More important, there are no publications regarding mid-term outcome of standard EVAR for necks shorter than 15 mm. Open surgery in short-neck/juxtarenal aneurysms is not extensively described in the literature, but several reports do specify the greater risks of mortality and morbidity. Mortality rates vary between 5.8 and 9%.6-8 Renal function deterioration is not infrequent and has been reported up to 40.5%, with 7.0% of patients requiring dialysis.6 A special subgroup includes the patients who had previous open aortic repair and present with a pararenal or anastomotic aneurysm, or the patients with type I endoleaks after previous EVAR, with a neck too short for proximal extension with a cuff. It is clear that open redo surgery in these cases is technically challenging, and associated with significant mortality and morbidity.9 Early published short term results of fenestrated stent-grafting, albeit from centers of excellence, were very promising. At this moment there are more publications emerging with striking similar results.10 Pooled results demonstrate technical success above 95%, 30-day mortality of 1-4%, and acute loss of visceral arteries of 1-3%.1-3, 11-12 Our personal series with fenestrated and branched grafting has now reached more than 280 patients. Mortality in the fenestrated group for complex abdominal aortic aneurysms was 1 patient (0.7%) and target vessel loss overall 4%. There was one immediate conversion to open surgery, in a patient after previous open surgery. Mean hospital stay was 5.5 days (range 3 -12 days). There were no proximal type I endoleaks during follow-up. Two disconnections between fenestrated tube and bifurcated part occurred and were re-stented. No aneurysm ruptured. Two patients required dialysis during follow-up. In addition, one has to take into account that most patients had serious contra-indications for open surgery, either cardio-pulmonary or because of hostile abdomens. The fenestrate technique also proved valuable in the subgroup of patients after previous surgery. Finally, the fenestrated technique provides a useful platform in the development of branched grafts to treat thoraco-abdominal aneurysms.

In our opinion there is enough evidence that fenestrated stent-grafting provides an additional treatment option for patients with short-neck aneurysms. This may even be more true for patients with juxta- or suprarenal aneurysms, and thoraco-abdominal aneurysms, simply because



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a significant proportion of these patients cannot safely be treated by open means (cardio-pulmonary high-risk, hostile abdomen, redo surgery).

F/U after EVAR: do we have a consensus?

Dr. Jamal Hoballah

American University of Beirut Medical Center

Thoraco abdominal aneurysms: how do I do it?

Dr. Hazim Safi

University of Texas Medical School

Challenges in the treatment of aortoiliac occlusive disease

Dr. Daniel Clair

Cleveland Clinic Lerner College of Medicine

Popliteal aneurysms: update

Dr. Eric Verhoeven

Klinikum Nurnberg Sud

Popliteal artery aneurysms (PAA) are usually treated when they exceed 2 cm in diameter, especially if mural thrombus is present, or in case of severe angulation.¹⁻⁴ Open surgical treatment with a venous bypass graft is still the treatment of choice for most surgeons.⁵⁻⁷ A medial approach with proximal and distal ligation of the PAA and bypass has been favored by many, but recent reports demonstrated aneurysm growth and even ruptures in some cases.⁸⁻¹⁰ Other surgeons prefer a posterior approach in order to completely exclude the PAA, but this becomes technically impossible if the PAA extends proximally into the superficial femoral artery. Endovascular approach has been reported for the first time in 1994 by Marin et al., and feasibility established.¹¹ Before 2005, only case reports and small case studies were reported.^{11,12} Since then, a few larger cohort studies have been published, almost invariably with the use of the Hemobahn/Viabahn endoprosthesis (W.L. Gore & Associates, Flagstaff, Arizona, USA).¹³⁻¹⁸ Endovascular procedures are limited by anatomical in- and exclusion criteria. In general, transgressing these criteria results in a higher risk of complications. Anatomical requirements for endovascular repair of PAA include standard features for any endovascular procedure, i.e., a proximal and distal landing zone, and an appropriate access. In addition, for endovascular treatment of PAA, the diameter between proximal and distal landing zone should not differ more than 2-3 mm. Indeed the used grafts are tubular and can only be accorded with 1 mm difference in diameter size.

Besides these criteria correct selection and positioning of the stent-graft(s) is mandatory. The first step is preoperative measurement by duplex and or CT-scan to determine the correct diameter and proximal and distal sealing zone. In our center, a preoperative duplex is done under supervision of the operating surgeon and both proximal and distal landing zone are marked on



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the limb. The second step is the correct positioning intraoperatively. It is safe to aim for a long sealing zone proximally and distally and to seal in a healthy vessel rather than in a portion of the vessel still containing mural thrombus. The overlap zone between two stent-grafts should also be at least 3 cm, in order to avoid late migration and type I endoleak. The positioning of the overlap zone is crucial. As experienced in our series (Tielliu, Verhoeven, et al., submitted) stent-graft fractures do occur more often, and are related to overlap zones at the level of the bending point of the popliteal artery, which is located a few cm above the knee joint. Therefore overlap between two stent-grafts at the bending point of the popliteal artery should be avoided.¹⁹ In a mathematical model, to be published soon, we estimated that about 70% of all cases performed with multiple stent-grafts (about 75% in our series) could be treated with a single stent-graft if we had longer (20-25 cm) and tapered stent-grafts. These longer and tapered stent-grafts could therefore not only simplify the procedure in the future, but also play a role in lower stent-graft fractures (and possibly occlusions?).

As demonstrated by multivariate analysis in our series, results seem to improve with the use of a stricter anticoagulation regimen.¹⁴ Our protocol now includes the use of clopidogrel for two months after the procedure, in conjunction with life-long aspirin.

Precautions and when not to use: Clearly, the combination of occlusive (i.e., inflow) disease and PAA is a contra-indication for endovascular repair. In our series, however, we were not able to demonstrate that outflow limitations resulted in a higher occlusion rate. The lack of a distal landing zone at the level of the popliteal artery is an absolute contra-indication. The crural vessels are too small to accommodate the stent-grafts used, and sacrificing one or two crural vessels in order to perform endovascular repair should not be considered. In view of the fact that in our series occlusion was also related to younger age, we do prefer to treat younger and active patients by open means if possible. To a certain extent, the same applies for excessive tortuosity in the popliteal artery as this increases the risk of mechanical damage, resulting in stent-graft fracture and occlusion. In contrast, we do not hesitate to propose endovascular repair to all other suitable candidates. Endovascular repair of PAA is a simple and effective procedure, far less invasive than open surgery, and patients do make a quick recovery.

Finally, a mismatch of more than 3 mm makes it impossible to accord the stent-grafts if one agrees that 3 stent-grafts for one PAA is the maximum number needed for exclusion.

Salvage of failing bypass, endovascular approach

Dr. Fady Haddad

American University of Beirut Medical Center



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Surveillance and Intervention on patent but failing bypass remains key in achieving assisted primary patency and subsequently limb salvage. Surgical bypass revisions can often be tedious, requiring lengthy general anesthesia in a frail population, and frequently complicated by the absence of good veins for revision. More literature is emerging supporting the use of endovascular first in bypass salvage. We will share in this presentation our experience in endovascular angioplasty for bypass salvage, with low risk to the patient, excellent patency and limb salvage at the price of increased re-intervention rate.

Infrapopliteal recanalization angioplasty for critical limb ischemia: technical considerations and current evidence

Dr. Daniel Clair

Cleveland Clinic Lerner College of Medicine

Limitations for endovascular treatment: when is open surgery a better option?

Dr. Piergiorgio Cao

University of Perugia

Carotid artery stenting vs carotid endarterectomy: the recent trials

Dr. Michel Makaroun

University of Pittsburgh School of Medicine

Recipe for an uneventful carotid case! How to avoid complications

Dr. Piergiorgio Cao

University of Perugia

Carotid endarterectomy: is it time to let go?

Dr. Ismail Khalil

American University of Beirut Medical Center

In the USA there are 750,000 strokes annually; stroke is the leading cause of adult disability. Stroke costs the U.S. \$ 30-50 billion annually and estimated to top \$ 202 trillion by 2050. Early trials in the 1990's demonstrated the benefit of carotid endarterectomy over non-contemporary best medical therapy in reducing the incidence of stroke. Over the years Carotid Endarterectomy continues to stand out as the gold standard procedure in treating selected patients with symptomatic and asymptomatic carotid artery stenosis. Carotid endarterectomy series performed at AUBMC from October 1991- January 2010 will be presented. To optimize the results of carotid endarterectomy the objective should be to make the first 30 days post-operation safer by combining refined surgical technique with best contemporary medical therapy in symptomatic patients with greater than 50% stenosis and asymptomatic patients with greater than 80% stenosis.



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Renal artery stenosis: practice guidelines based on the latest evidence
Dr. Peter Taylor
Guy's and St. Thomas' NHS Foundation Trust

Patients of any age who are found to have fibromuscular disease as the cause of hypertension or renal failure benefit from simple balloon angioplasty. The four groups of adult patients with renal artery stenosis who benefit from intervention are those with:

- 1.A short history (usually less than 6 months) of progressive renal failure associated with a high grade >90% stenosis
- 2.A history of flash pulmonary oedema
- 3.Angiotensin converting enzyme (ACE) inhibitor induced renal failure
- 4.Refractory hypertension

There is an increasing understanding of the role of silent atheroembolization from very diseased atherosclerotic aortas as a cause of progressive reduction in renal function. Drugs such as statins may help to stabilise the aorta and reduce the incidence of atheroembolization.

The Astral trial was undertaken in patients with atherosclerotic renal artery stenosis in whom the physician was substantially uncertain as to how to treat them. The two arms of the trial were best medical treatment which included a statin and anti-hypertensive medication versus best medical treatment and angioplasty. 806 patients were randomised. There was no difference in outcome measure between the two groups. These included mortality, renal function, blood pressure, time to first renal event such as acute renal failure, dialysis, transplant, nephrectomy or renal death. There was also no difference in cardiovascular events such as myocardial infarction, stroke, angina, fluid overload or death. This lack of efficacy of renal artery intervention has currently had a negative effect on the number of renal artery interventions performed in the UK. The trial was based on the fact that the physician randomising the patient had to be substantially uncertain as to the best way to treat the patient. Clearly if the physician has no doubts about treatment then they can still do whatever they think best, but the level one evidence does not support endovascular treatment of atherosclerotic renal artery stenosis.

Renal artery stenosis: technical pearls
Dr. Daniel Clair
Cleveland Clinic Lerner College of Medicine



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Hall D: Room 300

Unusual neurologic conditions in hand surgery

Dr. Raja Sawaya

American University of Beirut Medical Center

Not all motor or sensory symptoms or pathologies in the upper extremities are secondary to nerve entrapment requiring surgical decompression. Many patients present with motor weakness, muscle atrophy, with or without sensory disturbances, in the upper extremities, secondary to either diseases of the motor neuron, cervical root, brachial plexus, or non surgical lesions of the peripheral nerves.

Degenerative lesions of the motor neuron can be hereditary and chronic, as in spinal muscle atrophy, or acute, subacute as in amyotrophic lateral sclerosis.

Viral infections of the motor neurons, as in polio-myelitis can present with isolated weakness of one extremity. Brachial plexus lesions secondary to trauma, infections, or infiltrative disease can present with painful or painless weakness of the upper extremity.

The lesions of the peripheral nerves producing focal neuropathies can be secondary to hereditary disorders, viral or bacterial diseases, inflammatory or auto immune diseases. Diagnosis of these different entities is based on proper history taking and physical examination, as well as a detailed electrophysiologic study to evaluate the type of pathology, degree of nerve involvement, and give evidence for reinnervation and prognosis. Treatment of the above conditions is non surgical and is directed towards the etiologic agent.

The management of complex peripheral nerve injuries

Dr. Julia Terzis

Eastern Virginia Medical School

Recent advances in our understanding of the neurobiology of nerve repair, combined with improvements in microsurgical techniques, have dramatically improved functional results in patients with peripheral nerve injuries.

There is increasing understanding of the anatomy and physiology of the peripheral nervous system through important studies in the second half of last century. Also understanding the events surrounding nerve injury and regeneration is necessary prior to embarking to reconstruction of peripheral nerve injuries. Despite advances in understanding the detrimental role of tension, use of atraumatic techniques and appropriate microinstrumentation, still to date, normal function is never completely restored after nerve repair.

Complex extremity injuries present a challenge for nerve reconstruction and restoration of nerve function, because they are often associated with scarring, poor vascularity and invariably poor prognosis for functional results.



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Standard methods for optimizing nerve recovery following nerve grafting include utilizing an appropriate size graft and performing a tension-free coaptation.

Improving the blood supply to the graft with the use of vascularized nerve grafts is also beneficial. Since, 1976 experimental and clinical studies have suggested the superiority of vascularized nerve grafts. Recipient bed fibrosis and reduced vascularity can impair neovascularization of the graft, resulting in greater degree of nerve scarring and limited axonal regeneration. When it is not possible to use a vascularized nerve graft, the use of vascularized fascia has been employed. At times, when there is severe fibrosis in the underlying bed, a combination of vascularized fascia and vascularized nerve grafts has been used along with nonvascularized nerve grafts.

In complete transections or avulsion injuries, the proximal neuroma is resected until normal neural tissue is available, and the distal end is inspected and prepared to receive interposition nerve grafts. After nerve graft harvesting, and after recipient bed preparation, interfascicular nerve grafting takes place.

In cases of neuroma in continuity with partial function distally, it is imperative to preserve existing function and restore missing motor and sensory functions in the affected extremities. In these cases the employment of electrophysiological recording at the fascicular or group fascicular level allows the ability to diagnose axonal integrity through the lesion and by microsurgical dissection safeguards the preservation of fascicles with intact perineurium. Thus bundles with compromised perineurial sheath are resected, while ones with intact perineurium are preserved. Continued improvement in the microsurgical outcomes of peripheral nerve repair will depend on advances in neuroscience. Thus reconstructive surgeons are encouraged to communicate and develop working relationships with neuroscientists. Only through a multidisciplinary approach the outcomes of complex reconstruction of peripheral nerve injuries can move forward in future.

Free muscle transfers for elbow reconstruction in adult plexopathies

Dr. Julia Terzis

Eastern Virginia Medical School

Background:

The indications for free muscle transfer in brachial plexopathies are prolonged denervation time or inadequate upper extremity function after primary nerve reconstruction. The purpose of this study is to analyze the outcomes of free muscle transfer for elbow flexion and extension in brachial plexopathies in relation to the different muscles used, and the respective motor donors.



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Material and Methods:

Seventy three muscles were transferred for elbow flexion, and ten for elbow extension. Latissimus dorsi (LD) was used in thirty-seven cases, gracilis in twenty-eight, rectus femoris (RF) in seven and vastus lateralis in one. Five latissimus dorsi and five gracilis were transferred for elbow extension.

Results:

Patients younger than 15 years yielded better results than older patients for elbow flexion. When LD was transferred the mean muscle grading (MG) was 3.33 ± 0.25 when the neurotization was from intercostals; these outcomes were statistically significant when compared with outcomes of free gracilis transfer (MG 2.25 ± 0.6). There was also statistically significant difference when free LD was neurotized with three intercostals as compared with two intercostals nerves. RF yielded also good results when neurotized from contralateral C7 (cC7) (MG 3.67 ± 0.6). For elbow extension the better outcomes of LD were not statistically significant.

Conclusion:

Among all the free muscle transfers for upper extremity reconstruction, elbow reanimation yielded the most rewarding outcomes. The selection of powerful muscle units was more important than the effect of neurotization which was not as strong as it was in muscle transfers for facial or hand reanimation.

Shoulder reconstruction options for patients with brachial plexus injury
Dr. Julia Terzis
Eastern Virginia Medical School

Background:

Microsurgical restoration of shoulder abduction with free muscle transfers is one of the most challenging and difficult reconstructions. The purpose of this study is to analyse the outcomes of free muscles transfer for shoulder abduction.

Methods:

Since 1981, twenty two muscles have been transferred for shoulder abduction in posttraumatic brachial plexopathy. Two techniques have been used. Initially a double muscle transfer of abductor longus and gracilis was used for shoulder abduction and elbow flexion respectively (n=18). Subsequently Latissimus dorsi has been transferred for shoulder abduction (n=4). Outcomes of these two techniques have been analyzed retrospectively.



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Results:

For the double muscle transfer the mean range of motion of shoulder abduction was found post-operatively to be 30 ± 24 degrees and the mean muscle grade was 2.61 ± 0.76 ($p < 0.001$). Latissimus dorsi muscle was neurotized from intercostals nerves ($n=3$) and posterior division of contralateral C7 root. The mean postoperatively muscle grading of transferred muscle was 3.25 ± 0.73 , and the shoulder abduction was 40 ± 32 degrees compared with 5 ± 10 degrees of abduction prior to the muscle transfer.

Conclusion:

Free muscle transfer can enhance shoulder abduction after inadequate results from initial nerve reconstruction or in late cases. Latissimus dorsi yielded better results and had fewer complications (failures) as compared to double muscle transfer. Comparing to other options for shoulder stabilization free muscle transfer yields less complications to glenohumeral arthrodesis and similar outcomes with trapezius advancement. The latter can be used as additional operation to improve free muscle transfer outcomes.

Tendon transfer for shoulder in BP injuries

Dr. Bassem El Hassan

Mayo Clinic

Enhancement of shoulder function after brachial plexus injury requires a good understanding of nerve repair/ transfer outcome, shoulder anatomy, and shoulder biomechanics. This understanding enables the treating surgeon to use available functioning muscles around the shoulder for transfer to improve shoulder function. In obstetric brachial plexus palsy, progressive glenoid posterior bony loss with resultant posterior subluxation/dislocation of the humeral head may require open reduction of the shoulder joint with glenoid bony reconstruction in addition to tendon transfer to balance the shoulder and improve shoulder function. In adult patients, surgical treatment should address painful shoulder subluxation and/or improve shoulder function. The focus has been to improve shoulder abduction, although an improvement in shoulder external rotation may take priority because external rotation will allow patients to position the hand in front of their body, and improve their ability to perform activities of daily living. Transfer of the lower trapezius is a good transfer to restore external rotation of the shoulder. Other parts of the trapezius, levator scapulae, and rhomboids may also be available for transfer about the shoulder. In addition, preserved muscles, such as the latissimus dorsi, pectoralis major, teres major, biceps, triceps and serratus anterior muscles can be used to enhance shoulder movement.



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Saw bone session I workshop (NON-CME)
Scapholunate ligament injuries
Dr. Bassem El Hassan
Mayo Clinic

Scapholunate ligament injury leading to scapholunate instability is the most common form of carpal instability. The loss of the ability of the wrist to sustain physiologic loads because of injury to the linkage between the scaphoid and lunate is a major reason of wrist pain. Management of symptomatic SL ligament injury depends on the type of injury which could be partial or complete and chronicity of injury which could be acute or chronic. In partial SL injury, arthroscopic reduction and pinning with or without dorsal capsulodesis is indicated. In complete tear, repair of the SL ligament is indicated in acute cases. In chronic cases without arthritic changes and in the presence of reducible dissociation, open reduction with SL reconstruction using bone-ligament-bone or ligament tenodesis (Modified Brunelli) is indicated. If the SL joint is irreducible in fixed rotatory subluxation with no radioscaphoid arthritis, then Scapho-Trapezio-Trapezoid (STT) or Scapho-Capitate (SC) fusion is indicated. If the radioscaphoid joint is involved with arthritis then salvage procedures including radio-scapho-lunate arthrodesis with resection of the distal pole of the scaphoid, or proximal row carpectomy, or scaphoid excision and four corner fusion is indicated.

Scaphoid fractures and nonunions
Dr. Bassem El Hassan
Mayo Clinic

Scaphoid fracture non-union is a challenging problem. Several factors are implicated in the development of the non-union including: avascularity, bone loss/carpal collapse, adequacy of fixation and systemic factors. Conventional bone grafts are indicated in fracture non-union without vascular compromise. Otherwise, vascularized bone grafting is indicated in cases of AVN of the proximal pole of the scaphoid. Pedicled radius grafts have improved results in proximal pole non-unions but patient selection is imperative. These grafts are not suitable for restoration of scaphoid collapse in scaphoid wrist non-unions with proximal pole AVN. Non-unions with collapse, humpback deformity, and AVN require improved blood supply and correction of deformity. Free medial femoral condyle vascularized bone graft is the treatment of choice in scaphoid non-union with proximal pole AVN and carpal collapse. Some scaphoid non-unions cannot be repaired because of fragmentation and/or arthritis. Salvage procedures including proximal row carpectomy or scaphoid excision and four corner fusion may be indicated in this situation.

Distal radius fractures: update of best practice
Dr. Steven Moran
Mayo Clinic



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Complex hand fractures and dislocations
Dr. Steven Moran
Mayo Clinic

Pediatric hand and upper extremity fractures
Dr. Steven Moran
Mayo Clinic

Saw bone session II workshop (NON-CME)

Hall G: Diana Tamari Sabbagh Animal Lab

EUS (Endoscopic Ultrasound) Workshop
Dr. Paolo Giorgio Arcidiacono and Dr. Assaad Soweid
Vita Salute San Raffaele University and American University of Beirut Medical Center

Hall H: Van Dyck Auditorium

Endoscopic management of esophageal premalignant and malignant lesions
Dr. Samer El Dika
American University of Beirut Medical Center

Endoscopic ultrasound in the evaluation of pancreaticobiliary malignancies
Dr. Paolo Giorgio Arcidiacono
Vita Salute San Raffaele University

Intragastric/intraduodenal positioning of the endoscopic ultrasound (EUS) probe in close proximity to the pancreas and the extrahepatic biliary system permits the obtainment of high-resolution images and the visualization of local anatomic details that may not be detected by other imaging techniques . This peculiarity, coupled with the possibility of performing EUS-guided fine needle aspiration (EUS-FNA) to acquire tissue samples for the evaluation of any pancreatico-biliary lesions, has rapidly made EUS one of the most important and accurate tool for the evaluation of both benign and malignant pancreatico-biliary disorders. The precision of EUS in targeting the pancreas and then thrusting a needle into it or in any other adjacent accessible organ has inspired investigators to consider EUS not only a way to establish a definitive tissue diagnosis, but also a procedure to gain access to the pancreatico-biliary ductal system in cases of failure of endoscopic retrograde cholangiopancreatography (ERCP) or to inject and delivery anti-neoplastic or radiosensitizer agents directly into pancreatico-biliary lesions as a form of direct therapy. This technique, named EUS-guided fine needle injection (EUS-FNI), in association with the development of echoendoscopes with larger channels allowing the passage of stents and other accessories, has opened the door for the creation of a new field of therapeutic and



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interventional EUS that has found in the pancreatico-biliary system one of its major applications.

Colonic polyp screening: gastroenterologist or radiologist?

Dr. Rita Slim Karam

Saint Joseph University

Colorectal cancer (CRC) is one of the major public health issues in industrialized countries. Most colorectal cancers are thought to originate from benign adenomatous polyps. Early detection followed by removal of adenomas has been shown to reduce incidence and colorectal cancer-related mortality. Despite its effectiveness, CRC screening remains underutilized. Colonoscopy is currently considered the gold standard to detect and treat colorectal polyps. However 6 to 20% of polyps may be missed on the first colonoscopy. The use of new technologies combined with conventional endoscopy may enhance the accuracy of colonoscopy. CT colonography (CTC) is also proposed as a screening test for colonic neoplasia. CTC has several attractive features when compared with primary colonoscopic screening, including a lower risk of complications and the lack of a need for sedation. Important issues of CTC are heterogeneous sensitivity results of different studies in the detection of relevant colorectal adenomas and theoretical cancer risk associated with the radiation exposure. Prerequisites for colorectal cancer screening by CTC are adequate training of radiologists, employment of high-resolution low-dose CT technique and opportunity of same-day colonoscopy. CTC is not yet adopted as a screening tool in asymptomatic individuals instead of colonoscopy. However, there is a role for CTC in patients with obstructing colorectal lesions, after incomplete colonoscopy, and possibly for screening patients on anticoagulation or who are at elevated risk of sedation related complications or who refuse colonoscopy. Further work is still needed to define the appropriate threshold for referral for colonoscopy as well as post-CTC surveillance intervals.

Natural orifice trans-luminal endoscopic surgery (NOTES) is it for real?

Dr. Nagheshwar Reddy

Asian Institute of Gastroenterology

Capsule and small bowel endoscopy

Dr. Salem El Khoury

Saint George Hospital

Until recently, the small bowel was considered the 'no man's land' of the gastrointestinal tract as the available imaging modalities were costly, laborious, and invasive with significant radiation exposure.

The advent of wireless capsule endoscopy (WCE) and balloon assisted enteroscopy represented a major breakthrough.



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The WCE is an ingestible cylindrical shaped camera coupled with a battery of 8 hours medium life; the device measures 26x11 mm and weight 3.7 gr. Its captured images are transmitted via digital radiofrequency communication to external electrode sensors and stored in data recorder carried by the patient.

The digital images are then downloaded onto a reading platform for review and analysis. WCE diagnostic yield is variable from one disease to another and different studies have compared its performance with other diagnostic techniques like Small bowel endoscopy, CT enteroclysis, MR enteroclysis, and barium studies.

No contraindications are noted except for small bowel strictures that could lead to capsule retention.

The major drawback of WCE is the lack of therapeutic interventions. This gap is currently covered by small bowel enteroscopy. Although the classical push video enteroscopy was introduced in the 1980 s, its 250cm long limited the depth of insertion. In 2001 a double balloon assisted endoscope system was introduced that allowed more depth of insertion with the same length. An outer balloon mounted on an external sheet is inflated; it adheres and fixes the small bowel wall so the endoscope progresses to further depth. Later on a single balloon endoscope was introduced to allow easier manipulation. The technique is a two person procedure. Examining the entire small bowel is achieved in around 5% of case but combining both antegrade (per oral) and retrograde (per anus) routes can achieve up to 80% success. Balloon assisted enteroscopy can achieve therapeutic interventions; Homeostasis, polyp resection and lesion biopsies, strictures dilatation and foreign body removal, feeding jejunostomy tube placement. Most importantly it allows access to difficult areas after surgery; ERCP after Billroth II , gastric access after gastric bypass procedure for obesity .

The risk of complications is low. Integrating WCE and DBE in small bowel investigations has been studied by major gastrointestinal societies and recommendations are being published regularly.

The future of endoscopy

Dr. Nagheshwar Reddy

Asian Institute of Gastroenterology

Infection control initiatives in the region

Dr. Ziad Memish

King Saud University

Device related infections: new advances

Dr. Issam Raad

The University of Texas M.D. Anderson Cancer Center

H1N1 influenza: the Hajj experience

Dr. Ziad Memish

King Saud University



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Mass gatherings (MGs) pose unique public health challenges, placing burdens on both the public health capacities of host locations and those at the returning visitors' points of origin. Last year while a novel influenza A (H1N1) pandemic was evolving and acutely cognizant of the public health threat posed to millions of Muslims visiting the holy sites in the Kingdom of Saudi Arabia (KSA), the Saudi Arabian Ministry of Health convened a global strategic and tactical public health preparedness consultation in June 2009. The approaching holy season of 2009, encompassing both Umrah pilgrimages in the Islamic Holy month of Ramadan (August 2009) and the subsequent massive annual Hajj pilgrimage season from (November and December 2009) posed a special public health challenges due to influx of millions of visitors to the Kingdom. Thus in June consultants from various global public health agencies met with KSA counterparts. The meeting aimed to share global public health expertise in MGs, review the Kingdom's current plans for preparedness with specific directive to identify gaps and facilitate new interventions. Participants reviewed the strengths, weaknesses, deficits , opportunities, and lanes of authority for both cross-cutting examining specific domains of public health preparedness during MGs in KSA, with a special emphasis on the prevention and control of pandemic influenza. As a result, a total of fifty-four implementable recommendations were proposed: thirty measures applicable in advance and twenty four measures during the KSA. The most important recommendation was to encourage individuals at risk of severe disease to postpone their participation in Hajj until another year. These include elderly people, pregnant women, individuals with chronic diseases, and children. The recommendations were applicable before or during Hajj. Other recommendations include provision of education and personal hygiene packs to all pilgrims to prevent influenza acquisition and onward transmission, and isolation facilities if there is not sustained community transmission This strategic and tactical preparedness planning prevented an outbreak of Pandemic H1N1 during the 2009 Hajj season with a total of 73 diagnosed cases of H1N1 among pilgrims with 5 mortalities. No spread of pandemic influenza H1N1 was reported at the returning visitors points of origin.

Invasive candida infection in ICU patients

Dr. John Perfect

Duke University Medical Center

The combination of patients with severe underlying disease requiring long ICU stays, a myriad of invasive foreign bodies placed in them, and potent broad spectrum antibacterial treatments has allowed candidiasis to become a serious and deadly complication in ICUs. With this epidemiology which is not changing, the important question(s) is how to effectively respond to these organisms which may be hard to diagnose early and yet have an attributable mortality of 20-40% with invasive candidiasis. Clearly, we have now three antifungal classes for treatment of invasive candidiasis (polyenes, azoles, and echinocandins). In many reports we do have excellent antifungal agents for treatment but our interface with diagnostics and defined strategies to treat these infections earlier remain imprecise and poorly defined. We will examine the issues/studies around prophylactic, empiric, pre-emptive and therapeutic strategies. From the use of surveillance cultures (colonization index) to biomarkers to risk group stratifications we



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will examine the evidence and will also provide a pre-emptive design with the use of biomarkers (glucan measurement) that we are presently studying. Candidiasis in the ICU represents a classic frontier for study and strategy adjustments. We have outstanding drugs but must use them in directed and rapid fashion within the critical care units.

Invasive mould infections in cancer patients

Dr. Issam Raad

The University of Texas M.D. Anderson Cancer Center

Why do we fail in treatment of infections? The use of fungal infections as models of drug resistance

Dr. John Perfect

Duke University Medical Center

Drug Resistance remains a major obstacle to successful management of patients with invasive fungal infections and in order to improve our successes, we should examine why we fail. In fungal drug resistance, I would split the conversations into two headings. First, there is direct drug resistance and this can be measured by in vitro testing. Simply, despite our ability to use these very effective antifungal classes (polyenes, azoles and echinocandins) we find certain species to have primary or secondary resistance and this can clearly be identified in the laboratory. This direct antifungal drug resistance has primary influence on the single patient with infection since unlike antibacterial resistance, there are no known drug-resistance plasmids or transposons which can rapidly spread the drug resistance to other fungal species and /or patient. On the other hand, the second type of resistance is clinical resistance and this frequently becomes an issue that the clinician must identify and correct. In this clinical arena, the parameters around drug resistance include: host population/underlying disease, pharmacokinetics drug interactions, early and accurate diagnosis, site of infection, need for surgery or combination of agents, and finally how immune reconstitution inflammatory syndrome (IRIS) impacts on resistance. There is no question that we have unusual fungi in which none of our drugs have activity. Similarly, we have experienced many azole-resistant fungal infections and presently are observing more echinocandin-resistant yeast infections. However, despite these direct resistant strains, the majority of our problems occur with clinical resistance and the discussion will also focus on how to avoid these antifungal drug resistance issues.



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Hall A: Issam Fares Hall

Neutral stem cells for treatment of demyelinating diseases: fantasy or real prospect

Dr. Samia Khoury

Brigham and Women's Hospital

Multiple sclerosis (MS) is an autoimmune disease that causes demyelination and axonal damage in the central nervous system. The majority of the patients experience relapsing-remitting symptoms followed by a secondary progressive phase leading to permanent disability once chronic disease has set in. The current treatment of MS relies on immunologic manipulation. However, it is becoming clear that repair should be considered as a goal for treatment. Experimental autoimmune encephalomyelitis (EAE) is an animal model of MS, and provides a powerful tool for investigating the pathogenesis of MS. Although current evidence shows that remyelination and regeneration occur spontaneously to some extent, it is not nearly sufficient enough in MS or EAE. Remyelinating oligodendrocytes arise from differentiation of neural progenitors and a lack of progenitor function has been proposed to play a role in remyelination failure in MS. Chronically activated microglia are responsible, at least in part for the dysfunction in stem cell function. A detailed understanding of the interactions between neural stem cells and the immune system is required for developing therapeutic strategies targeting neural stem cell mobilization from germinal niches.

Controlling stem cells in health and disease

Dr. Ronald McKay

National Institute of Neurological Disorders and Stroke (NINDS)

The work in our group is focused on using the biology of stem cells to give new insight into the mechanisms that establish and regenerate adult tissues. Defining the human genome is a major achievement of contemporary bio-medical research. It is now necessary to define the functional consequences of human genetic diversity. Our demonstration that human pluripotent (ES and iPS) cells have a standard transcriptome as they differentiate provides a strong basis for future work using these cells to functionalize the human genome. This work also provides insight into the first steps regulating the differentiation of pluripotent cells where we are most interested in the role of the FOXA2 gene in the specification of endoderm and dopamine neurons. As a model of endodermal differentiation, we have shown that human ES and iPS cells efficiently generate hepatocytes that function in vivo and we have demonstrated that Foxa2 is required for the specification and maintenance of dopamine neurons in the mouse providing one of the few models of the age dependent neuron loss seen in Parkinson's disease. Transplantation of dopamine neurons or hepatocytes confers therapeutic benefit in models of Parkinson's and liver disease. However, these in vivo studies show that endogenous regenerative mechanisms also contribute to the recovery from injury. By identifying the signals controlling stem cells in vivo, we hope to define pharmacological strategies that promote the development of healthy tissues and regeneration following injury.



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A novel approach to organ-specific differentiation of stem cells
Dr. Marwan El Sabban
American University of Beirut medical Center

Despite the potential benefit of using human embryonic stem cells in regenerative medicine, their use remains controversial. In contrast, adult stem cells are found in all tissues of the body and have the potential to differentiate into multitude of cell types. The specific advantage of using adult stem cells for tissue repair is that the patient's own cells could be expanded in vitro and then reintroduced into the patient. This autologous grafting eliminates the use of immunosuppressants and hence, reduces the risk of infection and immune rejection. Bone marrow-derived mesenchymal stem cells are a population of multi-potent stem cells that maintain the capacity to self-renew and differentiate along multiple pathways resulting in the generation and maintenance of a variety of tissues. This has advanced the possibility of utilizing these cells to repair or replace damaged tissues. Both a structural scaffold and soluble mediators coordinate normal in vivo cell differentiation, both provided by the microenvironment of target organs. The use of organ-specific extracts to provide stem cells with a milieu that mimics in vivo microenvironment is an attractive alternative to the use of a defined combination of cytokines and growth factors. These extracellular matrix extracts provide cells with mechanical support and cyto-architecture, as well as components involved in cellular signaling, to induce and maintain a differentiated phenotype.

Stem cell research in cardiology
Dr. Marc Penn
Cleveland Clinic

Stem cell research in multiple sclerosis
Dr. Bassem Yamout
American University of Beirut Medical Center

Acute promyelocytic leukemia
Dr. Hugues De The
INSERM/CNRS

Acute promyelocytic Leukemia (APL) is characterized by a specific t(15;17) translocation, generating a PML/RARA fusion protein. Expression of PML/RARA, a potent transcriptional repressor induces APL in mice. Retinoic acid (RA) and arsenic trioxide, both directly target PML/RARA-mediated transcriptional repression and protein stability, inducing rapid differentiation of the promyelocytes and clinical remission of APL patients.

We have demonstrated that RA, in addition to induction of granulocytic differentiation, triggers growth arrest and progressive clearance of Leukemia Initiating Cells (LIC), both ex vivo and in vivo. Suboptimal RA concentrations or the expression of PLZF/RARA allow complete



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RA-induced differentiation, but neither LIC clearance nor disease remission. Thus RA-induced differentiation and LIC clearance are two uncoupled events. The RA/arsenic trioxide association, which dramatically synergises for PML/RARA degradation but not for differentiation, rapidly clears LIC in a proteasome-dependent manner resulting in APL eradication in murine models and patients. Cyclic AMP signalling also accelerates RA-induced LIC clearance and PML/RARA degradation, which is dependent on a cAMP-regulated phosphorylation site of PML/RARA. Thus, activation of cAMP signalling could be a novel clinically achievable oncogene-targeted therapy.

Collectively, these results demonstrate that LIC clearance, that mirrors PML/RARA degradation, is the primary basis for APL cure by the RA/arsenic trioxide association, rather than differentiation. There are indications that oncogene degradation could be a generally applicable therapeutic strategy to clear LICs in several types of tumours.

Adult T cell leukemia / lymphoma

Dr. Ali Bazarbachi

American University of Beirut Medical Center

Cancer stem cells as therapeutic target

Dr. Rihab Nasr

American University of Beirut Medical Center

Cancer stem cells (CSC) have recently been identified in several solid tumors and leukemias. They are a rare population of malignant cells with some stem cell like properties, such as self-renewal, pluripotency and quiescence. CSC are believed to play a critical role in the development and progression of cancer. A major challenge in the treatment of cancer is refractoriness of these CSC to conventional treatments that target rapidly dividing cells. Accordingly, CSC resistance may explain why it is difficult to completely eradicate cancer cells and why disease relapse remains a major threat. The cancer stem cell hypothesis has recently attracted a great deal of attention, owing to that fact that CSC may serve as critical cellular targets for cancer treatment. In fact, recent developments in isolation and characterization of CSC, have opened new possibilities for developing CSC-targeted therapies. Moreover, targeting CSC resistance mechanisms, such as increased expression of drug efflux pumps, self renewal and quiescence could be of great therapeutic interest. Recent studies have demonstrated the critical role of the tumor suppressor PML, one of the key cell-cycle regulators, that controls self-renewal in cancer stem cells. There is hope for the future that such novel CSC-targeted therapeutic strategies will improve clinical cancer therapy, in particular for those malignancies that are currently refractory to conventional anticancer agents.

Breast cancer

Dr. Hugues De The

INSERM/CNRS



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Cyclophosphamide dose-intensification may circumvent anthracycline resistance of p53-mutant breast cancers Jacqueline Lehmann-Che¹, Fabrice André², Christine Desmedt³, Chafika Mazouni⁴, Sylvie Giacchetti⁵, Elisabeth Turpin¹, Marc Espié⁵, Louis-François Plassa¹, Michel Marty⁵, Philippe Bertheau⁶, Christos Sotiriou³, Martine Piccart³, W Fraser Symmans⁷, Lajos Pusztai⁷ and Hugues de Thé¹. ¹Biochemistry Department, Saint Louis Hospital, Assistance Publique Hôpitaux de Paris (AP/HP) and INSERM U944/CNRS UMR 7212/ University Paris 7, Paris, France; ²Institut Gustave Roussy, Villejuif, France; ³Institut Jules Bordet, Bruxelles Belgium, ⁴Department of Surgery, IGR and Laboratoire de transfert biologique oncologique, Marseille, France; ⁵Maladies du sein, Saint Louis Hospital, APHP, Paris, France, ⁶Department of Pathology and INSERM U728/ University Paris 7, St-Louis Hospital, APHP Paris, France. ⁷MD Anderson Cancer Center, Houston, United States.

The predictive value of p53 for the efficacy of frontline anthracycline-based chemotherapy regimen has been a matter of significant controversy. Anthracyclines are usually combined to widely different doses of alkylating agents, which may significantly modulate tumour response to these associations. We analyzed three series of de novo stage II-III breast cancer patients treated frontline with anthracycline-based regimen of various cyclophosphamide dose-intensity: 65 patient with estrogen receptor (ER)-negative tumors treated with anthracyclines alone (J. Bordet, Brussels), 51 unselected breast cancers treated with intermediate doses of cyclophosphamide (FAC regimen, MDACC, Houston) and 128 others, with a dose-dense anthracycline/cyclophosphamide association (St. Louis, Paris). After chemotherapy and surgery, pathologic complete response (pCR) was evaluated. p53 status was determined by a yeast functional assay (FASAY) on the pre-treatment tumour sample. In a multivariate analysis of the pooled results, lack of ER expression and high-dose cyclophosphamide administration were associated with increased likelihood of pCR. A sharp statistical interaction was detected between p53 status and cyclophosphamide dose-intensity. Indeed, when restricting our analysis to patients with ER-negative tumours, we confirmed that mutant p53 status was associated to anthracycline resistance, but found that p53 inactivation was required for response to the dose-intense alkylating regimen. Thus, our data strongly suggest that cyclophosphamide dose-intensification in ER-negative/p53-mutated breast cancer could significantly improve their response.

I am allergic to cheese and my skin itches

Dr. Raif Geha

Children's Hospital / Harvard Medical School

AD is a pruritic inflammatory skin disease that affects 15% of infants and children. AD is characterized by itchy dry skin with lesions infiltrated by a Th2 dominated immune and skin infiltration



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with T cells and eosinophils. In about 20% of the cases there are mutations in the skin specific gene filaggrin (FLG), which is important for the hydration and barrier function of the skin. We developed a mouse model of allergic dermatitis by repeated epicutaneous sensitization with ovalbumin of skin mechanically injured by tape stripping, which upregulates the expression of keratinocyte-derived inflammatory cytokines in the skin. Studies in this model and in FLG deficient mice highlight the role of skin injury in driving dendritic cells that carry antigen from skin to draining lymph nodes to polarize naïve T cells to differentiate into Th2 cells. The role of cytokines chemokines and arachidonic acid metabolites in skin inflammation in AD will be defined. The mechanism of susceptibility of patients with AD to food allergy, asthma and eczema vaccinatum will be discussed. Novel therapies for AD suggested by these studies will be proposed.

Metabolomics: how drug treatment is becoming personalized

Dr. Rima Kaddurah Daouk

Duke University Medical Center

Metabolomics is the study of metabolism at the "global" level and involves studies of the "metabolome", the entire repertoire of small molecules present in cells and/or tissues. The identities, concentrations and fluxes of these compounds represent the final product of interactions that extend from gene sequence to include gene expression, protein expression and the total cellular environment, an "environment" that in the clinical setting includes drug exposure. Metabolomics has already been identified as an important area for development under the NIH Roadmap Initiative. Sophisticated metabolomic analytical platforms and informatics tools have already been developed that have made it possible for us to define signatures for several central nervous system disorders and for response to drugs that are used to treat those disorders. The "Metabolomics Network for Drug Response Phenotype" a national network funded by NIH and lead by Dr. Kaddurah-Daouk has a mission to integrate metabolomics in clinical pharmacology and pharmacogenomics research to achieve a deeper understanding of mechanisms implicated in drug-response variation towards a more personalized approach to therapy. We will exemplify approaches we are taking and early findings from the study of statins and SSRI (antidepressant) classes of therapies.

Warding off autoimmunity: Usama's rabbits and the guardian FOX

Dr. Talal Chatila

University of California at Los Angeles

In the late 1970s, Professor Usama Khalidi embarked on provocative studies aimed at curing experimental allergic encephalitis (EAE) in rabbits, a model of the human autoimmune disease multiple sclerosis, by means of bone marrow transplantation. Since then, major advances have taken place in our understanding of the pathogenesis of autoimmune diseases such as EAE



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and in their treatment. Novel Lymphocyte subpopulations involved in maintaining immunological tolerance (Regulatory T cells or TR cells) and in mediating autoimmune injury (IL-17 producing T helper cells or Th17) have been identified and their genetic and molecular characteristics established. Our own studies have led to the identification of human autoimmune disorders that result from mutations in key genes controlling the differentiation and effector function of TR cells. The most prominent of these genes is the transcription factor Foxp3, which orchestrates the genetic circuitries characteristic of TR cells. Loss of Function mutations in FOXP3 and other related genes results in TR cell deficiency or dysfunction and syndromes of autoimmunity and immune dysregulation. Approaches that aim to boost the numbers and function of TR cells, and reciprocally repress those of autoimmune effector T cells, including Th17 cells offer promising new therapies for autoimmunity. In select cases, hematopoietic stem cell transplantation has been employed for the treatment of human autoimmune diseases, harkening back to the original approach of Professor Khalidi.

Role of TREM2 in pure early-onset dementia

Dr. Eliane Chouery

Saint Joseph University

A genome-wide screen using 382 STR markers to localize and identify the gene implicated in early-onset dementia (EOD) without bone cysts in a Lebanese family with three affected subjects was conducted. A unique locus homozygous by descent at chromosome 6p21.2 locus was identified. Candidate genes were explored by fluorescent sequencing and the effect of the identified mutation was confirmed by qualitative and quantitative RT-PCR. The genetic analysis revealed a novel deletion, c.40+3delAGG, in the 5' consensus donor splice site in intron 1 of TREM2 gene which is known to be responsible for PLOSL (Polycystic Lipomembranous Osteodysplasia with Sclerosing Leukoencephalopathy) also designated as Nasu-Hakola disease. In silico analysis predicted a lower strength for the novel donor splice site. Qualitative RT-PCR revealed normal transcript while quantitative RT-PCR showed over twofold down-regulation of TREM2 transcripts. The expression profile of six genes SPP1, NEDD9, FSCN, BCL3, NFKBIA and CCL2 known as disrupted in TREM2-deficient samples was studied and showed same expression profile as TREM2-mutated samples except for CCL2 which was normally regulated. The significantly-reduced expression of TREM2 in our patients and the expression profiles of the six studied genes confirm a role for TREM2 in this distinct phenotype of EOD without bone cysts. To our knowledge, this is the first report of mutations in TREM2 causing a pure dementia.

Rewiring cocaine addiction: N-acetylcysteine persistently prevents reinstatement of cocaine seeking by reversing cocaine-induced plasticity in cortico-striatal pathways

Dr. Khaled Moussawi

Medical University of South Carolina

Cocaine addiction and vulnerability to relapse arise from impaired regulation of motivated behavior by prefrontal cortex (PFC) glutamatergic projections into the nucleus accumbens (NAc).



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This is rooted in impaired glutamate homeostasis and synaptic plasticity in the NAc caused by repeated exposure to cocaine. Our research focuses on identifying and reversing these changes.

Rats were trained to self-administer cocaine for 2 weeks, then underwent 2-3 weeks of extinction during which they received daily N-acetylcysteine injections (100 mg/kg, i.p.), followed by 2-3 weeks without N-acetylcysteine treatments, after which the animals were examined for propensity to relapse, synaptic physiology and glutamate homeostasis in NAc using in-vivo and ex-vivo electrophysiology, glutamate microdialysis, and behavioral pharmacology. Cues and cocaine priming failed to reinstate drug seeking in N-acetylcysteine treated rats up to 3 weeks after the last N-acetylcysteine injection. N-acetylcysteine restored normal extracellular glutamate levels in NAc, and normalized measures of synaptic transmission at the PFC-NAc synapses. N-acetylcysteine inhibition of drug seeking depended on group II metabotropic glutamate receptors.

Our data indicate that reversing cocaine induced plasticity at PFC-NAc synapses is a promising therapeutic strategy for cocaine addiction, and that through this action N-acetylcysteine provides durable protection against relapse to cocaine seeking.

Cyclin D1 activates the DNA damage response in pineal cells resulting in p53-dependent senescence

Dr. Hassan Zalzali

Background and Objectives:

We previously showed that Cyclin D1 causes pineal hyperplasia limited by p53-dependent senescence. Loss of the Cdk-inhibitor p18Ink4c results in tumor progression. We now attempted to define the role of p53 and p18Ink4c in the senescence response.

Materials and methods:

We used the CycD1+ transgenic mouse, crossed into an Ink4c^{-/-} or p53^{-/-} background, to determine the contribution of each to tumor suppression.

Results:

We found that senescence in CycD1+ pineal cells was a two-stage process. The first stage involved cell cycle exit, dependent on both the p53 and Rb pathways. The second stage involved formation of senescence foci, which only occurred if cells had successfully exited the cell cycle. In the absence of Ink4c, proliferation arrest was delayed. Senescence ultimately occurred in most cells; however, few cells "escaped" the senescent response, resulting in delayed tumor formation in all mice. Interestingly, tumors had lost p15Ink4b expression.



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Conclusion:

Senescence is a two-stage process that depends on intact Rb and p53 pathways. p18Ink4c is necessary for suppression of Cyclin D1-driven pineoblastoma: although senescence still occurred in Ink4c^{-/-} cells, few escaped this response. Tumors had lost p15Ink4b expression, suggesting a possible mechanism for "escaping" Cyclin D1-driven senescence.

The combination of arsenic trioxide and interferon-alpha eradicates leukemia initiating cells in TAX-driven murine adult T cell leukemia

Dr. Hiba El Hajj

Adult T cell leukemia (ATL) is one of the rare human cancers initiated by a transforming retrovirus, HTLV-I. After many years of controversy, it is accepted that the viral transactivator protein Tax plays a critical role in initiating the leukemic process. Long-term prognosis of ATL patients remains extremely poor, but we recently reported that the combination of As₂O₃, interferon-(IFN), and zidovudine yielded unprecedented response rates. In 10 chronic ATL patients, a 100% response rate was observed, including 7 complete remissions (CR), 2 CR and one partial response.

To investigate the molecular mechanism of action of As₂O₃/IFN, we used Tax transgenics that develop a disease with striking ATL features.

We demonstrate that the As₂O₃/IFN combination, previously shown to degrade Tax, cures Tax-driven murine ATLs. Unexpectedly, this combination immediately abrogates leukemia transplantation into secondary recipients, while the primary tumor continues to grow and exhausts much later. Leukemia initiating cell (LIC) clearance is reversed by proteasome inhibition, demonstrating that LICs are addicted to continuous Tax expression.

These results establish that As₂O₃/IFN/zidovudine acts through Tax targeting and predict a favorable long-term outcome for responsive patients. Thus, oncogene degradation can selectively target LICs, explaining this very recent success of a similar regimen in patients.

Hall B: SB-101

HPV vaccine controversies

Dr. Kenneth Alexander

The University of Chicago

While the efficacy of human papillomavirus (HPV) immunization of females for prevention of cervical dysplasias and cervical carcinomas is well established, many healthcare providers remain concerned about HPV vaccine safety, vaccine durability, and the appropriateness of immunizing girls during early adolescence. Many providers also have questions about the use of the quadrivalent HPV vaccine in males. In this presentation, current data about vaccine dura-



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bility and safety will be presented. The rationale for immunization of adolescent females, and for adolescent male HPV immunization, will also be discussed.

The role of fetal echocardiography in outcome measures

Dr. Karim Diab

University of Arizona

Fetal cardiology continues to undergo tremendous advances in the detection, diagnosis and treatment of Congenital Heart Disease (CHD). Although fetal CHD continues to result in significant postnatal morbidity and mortality, advances in screening techniques continue to improve the prenatal detection of congenital heart lesions. This lecture discusses the advances in fetal cardiology and how it has allowed us to understand the natural history of certain progressive CHD lesions. It discusses the accuracy of fetal echocardiography in detecting different CHD lesions and the impact of in-utero diagnosis of severe cardiac malformations on the antenatal and postnatal course of affected fetuses. Fetal echocardiography also allows for improved counseling of families regarding the expected course of the pregnancy and the postnatal prognosis as well as prompt evaluation of associated genetic syndromes. Prenatal detection of arrhythmias by fetal echocardiography allows for in utero treatment in many instances and hence prevents the development of hydrops and fetal demise. Fetal echocardiography can also serve to identify patients for in utero cardiac interventions. Advances in fetal echocardiography continue to impact the practice of pediatric cardiology, obstetrics, perinatology and neonatology.

Swine flu H1N1 pandemic: surveillance, treatment and vaccination

Dr. Kenneth Alexander

The University of Chicago

The newly emerged H1N1 (2009) pandemic influenza was met with unprecedented levels of global surveillance, medical response, and media hype. Similarly, H1N1 vaccines engendered a clamor for immunization by some, and vocal rejection of the vaccine as unsafe by others. In this presentation, the epidemiology of the 2009-2010 flu pandemic will be summarized, and the safety and efficacy profiles of H1N1 vaccines will be discussed. Current recommendations for the use of influenza antivirals will be reviewed, and forecasts for the 2010-2011 influenza season will be presented.

Neonatal metabolic emergencies

Dr. Vassili Valayannopoulos

Hopital Necker - Enfants Malades

Updates on adolescent vaccination

Dr. Kenneth Alexander

The University of Chicago



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In contrast to a decade ago, when the only vaccine recommended for routine use in teens was the tetanus-diphtheria (Td) booster, several vaccines are now recommended for routine use in adolescents, including vaccines against meningococci (MCV4), human papillomaviruses (bivalent and quadrivalent HPV vaccines), tetanus/diphtheria/pertussis (Tdap), hepatitis A , and influenza. In this presentation, the rationale for the use of each vaccine will be reviewed. Strategies for promoting adolescent immunization will also be discussed.

Treating febrile children: the dark side of antipyretics
Dr. Mona Nabulsi
American University of Beirut Medical Center

Despite being a beneficial host response, many parents and caregivers consider fever to be harmful and routinely use antipyretics to suppress it. However, the value of lowering body temperature in febrile children is debatable. There is need to critically evaluate the benefits and risks of treating fever, and its impact on morbidity and mortality.

The rationale for treating fever was that treatment relieves discomfort, reduces metabolic demands, reduces morbidity and mortality, alleviates cognitive impairment and prevents febrile convulsions. Evidence however reveals that discomfort is unrelated to the magnitude of fever; that antipyretics may be harmful in patients with limited cardiac reserves, and may lead to higher mortality rates in critically ill patients. Moreover, antipyretics may prolong the course of viral, parasitic and bacterial infections in humans, with septic febrile patients having improved survival over afebrile ones. Prophylactic antipyretic administration at time of vaccination is associated with lower antibody responses to several vaccine antigens. In addition, a temporal relationship between antipyretics and delirious behaviour was observed in some patients with delirium behaviour suggesting that antipyretics may trigger delirium. Antipyretic therapy has not been shown to decrease the incidence or recurrence of febrile convulsions in predisposed children. Evidence supporting the immunologic advantage of fever should be evaluated in light of recent evidence revealing that physical antipyresis may be harmful; that acetaminophen may be comparable to placebo; and that there is no additional benefit from combining ibuprofen and paracetamol over ibuprofen monotherapy. Alternating ibuprofen with acetaminophen however is marginally superior to either drug alone.

In conclusion, physicians need to shift their attention to parental anxiety and fever phobia, educating parents about the immunologic advantage of fever and the risks associated with antipyretic abuse.

Treatment strategies in inherited metabolic diseases: past, present and future
Dr. Vassili Valayannopoulos
Hopital Necker - Enfants Malades



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Update on the genetics of congenital heart disease
Dr. Georges Nemer
American University of Beirut Medical Center

What pediatricians need to know about echocardiography
Dr. Karim Diab
University of Arizona

Although echocardiography remains the gold standard for non-invasive imaging and diagnosis of congenital heart disease in the pediatric population, additional modalities continue to emerge. These include 3-D echocardiography, intracardiac echocardiography, cardiac computed tomography with 3-D reconstruction and MRI. These modalities supplement information from echocardiography and replace some invasive angiographic testing. This lecture goes over the newer imaging modalities in CHD and presents examples of various lesions where such additional modalities could be of significant value in the overall care of patients with CHD. Despite the concern for radiation exposure, recent developments in CT technology primarily by reducing cardiac motion and the radiation dose usage have helped expand the indications for CT usage in CHD evaluation with relatively low risk and potentially great benefit in certain cardiac lesions.

Lactic acidosis
Dr. Vassili Valayannopoulos
Hopital Necker - Enfants Malades

Update on pharmacologic treatment of Autism
Dr. Fadi Maalouf
American University of Beirut Medical Center

This presentation reviews the treatment of target symptoms in autism and other pervasive developmental disorders (PDDs), namely motor hyperactivity and inattention, repetitive behavior, aggression and self-injury and impaired social relatedness. Results from controlled medication trials are presented and discussed. Efficacy and adverse effects of psychostimulants, atomoxetine, atypical antipsychotics, serotonin reuptake inhibitors and d-cycloserine are reviewed. While certain medications have shown efficacy in targeting individual symptoms in autism, many symptoms are still resistant to the currently available treatment which speaks for the need of larger placebo-controlled trials and new treatment development.

Response interruption and redirection (RIRD) as a treatment for stereotypy in children with autism
Dr. Lina Slim Topdjian
A Step Ahead Program



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Children with autism spectrum disorder exhibit stereotypic behaviors that interfere with skill acquisition. There is some evidence stating that stereotypy is controlled by multiple sources of reinforcement, including sensory consequences. The current study investigates the effects of Response Interruption and Response Redirection (RIRD) on motor and vocal stereotypic behaviors of two children with an autism spectrum disorder. Motor stereotypy is defined as instances of non-contextual or non-functional repetitive motor behaviors. Vocal stereotypy is defined as instances of non-contextual or non-functional repetitive speech and vocal behaviors. First, functional analyses were conducted to identify the functions of each child's behaviors. Results indicated that their behaviors were likely maintained by automatic reinforcement. After the functional behavior analyses were completed, RIRD was implemented using a single-subject ABAB withdrawal design. Preliminary results indicate a significant decrease in both motor and vocal stereotypic behaviors when compared with baseline. Follow-up probes and anecdotal evidence indicate that the intervention was successful in the natural environment.

Hall C:Nursing Auditorium

Recent innovations and advances in intracranial aneurysm treatment and research

Dr. Bernard Bendok

Northwestern University and Feinberg School of Medicine

Defining pharmacoresistance

Dr. Mohamad Mikati

Duke University

The definition of Drug resistant epilepsy has evolved with our increasing knowledge of the natural history of response to antiepileptic drug therapy. It most recently has been defined by the International League Against Epilepsy as failure of adequate trials of two tolerated and appropriately chosen and used AED schedules (whether as monotherapies or in combination) to achieve sustained seizure freedom (Kwan et al., 2009). This definition has several implications in terms of referral to specialized centers, consideration of advanced testing and for epilepsy surgery candidacy. The term "seizure-free" refers to freedom from all seizures, including auras. It is recognized that different seizure types in different individuals may be associated with variable degrees of impact, which should be taken into account by the treating clinician when deciding the most appropriate course of action for the patient. Therefore, for practicality, occurrence of any seizure is regarded to indicate failure of the treatment to lead to seizure freedom. Breakthrough seizures that occur in temporal proximity to potentially seizure provoking external factors such as sleep deprivation, menstruation, intercurrent febrile illness, and so on, pose difficulties in categorization because the causal association between the external factor and the seizure is often uncertain. In general, seizures that occur under these circumstances should still be considered as evidence of inadequate seizure control and hence treatment failure, but seizure relapse due to poor treatment compliance should not. Regarding the duration needed to declare the patient seizure free, the "rule of three" for calculating confidence intervals



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for zero events can be used (Hanley & Lippman-Hand, 1983). Specifically, to be 95% certain that a patient's seizure frequency has at very least decreased (i.e., there has been some therapeutic effect), a seizure-free duration that is at least three times the longest interseizure interval prior to starting a new intervention would need to be observed. The other main consideration, again regarding the duration of the seizure free period, is the need to document a sustained response that is clinically meaningful. Studies including patients treated medically (Sillanpaa & Shinnar, 2005; Jacoby et al., 2007) or surgically (Markand et al., 2000; Spencer et al., 2007, Mikati et al 2006, 2008) show that absolute seizure freedom, usually taken as at least 12 months, is the only relevant outcome consistently associated with meaningful improvement in quality of life. In a community-based survey, patients with one or more seizures over the last 2 years had higher levels of anxiety and depression, greater perceived stigma and impact of epilepsy, and lower employment rates than did those who were seizure-free (Jacoby et al., 1996). In many countries, having even one seizure per year poses restrictions on driving (Fisher et al., 1994; Berg & Engel, 1999). Therefore, there the current consensus is that seizure-free duration should be at least 12 months. Thus, based on the preceding considerations, seizure freedom is defined as freedom from seizures for a minimum of three times the longest preintervention interseizure interval (determined from seizures occurring within the past 12 months) or 12 months, whichever is longer.

Presurgical evaluation of medically refractory patients

Dr. Najj Riachi

Neuroimaging in epilepsy

Dr. Roula Hourany

American University of Beirut Medical Center

Temporal lobe epilepsy: clinical and electrophysiological characteristics

Dr. Ahmad Beydoun

American University of Beirut Medical Center

Abnormalities of cortical development and related lesions

Dr. Prakash Kotagal

Cleveland Clinic Foundation

Resective surgery for intractable epilepsy

Dr. Youssef Comair

American University of Beirut Medical Center

Predictors of outcome in epilepsy surgery

Dr. Wassim Nasreddine

Vagus nerve stimulation and other disconnective procedures

Dr. Marwan Najjar

American University of Beirut Medical Center



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Vagus nerve stimulation (VNS) is now a well established therapeutic modality for patients with intractable epilepsy who are not candidates for resective epilepsy surgery. Despite the lower efficacy in controlling intractable seizures when compared to resective procedures in general, it may compare to some disconnective procedures such as corpus callosotomy, though with a markedly better safety and morbidity profile. After a short review of various disconnective procedures with illustrative cases, we review our series of VNS cases performed at the American University of Beirut over the past 5 years, including their presentation and outcome, along with description of the surgical technique used at surgery. The effect on quality of life, reported by us in an earlier paper, is referenced and discussed as well. Our VNS series is one of the largest in the Arab Middle East States. The procedure has the same efficacy as reported in the European and North American literature. The surgery can be done safely in both the pediatric and adult populations in a short operative time and minimal complications.

Cost effectiveness of surgery in the management of intractable epilepsy

Dr. Prakash Kotagal

Cleveland Clinic Foundation

New developments in evaluation of medically refractory patients

Dr. Mohamad Mikati

Duke University

Advances in Neuroimaging and Medical Genetics are having increasing impact on the evaluation of patients with refractory epilepsy and providing opportunities for achievement of seizure freedom in some patients who previously were thought to be refractory to any intervention. Genetic testing, mainly in children, that could impact, or in many cases could cause complete remission of ,resistant epilepsy include testing for Pyridoxine-dependency (antiquitin gene mutation, therapy with B6, folic acid), Pyridoxal-responsiveness (PNPO mutation, therapy with 1-35mg/kg/d), Folic acid-responsiveness (antiquitin gene: therapy B6, folic acid), Cerebral folate deficiency, Neurotransmitter disorders (CSF neurotransmitters L-Dopa, other), Biotinidase deficiency (rash, seizures, therapy Biotin), Glucose transporter 1 deficiency (ketogenic diet), Hyperinsulinemia hyperammonemia syndrome (mean age 5 months, myoclonic absence, focal or GTC, dystonia, LD, GLUD1 mutation), Developmental Delay Epilepsy Neonatal Diabetes (DEND syndrome mutation in KATP channel, sulfonyleureas), Serine synthesis defects (microcephaly seizures, therapy serine), Creatine deficiency syndromes (Cr, GAA, MRS: creatine, ornithine with arginine restriction), and unrecognized phenylketonuria. Advanced functional MRI techniques are allowing better determination of eloquent cortex prior to surgical resection and emerging EEG coupled and resting state functional MRI may in the future help better localize epileptic and eloquent cortex. Diffusion tensor imaging measures white matter integrity through various measures the most important being fractional anisotropy which has been shown to be abnormal on the side of and in the regions of epileptic foci and may prove to be of use in localizing the epileptogenic zone. Tractography based on DTI techniques defines fiber tracks to avoid in surgical planning and in some cases has identified aberrant tracts that are thought to



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result in epileptic discharge propagation. All these techniques provide new approaches to the problem of resistant epilepsy in children and in adults.

Disentangling the genetic diversity of childhood brain diseases

Dr. Christopher Walsh

Children's Hospital Howard Huges Medical Institute

The recent revolution in DNA mapping and sequencing technologies have provided new insights into the underlying genetics of developmental brain diseases of children. A remaining challenge in understanding and diagnosing these conditions is their tremendous heterogeneity. Genetic studies in our lab and in others in the last few years have identified several genes that cause human brain malformations-LIS1, DCX, FLNA, Reelin, POMT1, ARFGEF2, ASPM, AHI1, GPR56, and others. The identified genes encode a variety of types of proteins, many having key cellular roles in the proliferation of neuronal precursor cells or the migration of neurons, both of which are essential features of the development of our cerebral cortex. The identification of the genes that are mutated in the human cortical malformations informs us about how our brain develops and even how it may have evolved, since a larger and more highly ordered cerebral cortex is a principal feature that distinguishes us from other mammals. More recent work in our lab has focused on elucidating the genetic basis of autism. Although autism is considered the most heritable of the neuropsychiatric conditions, specific genetic mutations are identifiable <20% of affected children. We have taken an approach to studying autism that utilizes rare, large families, where parents share ancestry, to identify recessive causes of autism. Some families are large enough so that a single family provides suggestive linkage (LOD score>2.5), with the responsible loci generally being different in different families. Interestingly, some autism patients show homozygous deletions within areas of linkage that either remove genes, or in some cases are near genes but do not affect the genes' coding sequences. These noncoding deletions encompass highly conserved elements, some predicted to encode sites that would control patterns and levels of gene expression. The genes that are in or nearest to homozygous deletions tend to be expressed in adult hippocampus and regulated in their expression by neuronal activity. These data suggest that autism mutations may run a spectrum from null mutations to milder mutations that may disrupt neuronal function only partially, and hence might be better targets for therapies.

Hall D: Room 300

Poly-trauma management in the ED

Dr. George Abi Saad

American University of Beirut Medical Center

Mass casualty management in the ED: lessons learnt in Beirut

Dr. Amin Kazzi

American University of Beirut Medical Center



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Mass Casualty Incident (MCI) management is a special challenge to any emergency medical service, all the way from the field to the Emergency Department (ED) and to the rest of the chain of medical care. In Lebanon, emergency departments and ED providers have repeatedly faced such challenge during its various armed conflicts and wars over the last 35 years. The ED at the American University of Beirut consistently played a central role in delivering emergency care to the victims of such strife. Understandably, its ED faced the largest numbers of mass casualty incidents and its ED staff acquired significant experience and instituted special measures in the field of mass casualty management.

This session provides attendees an opportunity to acquire or polish their mass casualty management skills, with a focus on incident identification, hospital and ED leadership and staff mobilization and activation, ED staff and physical space assignment and designation, "MCI ED Triage Categories", staff mobilization and distribution, surge capacity enhancement, security issues and auto-delegation, medical records, caretakers, patient families, and crowd management, media relations, and interactions with hospital leadership, departments and staff.

The FAST exam (focused assessment sonography in trauma): do you need it in your ED?

Dr. Mark Langdorf

University of California - Irvine

The ultrasound protocol, Focused Assessment of Sonography for Trauma (FAST), has become an integral part of early trauma evaluation. It has good sensitivity and excellent specificity for intraperitoneal and intracardiac free fluid (blood). It can be performed in approximately two minutes, and, coupled with clinical assessment of vital signs, helps guide decision making regarding which patients need emergent laparotomy vs. more specific evaluation with computed tomography or angiography for pelvic fractures. It is useful for penetrating trauma as well, and can diagnose pericardial effusion, tamponade, hemothorax and pneumothorax (with extended FAST). It is portable and repeatable, in contrast to CT. It has largely replaced diagnostic peritoneal lavage as an assessment of early hemorrhage in the peritoneum. Training and competency can be established in as few as 25 scans. Modern trauma care should incorporate FAST.

An evidence-based review of the recent emergency medicine literature

Dr. Edward Panacek

University of California - Davis

It is nearly impossible for any physician to keep up with relevant recent literature in their field. It's particularly difficult for broad-based specialties such as emergency medicine, which may have important literature occur in journals outside their field. However, clinical practice is becoming increasingly evidence-based. All physicians are expected to make efforts to keep up with the latest advances and most important literature.



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This session will review recent published articles that directly impact the clinical practice of emergency medicine. It will have an emphasis on non-EM primary journals. It will emphasize study limitations and important applications of each of these articles. Although it will cover new important facts, the emphasis will be on new practices that are recommended and prior clinical practices that should be discontinued. The entire session will focus on evidence-based approaches.

Procedural sedation in the ED

Dr. Mark Langdorf

University of California - Irvine

The objective of this talk is to understand the use of seven types of medications to accomplish sedation for emergency department procedures, and understand the importance of ongoing physiologic monitoring when using these agents. We will cover the sedation continuum, cover indications and contraindications to ED sedation. Using a case-based method, we will discuss the best agents to use for sedation of different types of patients, including neuroleptics, ketamine, opiates, benzodiazepines, propofol, barbiturates and etomidate. We will discuss the lack of science behind NPO recommendations, evaluation of the patient's airway and co-morbid conditions prior to sedation, and the potential pitfalls and required preparation for deeper-than expected sedation.

Snake bite injury in Lebanon

Dr. Ziad Kazzi

Emory University and The Georgia Poison Center

Difficult ECGs: where can the diagnosis of ischemia and infarction hide?

Dr. Mark Langdorf

University of California - Irvine

The objectives of this talk are to understand the interpretation of 12 lead ECG with regard to infarction and ischemia in the presence of right and left bundle branch block and ventricular paced rhythms. We will discuss and describe the expected ST T wave changes which are inherent in bundle branch blocks, and therefore recognize primary, ischemic/infarction changes. We will define the expected (normal) discordant ST changes and the concordant (abnormal) changes that indicate acute disease. We will cover the utility of decision rules on this topic, and ultimately conclude that you can make the diagnosis of acute myocardial infarction or ischemia even in the face of bundle branch blocks or paced rhythm.

Soft tissue infections in the ED

Dr. Bisan Salhi

Emory University



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In recent years, community-acquired Methicillin-Resistant Staphylococcus aureus (CAMRSA) has emerged as the predominant organism in skin and soft tissue infections (SSTI) in the emergency department (ED). While ED physicians have adapted to the rising numbers of CAMRSA, recognition, diagnosis and treatment remain a challenge as our knowledge about SSTI's evolve. Although CAMRSA remains susceptible to a number of easily accessible antimicrobial agents, there is concern that resistance to these antibiotics may be rising with more routine use. In this session, we will discuss the microbiological characteristics of soft tissue and skin infections, describe the different possible clinical manifestations of soft tissue and skin infections in the ED. Additionally, we will discuss the risk factors for antibiotic resistance in ED patients with soft tissue and skin infections and the appropriate approach to such patients in the ED.

The pulseless patient: an update

Dr. Eveline Hitti

American University of Beirut Medical Center

In spite of the many advances in resuscitation, survival from cardiac arrest remains poor. This talk will cover the history of cardiopulmonary resuscitation and advances in cardiac resuscitation over the past decade. The evidence behind the most recent guidelines with regard to approach to cardiopulmonary resuscitation, defibrillation, pharmacology and cooling will be covered.

Toxicology and ACLS: where do they meet? where do they not?

Dr. Ziad Kazzi

Emory University and The Georgia Poison Center

Sepsis update: 2010

Dr. Edward Panacek

University of California - Davis

Sepsis is a very serious condition that carries a high (20-50%) mortality rate. It's one of the most important causes of death in patients acutely presenting to an emergency department and the incidence rate is increasing. There have been new developments in our understanding of the pathophysiology of sepsis. There also have been some trials emphasizing new diagnostic and therapeutic approaches.

This session will provide a review of the important underlying pathophysiology of sepsis. It will also cover the epidemiology of the problem. Most of the session will focus on new developments in evaluation and therapy that have direct clinical applications at the bedside. Therapeutic recommendations will be evidence-based. It will end with thoughts regarding the future and new developments that may come out of current ongoing investigations.



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Hall H: Van Dyck Auditorium

Migraine related vertigo: an underdiagnosed entity?

Dr. Soha Ghossaini

Penn State Hershey Medical Center

Vertigo is the presenting symptom for a variety of central and peripheral vestibular disorders which make the diagnosis of patients with vestibular dysfunction challenging. Migranous vertigo is an under diagnosed entity due its variable presentation ranging from true vertigo to imbalance. In addition, vertiginous symptoms could be associated with headaches or present in Migraine free periods. The pathophysiology of Migraine Associated Vertigo is not very well understood but thought to be similar to other aura phenomenon known to occur with Migraine headaches. The differential diagnosis includes other central and peripheral vestibular disorders. Migraine Associated Vertigo should be distinguished from Meniere's disease due to overlapping symptoms. Vestibular symptoms of Migraine Associated Vertigo are controlled by similar medications similar to those used for Migraine. Vestibular therapy is of help in those patients especially in the presence of imbalance.

Reading a VNG: a practical application

Dr. Kim Abou Chacra

American University of Beirut Medical Center

Evaluation of the dizzy patient: beyond videonystagmography

Dr. Jack Wazen

Silverstein Institute

The evaluation of the dizzy patient starts in the office with a detailed history and comprehensive physical exam. While the typical ENT history and examination tends to be limited or problem focused, the dizzy patient is evaluated as a whole. By the time the patient is referred for testing, a firm differential diagnosis is at hand.

The purpose of this presentation is to go over the history and physical exam of the dizzy patient with tips and clues to guide the clinician develop a differential diagnosis. Aiding the patients describe their symptoms facilitates placing them into one of the following categories:

- Vestibular
- Visual
- Proprioceptive
- Cardiovascular
- Neurological
- Metabolic
- Drug related
- Psychological



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Patients are then referred for testing to confirm or rule out a diagnosis. Common tests include:

- Audiological testing
- Audiogram
- Otoacoustic emissions
- Auditory Brainstem Response
- Electrocochleography
- Vestibular testing
- Videonystagmography
- Vestibular evoked myogenic potentials (VEMP)
- Rotatory Chair
- Platform posturography (Equitest, Balance master)
- Radiological testing
- CT
- MRI
- Metabolic/ Blood testing

Following completion of the work up, patients are advised of their findings, diagnosis, treatment plan or appropriate referral.

Surgical treatment of dizziness

Dr. Marc Bassim

American University of Beirut Medical Center

Endoscopic management of cholesteatoma

Dr. Muaaz Tarabichi

American Hospital Dubai

Surgery for chronic ear disease: the House Clinic experience

Dr. Jose Fayad

University of Southern California

The author will review the surgical techniques used by the Associates of the House Clinic in Los Angeles, in their treatment of chronic ear disease. The presentation will include videos illustrating different techniques of tympanoplasty with and without mastoidectomy. Our preference for canal wall up procedure when feasible in the treatment of cholesteatoma is stressed. Our indications for canal wall down mastoidectomy is reviewed. Results of ossicular chain reconstruction using Plastipore and titanium with tragal cartilage will be shared.

Decision making in the management of acoustic neuromas

Dr. Jose Fayad

University of Southern California



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Different modalities (observation, surgery, and radiation therapy) used in the treatment of acoustic neuromas will be reviewed. Our indications for each of these modalities will be presented. Symptoms at presentation, size and location of the tumor, hearing status, general health as well as prognostic factors such as audiogram, auditory brainstem responses, videonystagmogram and patient wish, are all taken into consideration to make a recommendation and reach a decision with the patient in regard to treatment. Results on the facial nerve and hearing preservation when applies will be discussed.

Updates on cochlear implants

Dr. George Zaytoun

American University of Beirut Medical Center

Implantable middle ear devices

Dr. Jack Wazen

Silverstein Institute

The constant improvement in hearing aid technology is keeping pace with the increasing demand on hearing aids and their performance. Our aging population with the expected rise in the number of people requiring hearing aids is of great interest to the hearing aid industry. There is however a subgroup of patients who for medical reasons cannot, or do not wish to wear conventional hearing aids. The purpose of this paper is to review the available implantable hearing devices. A description of each device will include the indications, technical specifications, surgical technique and results.

Bone anchored hearing aids: expanding applications and techniques

Dr. Soha Ghossaini

Penn State Hershey Medical Center

The Baha system has been used for several years in the treatment of conductive and mixed hearing loss, when conventional hearing aids are unsuitable or unsuccessful. Recently, its application in patients with unilateral profound to severe sensorineural hearing loss, referred to as single sided deafness, was introduced which revolutionized the rehabilitation of such a patient population. A general review of the Baha system and its application will be discussed in addition to a brief review of the surgical technique. The results of few studies about patient satisfaction, sound localization and complications will be presented.

Office procedures in otology

Dr. Jack Wazen

Silverstein Institute

As our health care delivery system evolves, patient treatment protocols have shifted from hospital based to ambulatory or office based procedures. Office based approaches have grown in popularity and are preferred by the patient as well as the third party payers for financial and psychosocial reasons.

In this presentation, we will cover a variety of minimally invasive otological office procedures



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including:

- Middle ear endoscopy
- Fat myringoplasty
- Intratympanic inner ear perfusions for
- Sensorineural hearing loss
- Recurrent vertigo
- Cochlear hydrops
- Osseointegrated titanium implants for bone conduction devices.

For each procedure, the indications, technique, and results will be presented. The successful results, time and costs savings of minimally invasive otological office procedures have modernized the practice of Otology and are worthy of inclusion in any Otological practice.

Charles Hostler Auditorium

Esthetics and maxillofacial prosthetics: esthetic and functional rehabilitation in multidisciplinary treatment of cleft palate and facial defects

Dr. Michael Huband

Cleveland Clinic

The definition of success in rehabilitation is often viewed differently by the patient and the health care provider. To ensure success, a multidisciplinary approach should be employed when treating patients with palatal clefts and facial defects. The multidisciplinary concept of care and its advantages will be highlighted, including a review of the roles of different providers. The key steps in coordinating and executing a complex treatment plan will be outlined and illustrated.

Smile esthetics: Problem solving with invisalign - aligner treatment - the art of the impossible (1)

Dr. Timothy Wheeler

University of Florida College of Dentistry

Treatment of malocclusion with clear removable aligners has increased over the last decade, not only because of public demand, but also because further development of the aligner and better understanding of how effectively it moves teeth have led more practitioners to offer this treatment modality to their patients. Several factors are considered during treatment planning with clear aligners that usually are not with traditional fixed appliances, such as placement and shape of attachments and specific staging of tooth movement. While intrusion, extrusion, rotation and translation can be accomplished, some movements are more efficient than others. Therefore, more complex decisions, such as using partial fixed appliances at certain times during treatment, allow the orthodontist to treat more types of malocclusions efficiently, expect excellent outcomes, and satisfy the patient by maximizing treatment time with the more esthetic aligner.



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Treatment planning taking advantage of the features well managed by aligners can be optimized: 1-because they facilitate dental hygiene, aligners are my appliance of choice for patients with a periodontium compromised by preexisting periodontal disease, 2-aligners allow the control of which teeth to move, when and how fast to move them, 3-tipping generated by aligners may facilitate the management of complex appearing malocclusions.

With further research and knowledge on mode of treatment of aligners, various types of malocclusions can be treated and outcome improved, specifically by the use of attachments and aligner staging. The presentations include a review of data collected in several experiments that can already be used for more efficient aligner treatment.

Smile esthetics: the future of invisalign - aligner treatment - the art of the impossible (2)
Dr. Timothy Wheeler
University of Florida College of Dentistry

Treatment of malocclusion with clear removable aligners has increased over the last decade, not only because of public demand, but also because further development of the aligner and better understanding of how effectively it moves teeth have led more practitioners to offer this treatment modality to their patients. Several factors are considered during treatment planning with clear aligners that usually are not with traditional fixed appliances, such as placement and shape of attachments and specific staging of tooth movement. While intrusion, extrusion, rotation and translation can be accomplished, some movements are more efficient than others. Therefore, more complex decisions, such as using partial fixed appliances at certain times during treatment, allow the orthodontist to treat more types of malocclusions efficiently, expect excellent outcomes, and satisfy the patient by maximizing treatment time with the more esthetic aligner.

Treatment planning taking advantage of the features well managed by aligners can be optimized: 1-because they facilitate dental hygiene, aligners are my appliance of choice for patients with a periodontium compromised by preexisting periodontal disease, 2-aligners allow the control of which teeth to move, when and how fast to move them, 3-tipping generated by aligners may facilitate the management of complex appearing malocclusions. With further research and knowledge on mode of treatment of aligners, various types of malocclusions can be treated and outcome improved, specifically by the use of attachments and aligner staging. The presentations include a review of data collected in several experiments that can already be used for more efficient aligner treatment.



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Hall A: Issam Fares Hall

Update on pediatric fever

Dr. Robert Hoffman

Albert Einstein College of Medicine

The discussion will review current concepts in the management of children who have fever without an apparent source of infection. This will include review historical/traditional approach to management of children who have fever without an apparent source of infection and newer approaches; what age patients should routinely have a complete sepsis evaluation to include lumbar puncture; effect of vaccines on the changing incidence of bacteremia, meningitis, and other invasive disease; and lab assays and investigations. The framework for this discussion will be the American College of Emergency Physicians (ACEP) publication "Clinical Policy on Children Younger Than Three Years Presenting to the Emergency Department With Fever" and subsequent literature.

The diabetic foot: A management primer

Dr. Jamal Hoballah

American University of Beirut Medical Center

Determinants of outcome in CAD from lifestyle to invasive strategies

Dr. Samir Alam

American University of Beirut Medical Center

Hormonal replacement therapy: State-of-the-art

Dr. Muhieddine Seoud

American University of Beirut Medical Center

In the early days of hormonal therapy (HT), the use of unopposed estrogen in women with a uterus led to an increased rate of endometrial cancer and a reduced use of HT. The introduction of progestogens either as sequential or combined regimens led to the second burst of enthusiasm for HT with a wide uptake across the world and in women over the age of 50. This phase has now ended, particularly with the publishing of the Women's Health Initiative (WHI) and Heart and Estrogen/Progestin Replacement Study (HERS) II in July 2002 , and later on the Million Women Study (MWS). The media's unbridled and often histrionic interpretation of the data led to an enormous reduction in the use of HT around the world. The impact of media headlines was that more than half of the HT users stopped HT without medical consultation, and for many, return of severe menopausal symptoms and a subsequent loss of quality of life occurred. The data on the estrogen only arm of the WHI, in hysterectomized women, showed a favorable and reassuring profile but failed to get the deserved media attention.



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Moreover, the results had mixed blessing:

1. On one hand, there has been steady decrease in breast cancer: In 2003 a steep decrease in the incidence of breast cancer occurred in the United States. This decrease was most evident in patients older than 50, and largely occurred because of a decrease in the incidence of estrogen receptor positive breast cancer. Trends in use of hormone therapy (which decreased markedly in late 2002 following the publication of WHI results) and other medications potentially linked to breast cancer risk will be discussed in this context.

2. On the other hand, there has been a steady increase in the incidence of osteoporotic fractures. The incidence of fractures among perimenopausal and postmenopausal women increased significantly in the 3 years after publication of Women's Health Initiative and Heart and Estrogen/Progestin Replacement Study II results. This trend followed a decline in the use of hormone therapy, concurrent with an increase in the use of other bone-modifying agents.

We now need to decide where to go with the next phase of HT. Most clinicians looking after women in menopause recognize that there has to be some form of HT for up to half of women during their life time for symptom control or as an initial option for long-term management of osteoporosis. The exact form of strategy has to be individualized. The emergence of alternative therapies have included the selective estrogen-receptor modulators (SERMs) and selective tissue estrogenic activity regulators (STEARS). Although SERMS, such as raloxiphen, have been shown to be effective in preventing vertebral fractures, they may worsen the withdrawal menopausal symptoms. Tibolone, a STEARS , have been showed to relieve climacteric symptoms, decrease the incidence of breast cancer, have a neutral effect on cardiovascular diseases, and prevent vertebral and potentially non-vertebral fractures. However, reports of endometrial cancers in patients taking tibolone and an increase of recurrence in patients with breast cancers taking Tibolone have stifled early enthusiasm in naming it the best alternative therapy to HT.

During this presentation, we will discuss the role of estrogen in bone remodeling and the prevention and treatment of osteoporotic fractures in postmenopausal women and the search for the ideal replacement to hormonal therapy.

Headache is not one disease, so is the treatment

Dr. Samir Atweh

American University of Beirut Medical Center

Fracture risk assessment models and FRAX

Dr. Ghada El-Hajj Fuleihan

American University of Beirut Medical Center

The management of osteoporosis relies on a preventive, healthy lifestyle, approach to all subjects, and reserves the use of pharmacologic intervention to high risk subjects only. Identification



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of high risk patients using \ BMD only had been shown to have a low sensitivity. Clinical risk factors were therefore added to further optimize risk assessment¹. These include the risk algorithms derived from the Study of Osteoporotic Fractures (SOF)², Osteoporosis Canada³, the Australian Study⁴, The Deutch tool⁵, and the WHO FRAX tool⁶.

FRAX is a user friendly, on-line fracture risk calculator, based on 12 prospective study cohorts, with a follow-up of 250,000 patient years, 60,000 men and women, during which 5,000 fractures were reported. It has been subsequently validated in other cohorts. Risk factors include, age, gender, BMI, BMD of the femoral neck, prior fracture history, current smoking, alcohol use, glucocorticoid use, secondary osteoporosis, rheumatoid arthritis, and parental history of hip fracture. If BMD information is not available, risk factors alone can be used. The output of FRAX is a 10 yr fracture risk for major osteoporotic fracture (spine, hip, and forearm) and 10 year hip fracture risk. The FRAX calculator is a major advance in case finding of patients at high risk for fracture and who would benefit most from pharmacologic therapy. The FRAX tool can be applied to many countries/populations. Lebanon is the only country from the ME available on the on-line tool as of Sept 2009. FRAX-Lebanon was made possible thanks to national hip fracture registry data provided from the Lebanese Ministry of Health.

FRAX provides a significant advance in the assessment of patients at risk for osteoporosis and allows the tailoring of pharmacologic therapies to high risk subjects. It was shown to substantially decrease the number of treated patients in the NHANES study⁷. Drawbacks of FRAX include the fact that radiologic fractures, the number of fractures, alcohol use, and steroid intake, cannot be taken into account. Similarly, vitamin D levels, weight loss, bone loss by DXA, and bone remodeling, all known risk factors for fractures, cannot be taken into consideration. FRAX does not define intervention thresholds, or the fracture probability at which treatment becomes cost effective. These parameters depend on country specific cost-effectiveness analyses. In the US, at a cost-effective threshold of 60,000 \$/QALY, treatment would be indicated at a 10 yr fracture risk of 20% for major osteoporotic fracture and at a 10 yr hip fracture risk of 3%. Osteoporosis Canada suggest categorizing patients as high risk those with a 10 yr fracture risk > 20%, medium risk with a 10 yr risk of 10-20% and low risk those below 10%. Risk assessment tools are a major improvement in osteoporosis care. FRAX will allow targeting of pharmacologic therapies to high risk patients by refining risk –assessment. The FRAX ISCD IOF Initiative will address three topics: FRAX clinical, FRAX BMD and FRAX International. The latter will address questions on the implementation of FRAX on an international basis and across race/ethnic diversity. We have been asked to partake in the FRAX International Task Force and lead the effort of FRAX Middle East and Africa. FRAX Lebanon will be validated prospectively, and used to re-appraise the existing Lebanese Osteoporosis Guidelines, as one of the charges of the Lebanese National Osteoporosis Task Force.

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4. Nguyen ND et al. Development of prognostic normograms for individualizing five year and ten year fracture risks. Osteoporos Int 2008; 19:431-
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6. (<http://www.shef.ac.uk/FRAX/tool.jsp?locationValue=12>).
7. Dawson-Hughes et al. The potential impact of new NOF guidance on treatment patterns. Osteoporos Int I 2009; 20:1807-20.

New trends in the screening and management of gestational DM

Dr. Ihab Usta

American University of Beirut Medical Center

Gestational diabetes complicates about 1-14% of pregnancies and is becoming a growing health concern in many parts of the world. It is associated with a high maternal and fetal morbidity and serious, long-term consequences for both baby and mother. Early detection and intervention can greatly improve outcomes for women with this condition and their babies. To achieve outcomes approaching those seen in a normal healthy pregnant population, careful attention should be paid to the metabolic, hemodynamic, and vascular perturbations associated with the disease. Unfortunately, gestational diabetes has been a contentious, complex and multifaceted subject. The failure of several prevention trials muddies our waters. Screening and diagnostic tests are not uniform worldwide and are inconsistent with treatment goals leading to under-diagnosis and under management.

Recently, after decades of good faith acceptance, the merits of treating gestational diabetes have been supported by solid evidence derived from clinical trials, thus providing impetus for health care providers who are now confident that the recommendations are currently based on actual data in lieu of expert opinion. However, controversies surrounding the causes, screening, diagnosis, management, and prevention of gestational diabetes have caused confusion as to what is the ideal strategy to address this medical condition. The scope of the problem reinforces the need to tackle these pressing issues.

Fatty liver and the primary care physician: Should you care?

Dr. Alaa Sharara

American University of Beirut Medical Center

Ambulatory management of patients with thrombosis

Dr. Ali Taher

American University of Beirut medical Center



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Hall D: Room 300

Overview and principles of resuscitation

Dr. Lama Charafeddine

American University of Beirut Medical Center

Background:

Neonatal mortality remains a significant contributor to global child mortality and accounts for 38% of all deaths in children less than 5 years. Most neonatal mortalities (99%) occur in the developing countries. Over 19% of neonatal deaths worldwide are caused by birth asphyxia. Improving resuscitation skills of health attendants by introducing a neonatal resuscitation program has proven to be an effective strategy for preventing neonatal death and improving newborns outcomes.

Objectives:

- 1-To train health care personnel in all Lebanese hospitals in neonatal resuscitation.
- 2-To evaluate the impact of resuscitation training on improving knowledge and skills of trained health care personnel.

Methods:

A neonatal resuscitation course based on the International Liaison Committee on Resuscitation and the World Health Organization recommendations was developed using the American Academy of Pediatrics' official Neonatal Resuscitation Program. The course offered to pediatricians has the format of workshop over a full-day period. It includes a series of theory lectures covering physiologic changes during delivery, different levels of resuscitation needed at birth, detailed and advanced resuscitation techniques including ventilation, chest compression and medication administration, in addition to ethics and special situations. Each topic will be followed by hands-on training at skill stations using manikins and resuscitation equipments. Procedures taught include providing positive pressure ventilation, intubation, chest compressions, umbilical line placement and medication administration. Knowledge assessment will be based on a pre and post written test. Skills assessment will be done during the hands on practice sessions. A Certificate of attendance will be issued after completion of the entire course.

Conclusion:

This intervention is expected to be beneficial in terms of knowledge and skills to all participants. The acquired skills will help participants in their resuscitation techniques when attending any delivery situation. We speculate that applying systematic, uniform and proper resuscitation techniques will decrease neonatal mortality, birth asphyxia and improve outcomes of newborns.



Poster Abstracts



Poster Abstracts

Posters are posted at the exhibition tent on the grounds of the Saab Medical Library

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P2	M. Chmayssani, RM. Lazar, J. Hirsch and RS. Marshall.	Reperfusion normalizes motor activation patterns in large-vessel disease.	Department of Neurology, Columbia University Medical Center, New York, USA.
P3	F Haroun, H. Hatoum, A. Bazarbachi, A. Shamseddine, Z. Salem, A. Taher, N. Saghir, A. Tfayli and N. Zgheib	The role of <i>CYP2B6</i> genetic polymorphisms in predicting toxicity from cyclophosphamide therapy in Lebanese patients with breast cancer or Non-Hodgkin's Lymphoma	American University of Beirut
P4	A. Hanna, R. Andary, S. Sanjad and J. Ghafari	Premature loss of primary teeth associated with hypocalcaemia vitamin D-resistant Rickets	American University of Beirut Medical Center, Lebanese University and New York University
P5	T. Shalan and J. Ghafari	Potential effects of Growth Hormone on mandibular growth	American University of Beirut Medical Center, Lebanese University and New York University
P6	H. Chakar, P. Salameh, C. Tabarani and J. Matta	Obesity and risk factors in Lebanese public schools adolescents	University of Balamand and Lebanese University
P7	S. Taavoni, U. Kafshgiry, F. Shahpourian and M. Mahmoudie.	Hormone Replacement Therapy: Post-Menopausal Sex life and Attitudes towards Sex	Iran University of Medical Sciences and Shahid Beheshtie University of Medical Sciences.
P8	A. Macari, A. Kassab and K. Abouchacra Smith.	Evaluation of Hearing in Children Treated with Rapid Palatal Expansion	American University of Beirut Medical Center
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Poster Abstracts

P1

Experimental Study Using Cinnamon Oil for Prevention of Diabetic Nephropathy in Rats
M. Al Shaikh

Background:

Diabetes mellitus is the leading cause of chronic renal failure. However, in the early phase of the disease before complications have set in, the glomerular filtration rate is elevated and kidney size increased. The clinical importance of these early aberrations derives from the hyperfiltration (the heightened glomerular capillary) that drives damages to the glomerulus, and the enlargement of the kidney (the glomerulus).

Aim of the study:

The aim of the present investigations is to examine histologically the effect of cinnamon oil on the kidney tissues of alloxan – induced diabetes rats.

Materials and methods:

Fifty male rats were used and divided into four groups: Group I =12 animal controls, Group II =12 treated with alloxan, Group III = 12 treated with alloxan + cinnamon oil, Group IV = 12 treated with cinnamon oil only.

Results:

Renal tissues (Bowman's capsule, proximal and distal convoluted tubules) of diabetes group: revealed obvious mesangial expansion and basement membrane thickening. While the diabetic treated animals with cinnamon oil ameliorated the increase in the mesangial area in diabetic rats.

Conclusions:

Cinnamon oil can be recommended as a support for the prevention of alloxan – induced diabetic complications.

P2

Reperfusion normalizes motor activation patterns in large-vessel disease.
M. Chmayssani, RM. Lazar, J. Hirsch and RS. Marshall.

Objective:

Hemodynamic impairment in one hemisphere has been shown to trigger ipsilateral motor acti-



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vation in the opposite hemisphere on functional imaging. We hypothesized that reversing the hypoperfusion would normalize the motor activation pattern.

Methods:

We studied four patients with high-grade stenosis and impaired vasomotor reactivity (VMR) but no stroke. Functional magnetic resonance imaging motor activation pattern before and after VMR normalization was compared with seven healthy control subjects scanned at an interval of 3 months using voxel-wise statistical parametric maps and region of interest analysis. Subjects performed a repetitive hand closure task in synchrony with 1Hz metronome tone. We used repeated-measures analysis of variance to compute the interaction between group (patients/control subjects) and time by obtaining the average blood oxygen level dependent signal of three motor regions of interest in each hemisphere.

Results:

Two patients normalized their VMR after spontaneous resolution of dissection, and two after revascularization procedures. Both voxel-wise statistical maps and region of interest analysis showed that VMR normalization was associated in each case with a reduction in the atypical activation in the hemisphere opposite to the previously hypoperfused hemisphere ($p < 0.001$).

INTERPRETATION:

In the presence of a physiological stressor such as hypoperfusion, the brain is capable of dynamic functional reorganization to the opposite hemisphere that is reversible when normal blood flow is restored. These findings are important to our understanding of the clinical consequences of hemodynamic failure and the role of the ipsilateral hemisphere in maintaining normal neurological function.

P3

The role of CYP2B6 genetic polymorphisms in predicting toxicity from cyclophosphamide therapy in Lebanese patients with breast cancer or Non-Hodgkin's Lymphoma

F. Haroun, N. Zgheib et al.

Background:

Cyclophosphamide is a cornerstone in the treatment of many malignancies and CYP2B6 is involved in its metabolism.

Methods:

We are conducting a 3 year project investigating the association between CYP2B6 variants



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and cyclophosphamide related toxicity in Lebanese patients with breast cancer and Non-Hodgkin's Lymphoma at AUBMC.

Results:

Our preliminary data, counting in 67 patients, showed a minor allele frequency of 41.55% for CYP2B6*4 and 29.2% for CYP2B6*6. There was a trend towards increased toxicity with CYP2B6*4 and CYP2B6*6 variant alleles: an increased incidence of febrile neutropenia (32% vs. 19%), G-CSF use (47.4% vs. 28.6%), and blood transfusion (15.8% vs. 9.5%) was observed in patients with at least 2 mutant alleles of the CYP2B6*4/*6 variants (P=NS). Furthermore, these patients suffered from a sharper drop in absolute neutrophil count (85% vs. 75%) in the week following their first chemotherapy regimen; similarly, a more prominent incremental decrease in hemoglobin level was noted after subsequent chemotherapy cycles (-4.5% in wild-type for both CYP2B6*6 and CYP2B6*4, -4.8% for heterozygous for CYP2B6*6, -6.9% for heterozygous for both, and -12.3% for double homozygous mutants) (P=NS).

Conclusion:

We hope that this study will improve our understanding of the inter-individual variability in response and toxicity from cyclophosphamide therapy.

P4

Premature loss of primary teeth associated with hypocalcaemia vitamin D-resistant Rickets

A.Hanna¹, J Ghafari^{1,2,3} et al.

1 American University of Beirut Medical Center;

2 Lebanese University;

3 New York University;

Hypocalcaemia Vitamin D-Resistant Rickets (HVDRR) is a very rare genetic recessive disease caused by mutations at the level of the Vitamin D receptor gene. Reported disturbances with deciduous teeth include: premature loss, enlarged pulp chambers and thin dentine.

Aim:

Evaluate the dentition of children with HVDRR. Methods: Clinical and radiographic findings in the dentition of 4 HVDRR children (2y2m-6y5m) from 3 families were assessed for common trends and variations.

Results:

The first primary teeth to emerge in the mouth (incisors) were missing in all children, the parents reporting increased mobility and loss within limited time periods post-eruption. Posterior



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primary teeth remained after eruption. Permanent teeth were evident on radiographs.

Conclusion:

1-Incisor crowns, formed prenatally before HVDRR affects root formation are lost after emergence; 2-After treatment initiation, normal root formation apparently anchors the later developing primary and permanent teeth, suggesting that treatment with high doses of calcium may be effective at the level of the dentition. Accordingly, if maternal and later therapeutic supplies of calcium affect dental formation, dental development may be an indicator of the disease process. Additional children with possible variant dental expressions are needed for longitudinal studies to evaluate this hypothesis.

P5

Potential effects of Growth Hormone on mandibular growth

T. Shalan 1 and J. Ghafari 1,2,3

1 American University of Beirut Medical Center;

2 Lebanese University; 3New York University

Growth hormone (GH, somatotropin) deficiency is reported to affect facial morphology, and in contrast, GH therapy may impact facial growth. Recent investigations have addressed the possibility of locally administering GH and growth factors to target the mandibular condyle and therefore increase the pace of endochondral ossification, potentially increasing mandibular growth.

Objective:

To explore ways of potentiating the effect of GH to achieve mandibular growth that otherwise could not be obtained. Thus, our presentation consists of two major parts: 1- the evaluation of available studies to determine the maximal effects of GH therapy on mandibular growth, particularly in comparison with normative data in patients with retrognathic mandibles (Class II malocclusion), 2- the discussion of in vitro studies that may contribute to the understanding of the interaction between cartilage and bone, thus of condylar endochondral ossification. The underlying question is whether this interaction may be stimulated by GH to provide amounts of growth sufficient to correct mandibular micrognathism and severe retrognathism. These assumptions are based on the ability of GH to promote proliferation of chondrocytes that is crucial for endochondral bone growth.



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P6

Obesity and risk factors in Lebanese public schools adolescents

H. Chakar, P. Salameh et al.

Background:

Define the overweight and obesity in adolescent in public schools. Assess the dietary adherence and the levels of physical activity.

Methods:

It is a cross section study conducted between April and June 2007, participants were 2547 healthy 11 to 18 years old male and female from 20 schools of the Ministry of Education.

Results:

20.5% of the sample population were overweight while 6.6% were obese. Differences between regions were not statistically significant $p=0,09$. In girls, increased age was associated with higher obesity $3,8\% \leq 13y$, $10,6\% > 17y$: $p=0,02$. This trend was not found in boys $6,55\% \leq 13y$, $7,2\% > 17y$ $p=0,78$. A significant increase in the risk of being overweight was found with increased frequency of eating fried potatoes, chocolate and eating out $p<10^{-4}$. In contrast, eating fruits $p=0,007$ and having physical activity $p=0,002$ were associated with a lower risk of being overweight. No significant increase was found in terms of studying hours, TV watching hours and computer playing hours.

Conclusion:

Several factors related to schools and family environments contribute to put the public schools adolescents at one of the highest points of the international ladder regarding overweight prevalence.

P7

Hormone Replacement Therapy: Post-Menopausal Sex life and Attitudes towards Sex **S. Taavoni, U. Kafshgiry, F. Shahpourian and M. Mahmoudie.**

Iran University of Medical Sciences and Shahid Beheshtie University of Medical Sciences
Clients' attitudes regarding menopause and physicians' attitudes regarding HRT may affect decisions about the use of HRT.

Aim:

To determine attitudes about the importance of sex and examine the relationship between HRT and sex life in menopause women.



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Methods:

In this comparative study 154 HRT cases were compared with 130 non HRT women. Descriptive and inferential statistical methods were used.

Results:

The average age in the HRT group was 53 years and in non-HRT group was 56 years. There was a significant difference in the average age between the two groups ($P < 0.001$). 85.7% of HRT group had opinion that sex was important, but in non-HRT group was 25.4% and there was a significant difference ($P < 0.001$). There was a significant difference between the HRT group and non-HRT group ($P < 0.001$). Women receiving HRT fared better in all aspects of their sex life (libido, sexual activity, satisfaction, pleasure, frequency of orgasms). There were significant differences between two groups ($P < 0.001$).

Conclusion:

There were fewer changes in all aspects of sex life after menopause in two groups. On the basis of the importance of sex during post-menopausal life, sexual and HRT counseling might be recommended.

P8

Evaluation of Hearing in Children Treated with Rapid Palatal Expansion A. Macari, A. Kassab and K. Abouchacra Smith.

American University of Beirut Medical Center

Rapid palatal expansion (RPE) is a common orthopedic treatment for maxillary constriction and/or lateral crossbite(s).

Aim:

The aim of this pilot study was to explore the potential association between RPE and improvement in conductive hearing loss. Three patients who underwent RPE, hearing sensitivity and middle ear function were measured before and after the expansion by puretone audiometry and tympanometry, respectively.

Results:

The results revealed amelioration in both measurements following RPE. Information gathered from these pilot data are incorporated in the design of a more elaborate study. The underlying mechanism for reduction or elimination of conductive hearing loss would consist of the extension of the tensor-veli palatine muscles following the palatal distraction, which opens the Eustachian



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tube orifice and facilitates air passage, allowing improvement in nasal breathing and normal middle ear aeration and function. Long-term evaluation should help determine whether improvements in hearing are transient or permanent, in which instance RPE may be an alternative treatment to surgical options in children with conductive hearing loss who also require palatal expansion.

P9

Interactive areas between orthodontists and medical specialists

C. Moukarzel, H. Aoun and A. Macari

American University of Beirut Medical Center and Lebanese University

Optimal dentofacial treatment outcome often requires a multidisciplinary approach not only among dental specialists but also with various medical specialists. The collaboration aims at improving oro-nasal function, facial esthetics and the psychosocial status of the patients. Respiratory problems (mouth breathing, sleep apnea), congenital malformations (cleft lip/palate, hemi facial microsomia) and growth disturbances (growth hormone deficiency) require a team work between the orthodontist, the otolaryngologist, the pediatrician, the endocrinologist, the maxillofacial surgeon and others depending on the condition of each patient and the different circumstances. The presentation will include discussion of the above listed conditions with corresponding clinical illustrations.

P10

PICO application in evidence-based practice

K. Perez, M. Saadeh, R. Haddad and J. Ghafari

American University of Beirut Medical Center, Lebanese University and New York University

Evidence-based practice promotes the collection, interpretation, and integration of individual clinical expertise with the best available external clinical evidence from systematic research. PICO is a commonly used process to construct the research question and search the evidence to answer the question. PICO stands for: Patient (Population), Intervention (Indicator), Comparison (Control), and Outcome. This process helps the clinician to 1-get the question clear in mind, 2-identify the information needed to answer the question, 3-translate the question into searchable terms and 4-develop and refine the search approach. In this presentation, we will describe the PICO steps and apply the process retrospectively in 4 patients of various ages, who underwent treatment for different malocclusions. Comparisons with the implemented treatment are made to determine the advantages of conducting a larger study to assess both the PICO process and why if not followed, treatment was successful or not.

P11

Simulation of profile changes before orthognathic surgery: correspondence of prediction with outcome

A. Macari, S. Jambart and J. Ghafari

American University of Beirut Medical Center



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Orthognathic surgery represents the ideal treatment of severe dysplasia between the jaws. It must be preceded with orthodontics to normalize the inclination of teeth over bone, anticipating an optimal occlusal fit during surgery.

Aim:

To evaluate the correspondence between computer-simulated profile changes before orthognathic surgery and the outcome of the surgery.

Methods:

The actual bony movements (maxillary advancement, setback and impaction; mandibular advancement and setback, genioplasty) were measured from superimpositions of pre and post-surgical lateral cephalometric radiographs, and entered in a prediction program (Dolphin Imaging) for nine patients whose surgery involved both the maxilla and mandible. The projected facial outline was compared with the postsurgical profile.

Results:

Measurements involving lips and surrounding structures corresponded less to actual changes, the worst apparently involving the lower lip.

Conclusion:

Given the pilot nature of these findings, correspondence may not be associated with predictability. Further research, including correlations with actual bony changes, various malocclusions, and larger samples should improve the generalizability of the findings.

P12

Post-surgical management of Jacob's disease: Report of a case

C. Chalala, M. Hage, N. Abou Chebel and J. Ghafari

American University of Beirut Medical Center, Lebanese University and New York University

Osteochondroma of the coronoid process or Jacob disease is an infrequent condition consisting of a pseudo joint formation between the enlarged mandibular coronoid process and the inner surface of the zygoma. Such pseudoarticulation results in restriction of jaw activity. We report on a 14-year-5-month-old male patient with the cited condition of unilateral mandibular coronoid enlargement associated with restricted mouth opening (less than 2 digits), deviation of the mandible to the right side and inability to shift the mandible to the left. In this report, physiotherapeutic, orthopedic and orthodontic management following the surgical resection of the mushroom shaped coronoid process are discussed. The post-operative management is crucial to reestablish and improve function shortly after surgery. Reshaping of the resected



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coronoid process was confirmed on the panoramic radiograph several months after surgery. A thorough analysis of the resulting malocclusion, different steps and outcomes of the whole treatment are displayed.

P13

Advantages of the unilateral sagittal split osteotomy in the treatment of mandibular asymmetry

R. Haddad and N. Abou Chebel

American University of Beirut and Lebanese University.

Mandibular asymmetry is a common deformity in the human craniofacial skeleton. In adults, its treatment often requires a combination of orthodontic treatment and orthognathic surgery to achieve satisfactory facial appearance and oral function. Though the choice of surgical intervention should depend on type and location of the asymmetry; the usual approach is a bilateral sagittal split ramus osteotomy. Unilateral split was advocated more recently to limit the impact on the sensory area of the alveolar nerve to one side only, and to reduce operational duration. Our aim is to compare the main treatment differences between unilateral and bilateral osteotomies based on retrospective data. Results will be shown on treatment outcome and stability, and on neurosensory disturbance of the treated side(s).

P14

Detection of Leishmania parasites in blood of patients with isolated cutaneous Leishmaniasis: A finding of significant clinical implications

1H. Nakash Chmaise, * N. Nuwayri-Salti
2, G. Nahhas2, R. Makki
3 and K. Knio

1,3 4 Department of Physiology, Faculty of Pharmacy, Beirut Arab University, Beirut, Lebanon
- 2 Department of Human Morphology, Faculty of Medicine, American University of Beirut, Beirut, Lebanon
- 3 Department of Biochemistry Faculty of Medicine, Beirut Arab University, Beirut, Lebanon
- 4 Department of Biology, Faculty of Arts and Sciences, American University of Beirut, Beirut, Lebanon.

Objectives:

The consequences of spread of Leishmania parasites to blood from lesions in patients with cutaneous leishmaniasis are numerous. To assess the magnitude of this invasion we conducted the present study on patients referred to the American University of Beirut Medical Center for cutaneous leishmaniasis.



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Design:

Patients referred for the management of cutaneous leishmaniasis were included in the study. Skin and blood cultures for Leishmania were taken from these patients.

Results:

One hundred sixty-two patients were proven to have cutaneous leishmaniasis by pathology. They were 52% males and 44% females (4% were missing their gender information). The patients' age ranged between 5 months and 70 years. None of the patients received treatment for Leishmania. We obtained parasite isolates from 85 patients (52.5%) proven by cultures from skin and blood/blood components. Interestingly, the parasite was isolated in the blood and blood components of 50 patients (30.9%). Isoenzyme analysis confirmed the fact that the organisms in blood and skin were the same.

Conclusions:

The hematogenous spread of parasites in cutaneous leishmaniasis is common implying that patients become carriers with all the serious consequences this state represents. Hence we recommend parenteral treatment to sterilize blood and skin of patients with cutaneous leishmaniasis.

P15

Open arterial revascularization of the critically ischemic foot using arterial homograft
J. Naoum, J. Bismuth, H. Hassoun, M. Davies, E. Peden and A. Lumsden

Background:

Revascularization alternatives for patients without adequate autogenous vein and with critical limb ischemia remain challenging. We reviewed our experience with the use of arterial homograft as a conduit for limb salvage in patients with limb ischemia and active lower extremity infections.

Methods:

A retrospective review of patients who underwent open arterial revascularization of the lower extremity with cryopreserved femoral artery homograft for the treatment of symptomatic critical limb ischemia (ie. foot ulceration, infection, or gangrene) during an 18 month period ending July 2009 was performed. Relevant clinical variables and treatment outcomes were analyzed. Clinical success was defined as limb salvage for one year, patency of the reconstruction, and wound healing.



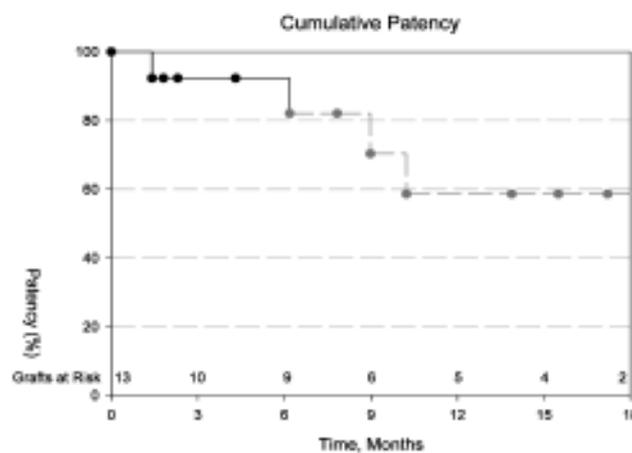
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Results:

Thirteen patients (5 men; average age 71 years, range 51–87 years) were treated during this study period. Treatment indications included 10 (77%) foot ulcerations, 2 (15 %) critically ischemic limbs without ulceration, and 1 (8 %) infected polytetrafluoroethylene bypass graft with acute occlusion and limb ischemia. A femoral below the knee popliteal bypass was performed in 4 (1%), femoral to anterior tibial artery in 4 (31%), femoral to posterior tibial artery in 3 (23%), and femoral to peroneal artery in 2 (15 %). All 13 limbs were preserved. Minor amputations were performed in 6 patients, 2 underwent toe amputations and 4 patients had a transmetatarsal amputation. The cumulative patency rate at 6, 9, and 18 months was 92.3 %, 70.3%, and 58.6%, respectively.

Conclusions:

Open arterial revascularization with arterial femoral homograft is an acceptable treatment method in patients with critical limb ischemia and active infection in whom autogenous vein is not available or the use of a synthetic conduit is not possible.



Faculty

Guest Faculty

Dr. Kenneth Alexander

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MEMA General Information and Accreditation

Overview:

The Middle East Medical Assembly offers high standard educational activities for participants. Attendees can enhance their clinical skills, explore practice performance issues, present their own research or clinical experience, benefit from new and most advanced techniques, participate in sessions addressing specialty and multidisciplinary topics, and interact with internationally renowned experts.

Venue:

The XLIII Middle East Medical Assembly will be held on the premises of the campus of the American University of Beirut, Lebanon.

Accreditation Statement:

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of The Cleveland Clinic Foundation Center for Continuing Education and American University of Beirut Medical Center. The Cleveland Clinic Foundation Center for Continuing Education is accredited by the ACCME to provide continuing medical education for physicians.

The Cleveland Clinic Foundation Center for Continuing Education designates this educational activity for a maximum of 28.25 AMA PRA Category 1 Credits.

Physicians should only claim credit commensurate with the extent of their participation in the activity.

Participants claiming CME credit from this activity may submit the credit hours to the American Osteopathic Association Council on Continuing Medical Education for Category 2 credit.

Lebanese Order of Physicians Accreditation Statement:

The Lebanese Order of Physicians designates this educational activity for continuing medical education credits.

Target Audience:

This annual scientific meeting has been designed primarily for physicians in all specialties (specifically in: basic science research, dentistry, emergency medicine, epilepsy, GI endoscopy, hand surgery, infectious diseases, OBGYN, otology/neurotology, pediatrics, stem cells and vascular surgery), residents, and medical students. Many topics have been modified and would certainly benefit health related professionals working in the fields of nursing, public health, social work, counseling or physical therapy.



MEMA General Information and Accreditation

Registration Fees:

- Free access to scientific sessions for students, interns, residents, exhibitors and invited speakers with proper identification
- \$50 or LL75,000 for all physicians with valid identification cards requiring Lebanese Order of Physician (LOP) Credits.
- \$200 or LL300,000 for all physicians with valid identification cards requiring AMA PRA Category 1 Credit.
- Free admission to designated general public lectures

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