

THE HUNGARIAN MEDICAL ASSOCIATION OF AMERICA

AMERIKAI MAGYAR ORVOSSZÖVETSÉG



49th ANNUAL SCIENTIFIC MEETING

**CURRENT DEVELOPMENTS IN
BIOMEDICAL AND CLINICAL SCIENCES**

**October 29 – November 3, 2017
Sandcastle Resort at Lido Beach,
Sarasota, Florida**

CME provided by the Department of Continuing Medical Education,
Jacobs School of Medicine,
State University of New York at Buffalo, Buffalo, New York

7:30am-9:30am

Registration

**Young Investigators' Multidisciplinary Session II:
Student Award Recipients**

Moderators: Gyorgy Baffy MD, PhD and Zsolt Garami MD

- 8:00am **A new thalamo-hypothalamic pathway that activates oxytocin neurons**
Dávid Keller* MS, M. Cservenák PhD, V. Kis PhD, E. A. Fazekas, H. Öllös, A. Lékó MD, É. R. Szabó PhD, É. Renne PhD, T.B. Usdin Prof MD, PhD, M. Palkovits Prof MD, PhD, Á. Dobolyi PhD (16)
- 8:12am **SLAMF5, a novel positive regulator of DC autophagy**
Dora Bencze** MS, Zs. Agod MD, A. Lanyi PhD (17)
- 8:24am **The evaluation of sleep behaviours and circadian patterns in patients with comorbid diabetes and depression**
Timea Forró*** MS, Sz. Szatmári MD, PhD, K. Orbán-Kis MD, PhD, R. Gál MD, I. Mihály MD, A. Lázár MD, PhD (18)
- 8:36am **Buccal anomalies of the children under logopedic therapy**
Emoke Fodor*** MS (19)
- 8:48am **Q&A**
- 9:00am **Coffee Break**

**William Ganz MD Memorial Session in Cardiology and Vascular Surgery
Moderator: Zsolt Garami MD**

- 9:10am **Significance of factors influencing the evaluation of high sensitive troponin test in non-ST-elevation acute coronary syndrome**
K. N. Doan MS, D. Becker MD, PhD, Gy. Bárczi MD, PhD, R. Skoda, E. Dinya, B. Merkely MD, PhD, DSc, FESC, FACC (20)
- 9:22am **Measuring the left ventricular trabecula mass index with cardiac MRI in patients with non-compaction cardiomyopathy**
Anna Réka Kiss MS, A. Szűcs MD, PhD, O. Uri-Szabo MD, A. Tóth MD, PhD, T. Simor MD, PhD, CSc, Cs. Czibalmos MD, I. Csécs, MD, H. Vágó MD, PhD, B. Merkely MD, PhD, MSc, DSc, FESC, FACC (21)
- 9:34am **Comparison of three diagnostic tests for the detection of right to left cardiac shunts**
Viktória Rosta MS, Zs. Garami MD, J. Bakai MD (22)
- 9:46am **Experience with sedation of patients for transcatheter aortic valve replacement (TAVR) at University of Colorado**
Tamas Seres MD, PhD (23)

and have lower comorbid risks compared to surgical resection. These treatment options should be considered, especially in patients with unresectable metastatic disease to the liver.

MEASURING THE LEFT VENTRICULAR TRABECULA MASS INDEX WITH CARDIAC MRI IN PATIENTS WITH NON-COMPACTION CARDIOMYOPATHY

¹Anna Réka Kiss, ¹Andrea Szűcs MD, PhD, ¹Olga Uri-Szabó MD, ¹Attila Tóth MD, PhD, ²Tamás Simor MD, PhD, CSc, ¹Csilla Czimbalmos MD, ¹Ibolya Csécs MD, ¹Hajnalka Vágó MD, PhD, ¹Béla Merkely MD, PhD, MSc, DSc, FESC, FACC
¹Heart and Vascular Center of Semmelweis University Budapest Hungary, ²University of Pécs Medical School, Heart Institute, Hungary

Aims: Non-compact cardiomyopathy (NC-CMP) is a genetic disorder where the apex of the left ventricle is filled with a thickened inner layer of myocardial trabeculas (TRAB). The aim of our study was to compare the left ventricular structure and function in NC-CMP patients with preserved ejection fraction (EF) and control persons (K), to compare the different phenotypes of NC-CMP and to look for differences between males and females with cardiac MRI. The amount of TRAB was compared between NC-CMP and K persons using a new analytical software module.

Methods: Non-compact-to-compact ratio of 2.3 was used for diagnosis of NC-CMP. 158 of 5943 patients had NC-CMP between 2009 and 2014 at our Clinic. Patients with poor left ventricular EF (<50%, n=55), or with myocardial hypertrophy (n=15) and those who have other functional and structural cardiac disease (n=23) or because of other technical causes were excluded (n=24). The remaining 41 NC-CMP patients' mean age 38.2±14.1 years, males: n=22. These patients were divided into two groups (typical and atypical) by the morphology of trabecularisation. Examinations were performed with Philips Achieva 1.5T MR instrument. MedisQMass program and its new MassK algorithm were used for analysis, MedCalc software was used for statistics.

Results: TRAB mass index calculated with MassK in NC-CMP group was significantly higher than in K group both in males and females (NC-CMP vs. K g/m²; male: 17.8±1.6 vs. 14.6±1.4; female: 15.2±1.5 vs. 12.5±1.8, p<0.05). A cut off point for NC-CMP was found with ROC analysis: male: n=14, female: n=14.9g/m². We did not

found significant differences between the two NC-CMP groups. Using MassK the basic MRI parameters have significantly changed both in males and females compared to the standard evaluation method.

Conclusions: Measuring left ventricular myocardial trabecular mass with MassK, considering the sex, can help diagnose and specify the morphology of NC-CMP. Using this new module the current normal range of basic MRI parameters differ significantly.

HOW ARTIFICIAL INTELLIGENCE - AND WATSON - IS CHANGING HEALTHCARE

Botond Kiss MBA
 IBM Watson Health, Cambridge, MA

Aims: To introduce and define artificial intelligence (AI) and technologies like Watson, describe how AI is being applied today across healthcare and life sciences and in various specialties, including Primary Care, Oncology and Radiology, and outline some of the current and future possibilities of AI as well as the realities and challenges in realizing AI's potential.

Methods: Artificial Intelligence - using machine learning and natural language processing - to make sense of large amounts of data, including 80% of the data that is not structured, can surface insights from a variety of sources, including Electronic Health Records, claims data, images, and medical literature at a breadth, depth and speed unrealizable by clinicians.

Results: Although still in its relative infancy, AI is being utilized today to help make better decisions and improve outcome, for example in Oncology to help match patients to clinical trials and personalize treatment options based on genomics information and deeper understanding of the individual.

Conclusions: AI is enabling new solutions and helping make tangible progress in healthcare towards the quadruple aims - improving population health, increasing patient satisfaction, reducing per-capita health care spending, and reducing clinician burnout. Even in its early stages in the hype cycle, the core technology is real and benefits potentially significant and implication of AI disruptive to healthcare and life sciences.