The TUMS-KhNMU International USERN Spring e-Course

April 12th - May 14th, 2021

Held by:

Tehran University of Medical Sciences (TUMS), Tehran, Iran

Kharkiv National Medical University (KhNMU), Kharkiv, Ukraine

Universal Scientific Education and Research Network (USERN)

Organized and Hosted by:

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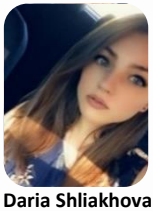

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Scientific Program at a Glance

April 12th			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Opening session
Week 1: The Week of Medicine Monday, April 12th: Day of Internal Medicine			
09:30-10:00	12:30-13:00	14:00-14:30	Evidence-based medicine *Akbar Soltani, Iran*
10:00-10:30	13:00-13:15	14:30-14:45	Clinical reasoning in internal medicine (part 1); analytical thinking: approach to difficult cases in internal medicine *Anahita Sadeghi, Iran*
10:30-11:00	13:15-13:30	14:45-15:00	Clinical reasoning in internal medicine (part 2); pattern recognition: the example of obstructive jaundice *Ali Ali Asgari, Iran*
10:30-11:00	13:30-14:00	15:00-15:30	Congestive heart failure *Kadykova Olga, Ukraine*
11:00-11:30	14:00-14:30	15:30-16:00	Acute Pancreatitis *Rostyslav Smachylo, Ukraine*

Week 1: The Week of Medicine Tuesday, April 13th: Day of Pediatrics			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Pediatric CPR *Behdad Gharib, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	Neonatal hyperbilirubinemia *Keyvan Mirnia, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	Pediatric obesity today *Tetyana Chaychenko, Ukraine*
10:30-11:00	13:30-14:00	15:00-15:30	The problem of placenta's dysfunction in pregnant women with extragenital pathology *Lazurenko Viktoriya, Ukraine*

Week 1: The Week of Medicine Wednesday, April 14th: Day of Advanced Technologies in Medicine			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Food additives: Are they useful or detrimental? *Anton Tkachenko, Ukraine*
09:30-10:00	12:30-13:00	14:00-14:30	COVID-19: Nanotechnology to the rescue *Nasrollah Tabatabaei, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	Molecular medicine mediates diagnosis for SAR-CoV-2 *Gholamreza Tavousi, Iran*
10:30-11:00	13:30-14:00	15:00-15:30	Diagnostics and treatment of COVID-19. A year of experience. *Dmytro Katsapov, Ukraine*

Week 1: The Week of Medicine Thursday, April 15th: Day of History of Medicine			
GMT	Kyiv Time	Tehran Time	Subject
9:00-9:06	12:00-12:06	13:30-13:36	Short Movie of THE LADDER
9:06-9:35	12:06-12:35	13:36-14:05	The history of pharmacy and medicine: Why be interested in it? *Bruno Bonnemain, France*
9:35-9:55	12:35-12:55	14:05-14:25	Insights into some achievements on medical and pharmaceutical issues in Sassanid era *Arman Zargaran, Iran*
9:55-10:15	12:55-13:15	14:25-14:45	History of Medicine in Plovdiv *Georgi Tomov, Bulgaria*
10:15-10:40	13:15-13:40	14:45-15:10	Application of orthopedic cast in leg fracture treatment in the Islamic era *Mohammad Sadr, Iran*
10:40-11:00	13:40-14:00	15:10-15:30	Semashko system and overcoming epidemics of infectious diseases *Vadym Ilin, Ukraine*
11:00-11:25	14:00-14:25	15:30-15:55	Outlines of European Antiseptics in the Second Half of the 19th Century *Olena Semenenko, Ukraine*
11:25-11:55	14:25-14:55	15:55-16:25	Management of common diseases and health services during the early years of the Turkish Republic *Kadircan Keskinbora, Turkey*
11:55-12:20	14:55-15:20	16:25-16:50	Medical care for civilians in Lyon, France, during the First World War *Cherilyn Lacy, USA*
12:20-12:30	15:20-15:30	16:50-17:00	Short movie of TO THE FUTURE

Week 2a: Week of Rehabilitation April 19th-20th: Days of Rehabilitation Monday, April 19th			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Robotic gait rehabilitation for CNS disorders *Mohammadreza Hadian, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	Myths of chronic low back pain: New concepts in physiotherapy *Azadeh Shadmehr, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	State of the Art Diagnosis and Treatment in Pain and Sports Medicine *Wolfgang Friedrich Paul Bauermeister, Germany*
10:30-11:00	13:30-14:00	15:00-15:30	Psychological services in University clinic in complex rehabilitation of patients with post-COVID syndrome *Volodymyr Korostiy, Ukraine*
11:00-11:30	14:00-14:30	15:30-16:00	Non-invasive brain stimulation for rehabilitation after stroke *Michael Nitsche, Germany*

Week 2a: Week of Rehabilitation April 19th-20st: Days of Rehabilitation Tuesday, April 20th			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Photobiostimulation: New approach for modern rehabilitation *Siamak Bashardoust Tajali, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	An introduction to vestibular rehabilitation *Reza Hoseinabadi, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	Pain medicine and Rehabilitation of common knee injuries and conditions (Pain Physician perspective view). *Abdullah Alkharabsheh, Jordan*
10:30-11:00	13:30-14:00	15:00-15:30	Biomechanical substantiation of the methods of restorative treatment in pelvic injuries *Andriy Istomin, Ukraine*
11:00-11:30	14:00-14:30	15:30-16:00	tDCS in post-stroke aphasia *Amir-Homayoun javadi, UK*

Week 2b: Week of Nursing and Midwifery April 21st-22nd: Days of Nursing and Midwifery Wednesday, April 21st			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	The significance of shared humanity during the COVID-19 pandemic *Arpi Manookian, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	Experiences and challenges of maternal care in labor and delivery in the COVID-19 pandemic *Elham Ebrahimi, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	The crucial value of nursing in palliative care *Tetyana Ospanova, Tetiana Khimich, Olena Pionova, Ukraine*
10:30-11:00	13:30-14:00	15:00-15:30	The problem of perinatal infections at the present stage of medicine development: clinical aspects *Vygivska Ludmila, Ukraine*

Week 2b: Week of Nursing and Midwifery April 21st-22nd: Days of Nursing and Midwifery Thursday, April 22nd			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Review on the Pandemic Fatigue: Reinvigorating the public to prevent COVID-19: World Health Organization Policy Framework for Supporting Pandemic Prevention and Management *Marzieh Hasanpour, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	Respiratory care considerations in COVID-19 *Maryam Esmaeili, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	COVID-19 care at the ICU in the Netherlands *Annemarie Padmos, the Netherlands*
10:30-11:00	13:30-14:00	15:00-15:30	The importance of oocyte number for IVF results *Gryshchenko Mykola, Ukraine*

Week 3: PID Week April 26th -29th, 2021 Monday, April 26th: Challenges of Inborn Errors of Immunity			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Opening session - in memory of Prof. Asghar Aghamohammadi *Nima Rezaei, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	Probing Common Variable Immunodeficiency - in memory of Prof. Asghar Aghamohammadi *Klaus Warnatz, Germany*
10:00-10:30	13:00-13:30	14:30-15:00	Playing with fire - Type-I interferons in health and disease *Tim Niehues, Germany*
10:30-11:00	13:30-14:00	15:00-15:30	Diagnosis of PID: from easy tests to molecular studies *Teresa Español, Spain*
11:00-11:30	14:00-14:30	15:30-16:00	The HSCT decision in patients with Profound Combined Immunodeficiency (P-CID): a prospective cohort study *Stephan Ehl, Germany*
11:30-12:00	14:30-15:00	16:00-16:30	Genetic and immunological causes of life-threatening COVID-19 *Jean-Laurent Casanova, USA*
12:00-12:30	15:00-15:30	16:30-17:00	COVID-19 in PID *Kathleen Sullivan, USA*
12:30-13:00	15:30-16:00	17:00-17:30	COVID-19 in Patients with PID and SID *Fabian Peissker, Germany*
13:00-13:30	16:00-16:30	17:30-18:00	Earliest Possible Diagnosis – How You Can Make it Happen; How You Can Make it Matter; How You Can Do it Now! *Vicki Modell and Fred Modell*

Week 3: PID Week
April 26th -29th, 2021
Tuesday, April 27th: Updates on Inborn Errors of Immunity

GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Revisiting X-linked agammaglobulinemia *Hirokazu Kanegane, Japan*
09:30-10:00	12:30-13:00	14:00-14:30	Genetics in PID: from black and white to grey *Bodo Grimbacher, Germany*
10:00-10:30	13:00-13:30	14:30-15:00	The Epidemiology of Inborn Errors of Immunity in the Middle East and North Africa- in memory of Prof. Asghar Aghamohammadi *Waleed Al-Herz, Kuwait*
10:30-11:00	13:30-14:00	15:00-15:30	21st Century management of CGD - triumphs and challenges *Andrew Gennery, UK*
11:00-11:30	14:00-14:30	15:30-16:00	Hyper IgE syndrome *Anne Puel, France*
11:30-12:00	14:30-15:00	16:00-16:30	Ataxia telangiectasia and a link to consideration for newborn screening *Mirjam van der Burg, the Netherlands*
12:00-12:30	15:00-15:30	16:30-17:00	IKAROS-associated diseases: a broad spectrum of manifestations *Sergio Rosenzweig, USA*
12:30-13:00	15:30-16:00	17:00-17:30	NK cell deficiencies *Jordan S. Orange, USA*
13:00-13:30	16:00-16:30	17:30-18:00	Questions and Answers

Week 3: PID Week
April 26th -29th, 2021
Wednesday, April 28th: Inborn Errors of Immunity and Associated Conditions

GMT	Kyiv Time	Tehran Time	Subject
09:00-09:20	12:00-12:20	13:30-13:50	CD19 deficiency: From beginning to date *Ismail Reisli, Turkey*
09:20-09:40	12:20-12:40	13:50-14:10	Hyperactive STAT1 signaling operates dysregulated immune profile in STAT1 GOF disease partially reversing with ruxolitinib *Safa Baris, Turkey*
09:40-10:00	12:40-13:00	14:10-14:30	Pathology of the organs of vision in patients with primary immunodeficiency *Gulnara Nasrullayeva, Azerbaijan*
10:00-10:20	13:00-13:20	14:30-14:50	Inborn errors of immunity predominantly affecting the gut *Ahmet Ozen, Turkey*
10:20-10:40	13:20-13:40	14:50-15:10	Monogenic Intestinal Epithelium Defects and the Development of Inflammatory Bowel Disease *Mahnaz Sadegh-Shabestari, Tabriz, Iran*
10:40-11:00	13:40-14:00	15:10-15:30	Probiotic application in Immunodeficiency disorders: Beneficial or harmful? *Hamid Ahanchian, Mashhad, Iran*
11:00-11:20	14:00-14:20	15:30-15:50	Early IBD and primary immunodeficiencies *Tooba Momen, Isfahan, Iran*
11:20-11:40	14:20-14:40	15:50-16:10	Enteropathy and primary immunodeficiency disorders *Marziyeh Tavakol, Karaj, Iran*
11:40-12:00	14:40-15:00	16:10-16:30	An overview of novel autoinflammatory cases in a cohort study of Iranian patients with Inborn Error of Immunity between 1976 and 2020 *Roya Sherkat, Isfahan, Iran*
12:00-12:20	15:00-15:20	16:30-16:50	EBV-associated primary immunodeficiency diseases *Samin Sharafian, Tehran, Iran*
12:20-12:40	15:20-15:40	16:50-17:10	Childhood Chronic Mucocutaneous Candidiasis *Sepideh Darougar, Iran*
12:40-13:00	15:40-16:00	17:10-17:30	Updates of Primary immunodeficiency and chronic mucocutaneous candidiasis *Abbas Khalili, Iran*
13:00-13:30	16:00-16:30	17:30-18:00	Questions and Answers

Week 3: PID Week April 26th -29th, 2021 Thursday, April 29th: Regional Challenges of Inborn Errors of Immunity			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:20	12:00-12:20	13:30-13:50	COVID-19 Presentations in Pediatric Patients with Inborn Errors of Immunity *Nasrin Moazzen, Mashhad, Iran*
09:20-09:40	12:20-12:40	13:50-14:10	COVID-19 and the Immune System *Zahra Daneshmandi, Iran*
09:40-10:00	12:40-13:00	14:10-14:30	Mendelian Susceptibility to Mycobacterial Disease (MSMD) *Alireza Mahdaviani, Tehran, Iran*
10:00-10:20	13:00-13:20	14:30-14:50	New updates about Hyper IgE *Javad Ghafari, Mazandaran, Iran*
10:20-10:40	13:20-13:40	14:50-15:10	Virological status of chronic diarrhea in patients with Primary Immunodeficiency *Kian Darabi, Iran*
10:40-11:00	13:40-14:00	15:10-15:30	IVIG Infusion side Effects: A long Term study in Shiraz *Hossein Esmaeilzadeh, Shiraz, Iran*
11:00-11:20	14:00-14:20	15:30-15:50	Complement deficiency *Mojgan Kiani Amin, Tehran, Iran*
11:20-11:40	14:20-14:40	15:50-16:10	Evaluation of T and B Cell Subsets in Patients with Ataxia Telangiectasia *Reza Yazdani, Tehran, Iran*
11:40-12:00	14:40-15:00	16:10-16:30	Report of two cases with PGM 3 deficiency and review of PID associated with a TH2 diathesis *Zahra Chavoshzadeh, Tehran, Iran*
12:00-12:20	15:00-15:20	16:30-16:50	PID in Yazd: a historical cohort study of 97 Primary immune deficiency patients during 10years *Nasrin Behniafard, Yazd, Iran*
12:20-12:40	15:20-15:40	16:50-17:10	Malignancy in Primary Antibody Immunodeficiency *Narges Eslami, Iran*
12:40-13:00	15:40-16:00	17:10-17:30	The influence of COVID-19 pandemic on patients with primary immunodeficiency in Fars province, Southeast Iran *Soheila Alyasin, Shiraz, Iran*
13:00-13:15	16:00-16:15	17:30-17:45	Questions and Answers
13:15-13:30	16:15-16:30	17:45-18:00	Concluding Remarks

Week 4: Week of Public Health May 5th-6th Wednesday, May 5th			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Global public health in COVID-19 aftermath: the role of school of public health in low and middle-income countries *Amirhossein Takian, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	An introduction to the Iranian health system *Ali Akbari Sari, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	Water Access and Wastewater Treatment in Covid 19 Pandemic era *Simin Nasseri, Iran*
10:30-11:00	13:30-14:00	15:00-15:30	Adverse Events Following Immunization Surveillance in a COVID-19 Pandemic in Ukraine *Tetyana Chumachenko, Ukraine*

Week 4: Week of Public Health May 5th-6th Thursday, May 6th			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Health promotion; the role of healthcare professionals and society *Elham Shakibazadeh, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	Air pollution, climate change, and their burden in public health *Mohammad-Sadegh Hasanvand, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	Determinants of health in a social, cultural and societal context *Pomohaibo Kateryna, Ukraine*
10:30-11:00	13:30-14:00	15:00-15:30	Modern understanding of health policy and its implementation in the public health system *Nesterenko Valentyna, Ukraine*

Week 5: Week of Dentistry
May 11th-12th
Tuesday, May 11th

GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	Save it or extract it? Decision making in endodontics *Mohammad Hossein Nekoofar, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	New options in functional rehabilitation *Mohammad Bayat, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	Smart mechanics in orthodontics - preventing side effects. *Kryvenko Liudmyla, Ukraine*
10:30-11:00	13:30-14:00	15:00-15:30	Overview of Novel Periodontal Regeneration Protocols including Laser Assisted New Attachment Procedure *Amarender Vadivelu, Fiji*

Week 5: Week of Dentistry May 11th-12th Wednesday, May 12th			
GMT	Kyiv Time	Tehran Time	Subject
09:00-09:30	12:00-12:30	13:30-14:00	The future of dentistry is now! *Marzieh Alikhasi, Iran*
09:30-10:00	12:30-13:00	14:00-14:30	The role of the health of periodontium in the success of prosthetic treatment *Siamak Yaghobee, Iran*
10:00-10:30	13:00-13:30	14:30-15:00	Zygoma implantation: limits and possibilities *Chingiz Rahim oglu Rahimov, Azerbaijan*
10:30-11:00	13:30-14:00	15:00-15:30	The role of occlusion in the formation of the professional ideology of a dentist *Berezhna Olena, Ukraine*

Friday, May 14th: Day of Student Presentation

GMT	Kyiv Time	Tehran Time	Subject
09:00-11:30	12:00-14:30	13:30-16:00	-Students' talk; each 5 minutes -Closing Session

Guest Lecturers

Week of Medicine (*Day of Internal Medicine & Day of Pediatrics)*

Akbar Soltani

Evidence-based medicine

- **Associate Professor of Endocrinology, Evidence-Based Medicine & Critical Thinking Working Team, Endocrinology and Metabolism Research Institute, Tehran University of Medical Sciences, Tehran, Iran**

Anahita Sadeghi

Clinical reasoning in internal medicine; analytical thinking: approach to difficult cases in internal medicine

- **Associate Professor of Internal Medicine, Digestive Disease Research Center, Digestive Disease Research Institute, Tehran University of Medical Sciences, Tehran, Iran**

Ali Ali Asgari

Clinical reasoning in internal medicine (part 2); pattern recognition: the example of obstructive jaundice

- **Assistant Professor of Internal Medicine, Digestive Oncology Research Center, Digestive Diseases Research Institute, Tehran University of Medical Sciences, Tehran, Iran**

Week of Medicine (*Day of Internal Medicine & Day of Pediatrics)*

Kadykova Olga

Congestive heart failure

- **Doctor of Medical Science, Professor of The Department of Internal Medicine No. 2 and Clinical Immunology and Allergology Named After Academician Lubov Malaia of Kharkiv National Medical University, Kharkiv, Ukraine**

Rostyslav Smachylo

Acute Pancreatitis

- **Chief of Hepatobiliary and Pancreatic Surgery Department of Zaytsev Insitute of General and Urgent Surgery of National Academy of Medical Sciences of Ukraine, Doctor of Medical Sciences, Professor of The Department of Surgery of Kharkiv National Medical University, Kharkiv, Ukraine**

Behdad Gharib

Pediatric CPR

- **Professor of Pediatrics, Department of Pediatric Intensive Care Unit, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran**

Week of Medicine (*Day of Internal Medicine & Day of Pediatrics)*

Keyvan Mirnia

Neonatal hyperbilirubinemia

- **Professor of Pediatrics, Department of Pediatrics, Faculty of Medicine, Pediatric Health Researches Center, Tehran University of Medical Sciences, Iran**

Tetyana Chaychenko

Pediatric obesity today

- **Doctor of Medicine, Professor of The Department of Pediatrics No. 1 and Neonatology of Kharkiv National Medical University, ESPE Obesity Working Group Coordinator, World Obesity Member, SCOPE National Fellow, Kharkiv, Ukraine**

Lazurenko Viktoriya

The problem of placenta's dysfunction in pregnant women with extragenital pathology

- **Doctor of medicine, Professor, Head of The Department of Obstetrics and Gynecology No. 2 of Kharkiv National Medical University, Kharkiv, Ukraine**

Week of Medicine (*Days of Advanced Technologies in Medicine & History of Medicine)*

Anton Tkachenko

Food additives: Are they useful or detrimental?

- Doctor of Medicine, Acting Director of The Research Institute of Experimental and Clinical Medicine, Kharkiv National Medical University, Kharkiv, Ukraine

Nasrollah Tabatabaei

Nanotechnology to the rescue

- School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran

Gholamreza Tavousi Dana

Molecular medicine mediates diagnosis for SAR-CoV-2

- School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran

Week of Medicine (*Days of Advanced Technologies in Medicine & History of Medicine)*

Dmytro Katsapov

Diagnostics and treatment of COVID-19. A year of experience.

- **Associate Professor of The Department of Infectious Diseases of Kharkiv National Medical University, Kharkiv, Ukraine**

Bruno Bonnemain

The history of pharmacy and medicine: Why be interested in it?

- **President, International Academy for the History of Pharmacy, France**

Arman Zargaran

Insights into some achievements on medical and pharmaceutical issues in Sassanid era

- **Assistant Professor of History of Medicine, School of Persian Medicine, Iran**

Week of Medicine (*Days of Advanced Technologies in Medicine & History of Medicine)*

Georgi Tomov

History of Medicine in Plovdiv

- **DMD, MSc, PhD, Medical University of Plovdiv, Plovdiv, Bulgaria**

Mohammad Sadr

Application of orthopedic cast in leg fracture treatment in the Islamic era

- **Faculty Member of the Department of the History of Science at the Encyclopedia Islamica Foundation, Tehran, Iran**

Vadym Ilin

Semashko system and overcoming epidemics of infectious diseases

- **PhD, Candidate of Historical Sciences, Associate Professor of The Department of Social Sciences of Kharkiv National Medical University, Kharkiv, Ukraine**

Week of Medicine (*Days of Advanced Technologies in Medicine & History of Medicine)*

Olena Semenenko

Outlines of European Antiseptics in the Second Half of the 19th Century

- **Fund Keeper of The History Museum of Kharkiv National Medical University, Kharkiv, Ukraine**

Kadircan Keskinbora

Management of common diseases and health services during the early years of the Turkish Republic

- **Professor of Ophthalmology & Head of Department of History of Medicine, Bahcesehir Univ. School of Medicine, Istanbul, Turkey**

Cherilyn Lacy

Medical care for civilians in Lyon, France, during the First World War

- **Professor of History & Coordinator of Public Health Program, Hartwick college, New York, USA**

Week of Rehabilitation

Mohammadreza Hadian

Robotic gait rehabilitation for CNS disorders

- **Professor of Physiotherapy, School of Rehabilitation, Tehran University of Medical Sciences, Iran**

Azadeh Shadmehr

Myths of chronic low back pain: New concepts in physiotherapy

- **Professor of Physiotherapy, School of Rehabilitation, Tehran University of Medical Sciences, Iran**

Wolfgang Friedrich Paul Bauermeister

State of the Art Diagnosis and Treatment in Pain and Sports Medicine

- **Professor of The Department of Physical Rehabilitation and Sports Medicine of Kharkiv National Medical University, Ukraine, Head of Pain Institute, Munich, Germany**

Week of Rehabilitation

Katharina Bauermeister

A Novel Large Area 2-D Shear Wave Elastography Approach to Assess thePhysical Properties of Muscles and Fascias

- Conservative and Rehabilitative Orthopedics, Faculty of Sport and Health Science, Technical University Munich, Germany

Volodymyr Korostiy

Psychological services in University clinic in complex rehabilitation of patients with post-COVID syndrome

- Director of The University Clinic, Head of Psychosomatic and Physiological Rehabilitation Centre of University Clinic, Kharkiv National Medical University, Kharkiv, Ukraine

Michael Nitsche

Non-invasive brain stimulation for rehabilitation after stroke

- Professor and Scientific Director, Leibniz Research Centre or Working Environment and Human Factors, IfADo

Week of Rehabilitation

Siamak Bashardoust Tajali

Photobiostimulation: New approach for modern rehabilitation

- Assistant Professor of Physiotherapy, School of Rehabilitation, Tehran University of Medical Sciences, Iran

Reza Hoseinabadi

Introduction to vestibular rehabilitation

- Assistant Professor of Audiology, School of Rehabilitation, Tehran University of Medical Sciences, Iran

Abdullah Alkharabsheh

Pain medicine and Rehabilitation of common knee injuries and conditions (Pain Physician perspective view).

- Specialist in Pain Relief, Anesthesia and Intensive Care, Member of Jordan Society of Anesthesia, Intensive Care and Pain Management, Jordan University of Science and Technology, Jordan

Week of Rehabilitation

Andriy Istomin

Biomechanical substantiation of the methods of restorative treatment in pelvic injuries

- **Head of The Department of Physical Rehabilitation, Sports Medicine With a Course of Physical Education and Health of Kharkiv National Medical University, Kharkiv, Ukraine**

Amir-Homayoun javadi

tDCS in post-stroke aphasia

- **Senior Lecturer in Cognitive Psychology / Cognitive Neuroscience, University of Kent**

Week of Nursing and Midwifery

Arpi Manookian

The significance of shared humanity during the COVID-19 pandemic

- Associate Professor, Medical-Surgical Nursing Department, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.

Elham Ebrahimi

Experiences and challenges of maternal care in labor and delivery in the COVID-19 pandemic

- Assistant Professor of Midwifery, Midwifery Departmen,School of Nursing and Midwifery,Tehran University of Medical Sciences,Tehran, Iran.

Olena Pionova

The crucial value of nursing in palliative care

- Associate Professor of The Department of Propedeutics of Internal Medicine No. 2 and Nursing Care of Kharkiv National Medical University, Kharkiv, Ukraine

Week of Nursing and Midwifery

Vygivska Ludmila

The problem of perinatal infections at the present stage of medicine development: clinical aspects

- **Associate Professor of The Department of Obstetrics, Gynecology and Pediatric Gynecology of Kharkiv National Medical University, Kharkiv, Ukraine**

Marzieh Hasanpour

Review on the Pandemic Fatigue: Reinvigorating the public to prevent COVID-19: World Health Organization Policy Framework for Supporting Pandemic Prevention and Management

- **Professor of Nursing, Pediatric and Neonatal Intensive Care Nursing Education Department, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.**

Maryam Esmaeili

Respiratory care considerations in COVID-19

- **Associate Professor of Nursing, Critical Care and Management Department, School of Nursing and Midwifery, Tehran University of Medical Sciences(TUMS), Tehran, Iran**

Week of Nursing and Midwifery

Annemarie Padmos

COVID-19 care at the ICU in the Netherlands

- **BSc in ICU Nursing, MSc in Pain Management, Working at Ikazia Hospital, Rotterdam, Netherlands**

Gryshchenko Mykola

The importance of oocyte number for IVF results

- **Doctor of Medical Sciences, Professor of The Department of Obstetrics and Gynecology No. 2 of Kharkiv National Medical University, Head of The Clinic of Reproductive Medicine Named After Academician Gryshchenko, Kharkiv, Ukraine**

PID Week

Nima Rezaei

Opening session - in memory of Prof. Asghar Aghamohammadi

- **Professor of Clinical Immunology, Research Center for Immunodeficiencies, Children's Medical Center, Tehran University of Medical Sciences, Tehran, Iran**

Klaus Warnatz

Probing Common Variable Immunodeficiency - in memory of Prof. Asghar Aghamohammadi

- **Department of Rheumatology and Clinical Immunology, Medical Center, Faculty of Medicine, Center for Chronic Immunodeficiency (CCI), Medical Center, University of Freiburg, Freiburg, Germany.**

Tim Niehues

Playing with fire - Type-I interferons in health and disease

- **Center for Child Health and Adolescence, Helios-Klinikum Krefeld, Academic Hospital RWTH Aachen, Lutherplatz 40, 47805 Krefeld, Germany.**

PID Week

Teresa Español

Diagnosis of PID: from easy tests to molecular studies

- **Immunology Unit, Vall d'Hebron University Hospital, Barcelona, Spain.**

Stephan Ehl

The HSCT decision in patients with Profound Combined Immunodeficiency (P-CID): a prospective cohort study

- **Faculty of Medicine, Center for Chronic Immunodeficiency (CCI), Medical Center - University of Freiburg, Institute for Immunodeficiency, University of Freiburg, Freiburg, Germany.**

Jean-Laurent Casanova

Genetic and immunological causes of life-threatening COVID-19

- **Laboratory of Human Genetics of Infectious Diseases, Necker Branch, INSERM U1163, Necker Hospital for Sick Children, University of Paris, Imagine Institute, Paris, EU, France. St. Giles Laboratory of Human Genetics of Infectious Diseases, Rockefeller Branch, The Rockefeller University, New York, NY, USA.**

PID Week

Kathleen Sullivan

COVID-19 in PID

- Division of Allergy and Immunology, The Children's Hospital of Philadelphia and the Department of Pediatrics at the Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania, USA.

Fabian Peissker

COVID-19 in Patients with PID and SID

- Head of Medical Education region MEAF, Biotest AG, Germany

Vicki Modell and Fred Modell

Earliest Possible Diagnosis – How You Can Make it Happen; How You Can Make it Matter; How You Can Do it Now!

- Jeffrey Modell Foundation (JMF), New York City, USA

PID Week

Hirokazu Kanegane

Revisiting X-linked agammaglobulinemia

- Department of Child Health and Development, Graduate School of Medical and Dental Sciences , Tokyo Medical and Dental University (TMDU) , Tokyo , Japan.

Bodo Grimbacher

Genetics in PID: from black and white to grey

- Center for Chronic Immunodeficiency, Medical Center, Faculty of Medicine, University of Freiburg, Freiburg, Germany.

Waleed Al-Herz

The Epidemiology of Inborn Errors of Immunity in the Middle East and North Africa- in memory of Prof. Asghar Aghamohammadi

- Department of Pediatrics, Faculty of Medicine, Kuwait University, Allergy & Clinical Immunology Unit, Pediatric Department, Al-Sabah Hospital, Kuwait City, Kuwait

PID Week

Andrew Gennery

21st Century management of CGD - triumphs and challenges

- **Translational and Clinical Research Institute, Newcastle University, Newcastle upon Tyne, United Kingdom.**
  Paediatric Stem Cell Transplant Unit, Great North Children's Hospital, Newcastle upon Tyne, United Kingdom.

Anne Puel

Hyper IgE syndrome

- **Laboratory of Human Genetics of Infectious Diseases, Necker Branch, Institut National de la Santé et de la Recherche Médicale, U980, and University Paris Descartes, Necker Medical School, 75015 Paris, France.**

Mirjam van der Burg

Ataxia telangiectasia and a link to consideration for newborn screening

- **Department of Pediatrics, Laboratory for Pediatric Immunology, Leiden University Medical Center, Leiden, The Netherlands**

PID Week

Sergio Rosenzweig

IKAROS-associated diseases: a broad spectrum of manifestations

- Immunology Service, Department of Laboratory Medicine, National Institutes of Health (NIH) Clinical Center, Bethesda, MD, USA.

Jordan S. Orange

NK cell deficiencies

- Department of Pediatrics, NewYork Presbyterian Morgan Stanley Children's Hospital, Columbia University Vagelos College of Physicians and Surgeons, New York, NY, USA.

Ismail Reisli

CD19 deficiency: From beginning to date

- Chief of Pediatric Immunology and Allergy, Necmettin Erbakan University, Faculty of Medicine, Department of Pediatrics, Konya, Turkey

PID Week

Safa Baris

Hyperactive STAT1 signaling operates dysregulated immune profile in STAT1 GOF disease partially reversing with ruxolitinib

- Marmara University Faculty of Medicine, Division of Pediatric Allergy and Immunology, İstanbul Jeffrey Modell Diagnostic and Research Center for Primary Immunodeficiencies, İstanbul, Turkey

Gulnara Nasrullayeva

Pathology of the organs of vision in patients with primary immunodeficiency

- Research Immunology Laboratory, Department of Allergy and Immunology, Azerbaijan Medical University, Baku, Azerbaijan

Ahmet Ozen

Inborn errors of immunity predominantly affecting the gut

- Division of Allergy and Immunology, Department of Pediatrics, School of Medicine, Marmara University,
  Istanbul Jeffrey Modell Diagnostic Center for Primary Immunodeficiency Diseases,
  The Isil Berat Barlan Center for Translational Medicine, Istanbul, Turkey.

Week of Public Health

Amirhossein Takian

Global public health in COVID-19 aftermath: the role of school of public health in low and middle-income countries

- **Professor, Department of Global Health & Policy, School of Public Health, Tehran University of Medical Sciences, Iran**

Ali Akbari Sari

An introduction to the Iranian health system

- **Professor, Department of Health Management, Policy & Economics, School of Public Health, Tehran University of Medical Sciences, Iran**

Simin Nasseri

Water Access and Wastewater Treatment in Covid 19 Pandemic era

- **Professor, Vice Dean for Research, School of Public Health, Tehran University of Medical Sciences, Iran**

Week of Public Health

Tetyana Chumachenko

Adverse Events Following Immunization Surveillance in a COVID-19 Pandemic in Ukraine

- **Doctor of Medical Science, Professor, Head of The Department of Epidemiology of Kharkiv National Medical University, Kharkiv, Ukraine**

Elham Shakibazadeh

Health promotion; the role of healthcare professionals and society

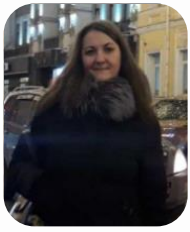
- **Associate Professor, Vice Dean for Education, School of Public Health, Tehran University of Medical Sciences, Iran**

Mohammad-Sadegh Hasanvand

Air pollution, climate change, and their burden in public health

- **Associate Professor, Director of Center for Air Pollution Research, Institute for Environmental Research; School of Public Health, Tehran University of Medical Sciences, Iran**

Week of Public Health



Pomohaibo Kateryna

Determinants of health in a social, cultural and societal context

- **Candidate of Medical Sciences, Associate Professor of The Department of Public Health and Healthcare Management of Kharkiv National Medical University, Kharkiv, Ukraine**

Nesterenko Valentyna

Modern understanding of health policy and its implementation in the public health system

- **Candidate of Medical Sciences, Associate Professor of The Department of Public Health and Healthcare Management of Kharkiv National Medical University, Kharkiv, Ukraine**

Week of Dentistry

Mohammad Hossein Nekoofar

Save it or extract it? Decision making in endodontics

- **Associate Professor, Endodontics Department, School of Dentistry, Tehran University of Medical Sciences, Iran**

Mohammad Bayat

New options in functional rehabilitation

- **Professor, Oral and Maxillofacial Surgery Department, School of Dentistry, Tehran University of Medical Sciences, Iran**

Kryvenko Liudmyla

Smart mechanics in orthodontics - preventing side effects.

- **Doctor of Medical Sciences, Professor of The Department of Pediatric Dentistry and Implantology of Kharkiv National Medical University, Kharkiv, Ukraine**

Week of Dentistry

Amarender Vadivelu

Overview of Novel Periodontal Regeneration Protocols including Laser Assisted New Attachment Procedure

- Professor of Periodontology of Fiji National University, Fiji

Marzieh Alikhasi

The future of dentistry is now!

- Professor, Prosthodontics Department, School of Dentistry, Tehran University of Medical Sciences, Iran

Siamak Yaghobee

The role of the health of periodontium in the success of prosthetic treatment

- Associated Professor, Periodontics Department, School of Dentistry, Tehran University of Medical Sciences, Iran

Week of Dentistry

Chingiz Rahim oglu Rahimov

Zygoma implantation: limits and possibilities

- **Professor and Chairman of The Department of Oral and Maxillofacial Surgery of Azerbaijan Medical University, President of the Azerbaijan Oral and Maxillofacial Surgeons Society, Baku, Azerbaijan**

Berezhna Olena

The role of occlusion in the formation of the professional ideology of a dentist

- **Candidate of Medical Sciences, Associate Professor of The Department of Prosthetic Dentistry of Kharkiv National Medical University, Kharkiv, Ukraine**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Oral Presentations

Kawthar Mohamed

Cognitive biases affecting the maintenance of COVID-19 pandemic

Kawthar Mohamed
School of Medicine, Tehran University of Medical Sciences, Tehran, Iran

All the countries and regions have already been infected with novel coronavirus disease (COVID-19). This super small guest has paralyzed the economy of the entire world, from the extreme fall of the oil prices to the bankruptcy of the great companies or even the small retail shops. The people's lifestyle is undergoing significant changes, by which it is leaving a negative impact on their psychological and physical health. The atmosphere is filled with dual accusations from each one of the governments and their citizens. Recognizing cognitive biases that have potentially affected decision-making during the COVID-19 pandemic would help in considering some behavioral changes for curbing this global viral infection.

Vimbai Matshalaga

The next round: Handling COVID-19 long haul patients

Vimbai Matshalaga
School of Medicine, Jilin University, China

The fight against the CoVid-19 pandemic is far from over but a new challenge has presented itself. The phenomenon now described as "long haulers" entails lasting effects of the CoVid-19 infection beyond the time of recovery of the patient. The scope of the variation of the symptoms is vast and there is little by way of literature to document it, as it is still an evolving situation. The pandemic has not only shaped global health as a whole but is slowly creating a rift between the patient and the examining physicians. The issue is unfortunately widespread, with many healthcare providers unsure how to proceed with dealing with this phenomenon. Many patients who are dubbed as "long haulers" have repeatedly been neglected by physicians despite having communicated their chief complaints which have undertones of ongoing recovery.
The onus, as research scientists, is to help bring awareness to the way in which such cases are handled in a clinical setting. The aim in such an undertaking would be to investigate clinician attitude and response toward long haulers and in essence help cast a wider net to encompass the different sides of the post CoVid infection's lingering symptoms. In so doing, the focus shifts from battling the disease itself to the patient and doctor interaction, ultimately ensuring that the patient is not only taken care of but is most importantly heard.

Leila Jahanshahlu

Nanocarriers: novel strategy for drug delivery to glioblastoma

Leila Jahanshahlu
School of Medicine, Zanjan University of Medical Sciences, Zanjan, Iran

Glioblastoma multiforme is the most common primary malignant tumor of the central nervous system and one of the deadliest types of cancer. One of the most important challenges in the treatment of this cancer is the blood-brain barrier, which has made it difficult to deliver drugs to the tumor. One of the most effective methods is the use of nanocarriers, which can have the greatest effect on tumor cells with targeted drug delivery. For example, scientists at the University of Michigan have developed nanoparticles of the albumin protein that have the ability to cross the blood-brain barrier and have yielded very promising results in the treatment of brain tumors. Researchers at the Massachusetts Institute of Technology have also used liposomes to deliver the drug temozolomide, which has had a very good effect on tumor destruction. Nanocarriers have minimal side effects and toxin effects due to their ability to cross the blood brain barrier, which is almost impenetrable, and their ability to deliver drugs in a targeted manner. these capabilities have led to nanotechnology providing effective methods for researchers to deliver drugs to the brain.

Kliepova A., Samotieikina A

Endothelial injury in young smokers

Kliepova A., Samotieikina A.
Scientific adviser: Associate Professor T. M. Popova
Department of Biological Chemistry, Kharkiv National Medical University, Kharkiv, Ukraine

Smoke of conventional tobacco cigarettes is associated with burdens of human morbidity and mortality. Electronic cigarettes (EC) were introduced by advertising as novel smoking approaches with harmless effect on health of smokers. The aim of our study was to assess of the vascular endothelial function in EC smokers. 60 subjects were recruited for the study. They were randomly divided into four groups. Group 1 (n = 15) was introduced by non-smoking subjects; group 2 (n = 15) – tobacco cigarette smoking participants have smoked for 3 years; group 3 (n = 15) – EC smoking subjects have smoked for 3 years; group 4 (n = 15) «HEAT STICK» cigarette smoking participants have smoked for 3 years. Concentration of nitrites, nitrates, S-nitrosothiols and endothelin-1 (ET-1) in the saliva of subject. The average age was 19 (18-21) years. The nitrate, nitrite and S-nitrosothiols levels were significantly decreased in saliva of subjects in groups 2, 3 and 4. At the same time, salivary ET-1 concentration was significantly elevated in participants of these groups. It must be noted a significant increase of the nitrate, nitrite and S-nitrosothiol levels in subjects of group 2, in contrast to 3 and 4. There were no significant differences of the above substances between groups 3 and 4. It shows the most harm of tobacco cigarettes to the health of the younger generation, though EC have atherogenic effect anyway.

Chupina Vilena

Assessment of premature aging in patients with essential arterial hypertension

Chupina Vilena, Jnied Laith, Ph.D. Khimich Tetiana
Department of Propedeutics of Internal Medicine No. 2 and Nursing Care. Kharkiv National Medical University, Kharkiv, Ukraine

Introduction. Assessment of biological age (BA) can predict the degree of deterioration in human health better than chronological age (CA). The aim of the study was to investigate the relationship between premature aging and biomarkers in patients with essential arterial hypertension (AH).
Methods: 87 patients (55% women; mean age 43.9 years, SD = 10.4, range 25-59) were included in the study and divided into group 1 (control, n = 22) and group 2 (n = 65), consisting of patients with hypertension of 1-2 degrees. Standard clinical and laboratory parameters were assessed in all patients. BA was assessed using CA and laboratory parameters according to the method of M. Levine et al. (2018).
Results: The difference between BA and CA was greater in group 2 compared to the control (+1.98 vs. +0.3 years). In group 2, significant associations with AD were observed between monocytes ($p = 0.000$), granulocytes ($p = 0.001$), triglycerides ($p = 0.003$), total cholesterol ($p = 0.001$), LDL cholesterol ($p = 0.031$), VLDL- cholesterol ($p = 0.002$) and glomerular filtration rate ($p = 0.03$), and in the control group 1, no such associations were found and BA correlates with haemoglobin ($p = 0.007$), platelet count ($p = 0.000$), erythrocyte sedimentation rate ($p = 0.000$), all fractions of bilirubin ($p \leq 0.005$), with waist circumference ($p = 0.023$).
Conclusions: The rate of premature aging in patients with hypertension of 1-2 degrees is accelerated in comparison with the control group and is associated with lipid profile and renal function. This circumstance should be taken into account for the early prevention of the progression and development of complications of hypertension in individuals with grade 1-2 to prevent the rate of vascular aging.

Dashchuk A.A., Derkach Y.V

Lepidopterism

Dashchuk A.A., Derkach Y.V.
Scientific advisor: As. Prof. Dobrzhanskaya E.I.
Department of Dermatology, Venereology and AIDS, Kharkiv National Medical University, Ukraine

Relevance: Lepidopterism is a caterpillar dermatitis. Caterpillars have short hairs (bristles) that may irritate the skin and cause conjunctivitis and rhinitis.
Purpose: To study the clinic of pathological processes after the contact of caterpillars with skin.
Materials and methods: We observed 12 patients with dermatitis after contact with caterpillars at the age of 18-60 years, 7 men and 5 women. In 8 patients immediately after contact appeared erythema, papules and vesicles. Skin manifestations were caused by mechanical irritation and the release of irritating substances. All patients presented complaints of severe, burning pain. In 4 patients skin manifestations appeared in 12 hours. In 5 patients linear skin lesions appeared where caterpillars crawled over the skin. Three patients in addition to skin manifestations developed rhinitis and conjunctivitis.
Results: The diagnosis was confirmed by examination under a microscope, revealing caterpillar hairs taken from the skin with adhesive tape, which glued to a glass slide. Treatment was based on application antihistamines: loratadine and cetirizin. In some cases to relieve itching sedatives were prescribed: valerian, motherwort. Corticosteroid ointments were used locally: clobetasol, betamethozone. In addition a diet with the exception of spicy, salty and fried foods was prescribed and bathing was excluded. In 10 cases within seven days, the rash regressed and in 2 patients within two weeks.
Conclusion: As a result of our research, it was revealed that after skin contact with caterpillars lepidopterism often develops. After complex treatment the manifestations on the skin completely disappeared during two weeks.

Ghazaleh Roozbahani

Skin damage among Iranian healthcare workers during COVID-19 pandemic

*Ghazale Roozbahani (presenter)1, Alireza Nikbakht Nasrabadi2, Touraj Harati khalilabad3, Marzieh Sobhani4, Neda Sheikhzakaryaee5 and Mahboobeh Shali6**

1 Nursing student, school of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran
2 Professor, school of Nursing and Midwifery, Medical surgical nursing department, Tehran University of Medical Sciences, Tehran, Iran
3 Researcher, Department of Health Economics, School of Health Management and Health Information Sciences, Iran University of Medical Sciences, Tehran, Iran
4 Instructor, Medical surgical nursing department, Islamic Azad University Dehaghan Branch, Isfahan, Iran
5 Assistant Professor, Pediatric nursing department, Kurdistan University of Medical Sciences, Sanandaj, Iran
6 Critical care nursing and management department, school of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran
*Corresponding author: Mahboobeh Shali, School of Nursing and Midwifery, Doctor Mirkhani St, Tohid Sq., Tehran, Iran

Introduction and aim: Since the outbreak of COVID-19, health care workers (HCWs) have been struggling with extra workload and stress. Due to long use of personal protective equipment (PPE) and hand hygiene, they are at risk of skin damage. This study aims to find the prevalence and clinical features of skin damage among Iranian HCWs.

Method: This cross-sectional study was carried out from June to August 2020 and six hundred HCWs including nurses, physicians, physiotherapist and midwives were included. To collect data a questionnaire was used which consisted of two parts. The first part was about demographic data. To collect data about skin damage Jiajla Lan et el questionnaire was used which was consisted of symptoms, type and site of skin damage.

Results: Skin damage was more seen in specific areas such as hands (96%), bridge of the nose (95%) and less in forehead (61%) and cheeks (57%). 99% of participants suffered from dryness and tightness. Participants also suffered from some side effects like desquamation (72%), erythema (75%) and maceration (39%). Hand dryness accounted for the most skin damages.

Conclusion: Wearing the proper size of PPE and using it properly can reduce the risk of damage. It is necessary to pay attention to the needs and health of the HCWs .Providing good quality equipment and designing appropriate guidelines for the use of PPE are essential to prevent skin damage among healthcare workers during COVID-19 crisis.

Hananeh Shaban Bolukat

Impact of the COVID-19 pandemic on the mental health of healthcare workers (HCWs)

Hananeh Shaban Bolukat
Tehran University of Medical Sciences, Tehran, Iran

The Covid-19 pandemic has compelled a remarkable mental burden on society.Huge numbers of daily deaths and the deep grief for loosing family members and friends in addition to the sudden alteration in common lifestyles are among the factors which have formed this burden.Working as a healthcare staff is stressful in its own way and simultaneous pandemic confrontation has added much more additional stressors to it.

Thus it is completely obvious that mental health of medical staff is in serious danger.

Due to their critical role in health system we aimed to focus on potential mental threats in the ongoing crisis in this essay.

The current pandemic era has highly overloaded medical staff with long hours of working, fatigue and numerous infected patients. Many of healthcare workers are deprived of spending time with their families because of fear of infecting them. For those who get refreshed by hanging out with their family members and friends it is regarded as extra tension. So this distance and loneliness leads to a serious conflict between their roles as a family member and as a medical staff.

It is prevalently observed that infected medical staff who are in quarantine, deeply feel guilty of leaving their colleges in frontline. It means that they are under an unprecedented physical and mental pressure .Moreover as a result of being a witness of huge numbers of deaths, the medical staff are highly prone to depression.

So due to their significant role in health system, remarkable schedule should be arranged to develop their mental indexes.

Maryam Shami

Effect of virtual reality on nursing education in COVID-19 pandemic

Maryam Shami, Behnam Ravandeh, Amirhossein Jalilvand, Sahar Khaksar, Sahar Mohseni
Nursing and Midwifery School, Tehran University of Medical Sciences, Tehran, Iran

Introduction: Coronavirus pandemic as a rapidly evolving condition has affected all members of the community, including the health care professions, which are the first line of care and treatment. Medical and nursing students due to hospital-based training are often in the most difficult working conditions and are victims of the virus. Universities around the world have responded quickly to the crisis by announcing an immediate shutdown. Medical and nursing schools are preparing to convert education from real class to virtual education to minimize educational disruptions. Virtual reality is a new technology in which a person plays the leading role of a scenario in the context of a virtual space. Today, the use of these emerging technologies in nursing and medical education is recommended and in some universities is considered as an educational aid program. Therefore, the purpose of this study is to review the literatures in the field of nursing and medical students' education using virtual reality technology.

Method: A literature search from 2019 to 2021 was done in PubMed, Web of Science, and Scopus ,using keywords of COVID-19 and Virtual reality due to find related studies.

Finding: Totally 7 studies included in this review. The results indicate that the emergence of exciting new technologies such as virtual reality technologies provide endless opportunities for nurses in a range of different conditions like taking care and giving educations to clients. Nursing schools need to be adopted to platforms through virtual reality to enable and support students learning across a virtual reality environment. Positive learning experiences, and immersive and interactive learning process have been reported as benefits of this new technology. Improving quality and safety in the healthcare system, reducing costs of training, providing real time, distance modelling to students are some other advantages of virtual reality. The most interesting aspects of the virtual reality technique can be manipulated and users interacted with the generated virtual environment. We firmly believe that this type of technological progress will undoubtedly contribute to improving medical and nursing training processes. Development in VR technology as well as the growing VR industry focus in the educational sector have centered on applications, educational content, and mobile learning using smartphones, collaboration, and 3D spatial interactions and experiences. Also VR can play a prominent role in the diagnosis, treatment planning, and post-therapeutic monitoring of patients and providing them with useful content and decreasing their anxiety about the process and also provides an important support tool for patients to effectively prepare themselves before any procedure.

Conclusion: The results indicate that using virtual reality can provide interactive learning, positive learning experiences, improve quality and safety in the healthcare system, and reduce costs of training. Future research should continue to explore the impact of the educational characteristics of VR on patients' emotional and physical needs.

Aboelnour Lina

Effectiveness of isometrics relaxation exercise in the treatment of myofascial dysfunction in patients with vertebral artery syndrome

Aboelnour Lina
Kharkiv National Medical University, Kharkiv, Ukraine

Myofascial dysfunction (MD) is a chronic condition that affects the fascia, causing inflammation and pain to a single muscle or a group of muscles. It is usually characterized by feeling muscle pain when pressing a trigger point usually fewer than Fibromyalgia also causes muscle weakness, rigidity, muscle spasms, and sleeping problem. Treatment of MD varies from pharmacotherapy of non-steroidal anti-inflammatory drugs and tricyclic antidepressants, also using myorelaxants to physical therapy. Also, postisometric relaxation (PIR) as a method of not medicamental treatment may be used. PIR is a well-known technique developed by Karel Lewitt. PIR is the effect, after a short duration of submaximal isometric contraction of the same muscle, of a decrease in muscle tone in a single or group of muscles.PIR functions On the notion of autogenic inhibition. Vertebral artery syndrome: As the patient rotates his neck, symptoms such as dizziness, vertigo, and blurred vision. It is characterized by the mechanical occlusion of the vertebral artery during head rotation as symptomatic vertebrobasilar insufficiency

Aim of the study: Compare the effectiveness of standard treatment of myofascial dysfunction by Myorelaxants to the application of PIR exercises taking to account the adverse effect of both treatments.

Methods and materials: 29 patients aged 18-44 women with normal blood lipid profiles participated in the study with their written informed consent. The exclusion/inclusion criteria were based on three things: 1) duplex scanning: patients with atherosclerotic changes and complex intima-media thickness of more than 1 mm were excluded; 2) on sonography with rotational probes: patients with changes of blood flow velocity more than 30% in one of vertebral artery; 3) on MRI: detection of structural changes in the cervical spine including instability, herniation, and unco-vertebral arthrosis on level C5-C6. Patients were randomly divided into two groups. The experimental group includes 14 patients who were assigned to PIR exercises on the level of Trapezius muscle, Obliquus Capitis Inferior muscle, Stair muscles three times per week during 2 weeks, while the control group includes 15 patients treated with (Baclofen 25 mg orally per day during 2 weeks), clinical tests included the threshold for pressure pain (PPT) and the visual analog scale (VAS) for pain score before and after treatment.

Results: In the experimental group it was noticed that 78% of the patient has improved on VAS from 6-7 to 2-3 in comparison to the control group the improvement of the pain varied from 6-7 to 4-5.

Conclusion: PIR shows a significant pain decrease in patients with MD on the phone of VAS with minimal side effects in comparison to myorelaxants treatment regime.

Karrar Hasan Albomahmood

The effect of combination of extracorporeal shock wave therapy (ESWT) and muscle energy technique (MET) on active trigger point in upper trapezius muscle

Karrar Hasan Albomahmood
Tehran University of Medical Sciences, Tehran, Iran

Background: According to the International Association for the Study of Pain, neck pain is one of the most common causes of absence from work. It has been suggested that myofascial trigger points (MTPs) may be present in patients with insidious mechanical neck pain of musculoskeletal etiology. MTPs located on the upper trapezius muscle are active with the greatest frequency. Regardless of the underlying mechanism of trigger points (TrPs) origination, the treatment of MTPs is usually directed to the trigger point in the palpable taut band aiming at reducing its sensitivity. A clinical relationship between TrPs and joint impairments has been suggested by several authors. **Objective:** to demonstrate the effectiveness of combination of extracorporeal shock wave therapy (ESWT) and muscle energy technique (MET) on active treating trigger points in order to relieve pain and increase ROM and improve function of the cervical region in fewer sessions. **Method:** Fifty four (54) patients with active TrPs in upper trapezius muscle will participate and randomly will divide into three groups. Group A (N=18) will receive MET only, group B (N=18) will receive ESWT only, and group C (N=18) will receive both MET and ESWT. The visual analogue scale (VAS), pressure pain threshold (PPT), neck disability index (NDI) questionnaire and range of active contra lateral flexion (CLF) will measure before and after each treatment. The patients will treat for three sessions in a one-week period with at least a two-day break between each session and then will assess all of the outcomes.

Peymaneh Habibi

The impacts of climate change on occupational heat strain in outdoor workers: a systematic review

Peymaneh Habibi
Tehran University of Medical Sciences, Tehran, Iran

Climate change will make physiological and perceptual responses worse which can be direct and indirect effect on occupational heat strain, specifically among outdoor workers exposed to heat and solar radiation. The present systematic review was conducted by gathering the impacts of climate change on occupational heat strain, gathering risk factors that may increase susceptibility to climate-related occupational hazards, and gathering measures for controlling the impacts of climate change on occupational heat strain in outdoor workers. In this study, three main databases PubMed, Scopus, and Web of Science were searched to find relevant literature on climate change and its effects using subject headings, appropriate Mesh terms and experts' opinion. A total of 6176 studies were identified for screening and 25 studies were eligible for data extraction. Increasing occupational heat strain during the hottest seasons of each year is a key feature of global climate change. The evidence suggests an imprecise but positive relationship between climate change and occupational heat strain in outdoor workers, and the most likely mechanism involves dehydration, fatigue, dizziness, confusion, reduced brain function, loss of concentration and discomfort. The findings reflect a decreased awareness of climate change impacts on occupational heat strain in outdoor workers during hot climate conditions and the economic benefits associated with averting heat strain and poor health outcomes. We need to develop a framework to strengthen workers' heat strain awareness for considering the effects of climate change on outdoor workers.

Negar Ebrahimi

Strategies to support dentistry students in the midst of Covid-19 crisis: challenges and innovative solutions for the future

Negar Ebrahimi
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After the outbreak of covid-19 infectious disease and its worldwide spread, routine activities of many dental institutions and the number of their patients have decreased. Dentistry students don't encounter enough clinical cases to achieve the intended clinical competence. Furthermore due to virtualization of the classes, interaction between students and educators have diminished. Little participation in collaborative activities has led to some decrease in students' motivation for studying; consequently the drop-out rate of students have increased. Social isolation, worry about getting the infection and financial problems caused by spread of the disease, have caused some mental problems such as anxiety, stress, depression and lack of motivation in students. The purpose of this review article is to investigate the current challenges and suggest some practicable and innovative solutions to provide cognitive and affective support for dentistry students; For instance, the use of telepsychiatry and CBT (cognitive-behavioural therapy) can help to improve mental health problems. VRS (virtual reality simulation) can reconstruct different clinical conditions which are necessary for dentistry students to encounter. Students' interaction and participation can be improved by employing different capacities of social media and IMS (instant messaging soft-wares). These technologies can also be used for implementing personalised and adaptive interventions to support the students.

Dwivedi Ananya

Detection of the age and gender-related variability of Schneiderian membrane

Dwivedi Ananya
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The CT provides an information regarding the inner part of the maxillary sinus in order to increase the success rate of every surgical procedure and simultaneously limits the intra and post-operative complications.

Aim of study: To detect the age and gender-related variations in the Schneiderian membrane

Materials and methods: Spiral computed tomograms (SCT) of 20 patients without pathological conditions in ENT organs were observed. All patients were divided into 4 groups, on the basis of their gender and age.

First group – male 18-30 yrs.
Second group – male – 45 – 60 yrs.
Third group – female – 18 – 30 yrs.
Fourth group – female – 45 - 60 yrs.

Result: In males 18-30 years old an average thickness was 1.025+0.42 mm on the left side and 1.36+0.42 mm on the right side.

In females 18 – 30 years old , the average thickness was 0.81 +0.69 mm on the left side and 0.99 +0.69 mm on the right side.

In males (45 – 60 years) the average thickness was 1.054+0.42 mm on the left side and 1.41+0.69 mm on the right side.

In females (45-60) we found average thickness as 0.715+0.42 mm on the left side and 1.027 +0.69 mm on the right side.

Conclusion: According to SCT findings the thickness of the Schneiderian membrane depends on both age and gender of patients.

Male patients tend to have a thicker membrane than female patients in 32.2% cases and the max thickness was in patients of age group 45-60 yrs.

Ailar Yousefbeigi

The Effect of Low-Level Laser Therapy on the Prevention and Treatment of MRONJ on 2010-2020

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Background: Medication-related osteonecrosis of the jaw (MRONJ) is a serious adverse consequence of the use of bisphosphonates prescribed in the treatment of osteopathies and some osteoporotic malignancies. Conventional treatment is not always effective, so it is necessary to use adjuvant therapies such as low-level laser therapy. This study reviewed the effectiveness of low-level laser therapies in the treatment of MRONJ.

Materials & Methods: In this review trial, the papers published to assess the effect of low-level laser on the treatment of MRONJ were retrieved from the electronic databases of PubMed/Medline, Google Scholar, Scopus, during 2010-2020. The selected papers were checked in terms of inclusion and exclusion criteria. The results of papers regarding the effect of low-level laser irradiation on the treatment of MRONJ were reviewed then.
Results : In this study, from a total of 63 papers selected at the first phase, 19 ones were used for the final review. All these papers had acceptable methodological quality as judged by the researchers and included systematic reviews, case reports, and human and animal randomized clinical trials.
Conclusion: There, low-level laser irradiation as an adjunctive treatment for the standard surgical treatment or as combined with other modalities showed good effects on the improvement of MRONJ lesions. However, these effects were limited to MRONJ at early stages in some cases. The need for randomized clinical trials with adequate follow-ups is stressed regarding the effect of low-level laser irradiation on the improvement of MRONJ lesions.

Melika Zanganeh Motlagh

Evaluation of the effect of hot beverages on the elasticity of elastomeric chain

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Chains are one of the tools used to close space, which is commonly used in Orthodontics. They are cheap, time saving and easy to use. The elasticity and force of the chains over time to apply a very efficient force is of great importance. Considering that a patient consumes variety of hot beverages and foods per day, it is important to evaluate the effect of these on elasticity of chains. The samples consisted of 315 6-loop chain closures, 4 of which were 23.5 mm and drawn (approximate distance between the canine to the second premolar for the patient who extracted the first premolar) and they were placed in a built-in jig and were divided into 4 main groups based on exposure, and each group had 90 members. Based on the time of the study of the force, these were divided into 6 subgroups of 15. The greatest reduction in strength was for all groups on the first day. Except for the first day that the arrangement of the forces was from the lowest to the highest control, tea, coffee and hot water, in the rest of the days, the forces were arranged from the lowest to highest tea, control, coffee and hot water. Also, on seventh day there was not a significant difference between the groups. Experimental results show that at the end of 28 days the control group differed significantly only in hot water (P value <= 0.05) Also between tea and coffee, coffee is preferred. As a result, it can be concluded that hot water can affect the elastomeric elasticity of chains.

Golnaz Tajmiri

Evaluation of the effect of green tea extract on postoperative pain following surgical removal of the impacted mandibular third molar

Golnaz Tajmiri
School of Dentistry, Isfahan University of Medical Sciences, Isfahan, Iran

Introduction: Although there are various protocols for post-operation pain control, pain following surgical removal of impacted molars has remained a principal concern among practitioners. Since green tea has anti-inflammatory and antibacterial properties, the current study aimed to evaluate the efficacy of green tea-extract local application in controlling post-operation pain following surgical extraction of the impacted mandibular third molar teeth.
Material and methods: In this double-blinded randomized controlled trial study with split-mouth design, 32 patients underwent bilateral removal of impacted third molars in 2 months. Green tea-extract-impregnated and saline-impregnated sterile gauzes were applied randomly to the surgical sites. Post-operation pain evaluation at 6, 12, 24, and 48 hours after surgery performed using the Visual Analog Scale-based questionnaire and the number of analgesics used after surgery.
Results: The total number of 32 patients with a mean age of 21.53 ± 2.5 years underwent a total of 64 surgeries. The mean score of the VAS, as well as the mean number of analgesic consumptions in the first two days after surgery, was decreased. Chi-square analysis showed that the differences in VAS scores were significant after using green-tea, at 6 and 12 hours (p-value < 0.05); But not at 24 and 48 hours after surgery (p-value > 0.05). The number of analgesics consumption was significantly lower in the green-tea group in comparison to the control group.
Conclusion: Green-tea extract can be an appropriate and safe choice to control the post-operation pain after surgical extraction of the impacted mandibular third molar teeth.

Fatemeh Sohrabpoor

Early childhood caries and its association with socioeconomic risk factors

Fatemeh Sohrabpoor
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Introduction: Early dental caries in childhood is one of the most prevalent health problems. This survey was conducted to determine the prevalence of early childhood caries and its contributing socio-economic factors among kindergarten children of Semnen, Iran.

Materials and Methods: In this cross-sectional study, 1332 children under 6 years from Semnan kindergartens were selected by census and examined for dental caries using WHO criteria. Variables including age, gender, educational level and occupation of parents and the level of kindergarten were recorded in a checklist. Additionally, the number of decayed, filled or extracted teeth was also calculated to represent the dmft score.

Results: From 1332 studied children, 61.1% had early childhood caries (ECC). Variables including age (OR= 2.21 and 95%CI: 1.90-2.56, p<0.001)) and maternal career (p= 0.002) showed significant relationship with ECC. Moreover, the incidence of ECC was 2.33 and 2.95 times greater among children with housewife mothers and mothers having non-medical jobs, respectively than that of children with mothers having medical jobs.

Conclusion: The results indicated a high prevalence of early childhood caries among Semnan children. Therefore, particular emphasis should be placed on educational and interventional programs, especially for mothers of children specifically at preschool age regarding their health care procedures and diet.

Markevych Yuliia

Clinical aspects of using modern methods of distalization of molars

Markevych Yulii
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Actuality: In modern orthodontic practice, there is often a medial change in the first permanent molars, especially due to the premature removal of second temporary molars or violation of the timing of eruption.

The purpose of this work: to analyze the clinical features of the use of methods of distalization of molars.

Materials and methods: During the study literature sources on the methods of distalization of molars were analyzed. In addition, eight clinical cases were analyzed at the University Dental Center (3 patient with non-removable appliance, 3 patient with removable appliances, 2 patient with micro implants).

Results: There are the following methods of distalization: using a removable appliance with a screw, non-removable appliance and the use of microimplants. The advantages of a non-removable device which consist of crowns on the first molars, a palatal plastic button, screws for distalization and spring are: constant action on the molars, and due to the fact that the device is not removable - does not depend on compliance with patient. But the disadvantages in most cases are tipping of the crowns of the teeth, absence of bodily movements, which can lead to a recurrence of the change of molars. It is also possible to change and rotate the front teeth. The advantages of using microimplants, which also includes a nickel-titanium arch, are the changes in the bodily positions of teeth, no negative impact on the front teeth and possibility to control movements of teeth without cooperation with the patient. The disadvantage is an invasiveness of the method. An ambiguous issue is the duration of treatment, which differs when using different methods. According to our own clinical observations, the time of distal tooth movement was shorter when using non-removable devices (12 weeks)

Conclusions: Thus, each of the modern methods of distalization of molars has its advantages and disadvantages that must be used to treat patients in each specific clinical situation to achieve the best result.

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Poster Presentations

Ali Albarhoomi

Effectiveness and adverse effects of Risperidone in children with autism spectrum disorder in University hospital in Oman

Ali Albarhoomi
Sultan Qabos University, Oman

Introduction: Autism spectrum disorders (ASD) is a neurodevelopmental disorder characterised by abnormal or delayed speech, poor social communication, and repetitive stereotypy behaviour. Although there is no established pharmacological treatment for the core symptoms of ASD, certain psychotropic medications may play a role in management of associated disruptive behavior. Risperidone has been widely used in ameliorating severe disruptive behavior in paediatric patients with ASD.

Aims & objectives: to examine the clinical effect and side effect profile of risperidone in management of severe disruptive behavior in children with ASD.

Method: A cross-sectional, retrospective study of all patients (N=95) who received risperidone over a period of two years (January 2017 to December 2018) at SQUH.
Results: Ninety-five patients were included in this research. Eighty-eight of them who can measure the efficiency of medication. the most common cause/complaints for the use of risperidone for treatment was aggression combined with impulsivity, stereotypies and ADHD 36.7% (n= 11), followed by ADHD 16.7% (n=5), and thirdly aggression with ADHD 13.3% (n=4). Almost thirty percent of the treatment failure group reported side effects, compared to 69.5% of the success group. Somnolence was the most common side effect in success and unsuccess groups, followed by weight gain.
Conclusion: This study showed that the use of risperidone at SQUH was in accordance with other standard international prescribed studies and guidelines.

Aliakbar kahkeshanipour

Important factors in choosing dentistry among first and second year dentistry students in Kerman University of Medical Sciences in 2005.

Aliakbar kahkeshanipour
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Career choice is one of the most important decisions every individual makes in his life. Meanwhile, choosing dentistry as a job should be accomplished with more precise considerations because changing this job is rarely possible. Thereby, this study was done to determine important factors in choosing dentistry among first and second year dentistry students in Kerman University of Medical Sciences in 2005.

Methods: All first and second year dentistry students from Kerman School of Dentistry (n=52) participated in this descriptive study. A valid and reliable questionnaire asking about students' demographic characteris- tics and their motivations for entering dentistry was distributed as group administered. The result was analyzed by Mann-Whitney U test along using SPSS 11.5.

Results: The most important motivation for choosing dentistry was "relationship with people", whereas manual working was the least important motive. Male students were more likely to be motivated by income while female students were more likely to be influenced by their parents' advice.

Conclusion: Relationship with people has a high position in dentistry profession. Therefore, dentistry is considered as a social job. Since, income is an important factor for male students compared to females, this factor can be used for encouraging male students to choose dentistry as their profession.

AmirHossein Jedi

AD and novel neuropsychiatry

AmirHossein Jedi
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In this presentation we want to take a brief look at the neuropsychological process of neurodegenerative diseases specially AD.
We will study the linkage of neurobehavioural symptoms and its linkage to the biological and molecular prognosis of neurodegenerative diseases.
This is an interesting topic and review in the field of neuropsychiatry in medicine.

Fatemeh Kermani

Investigation The Incidence of Stillbirth During the COVID-19 Pandemic

Fatemeh Kermani
School of Nursing, Gonabad University of Medical Sciences, Iran

The covid-19 pandemic have an adverse effect on the maternal and neonatal care systems all over the world. Stillbirth rates increased significantly during this period. This was a sudden and unknown increase for the treatment staff. In the present study compares the prevalence of stillbirths between the pandemic period and pre-pandemic, and explains the possible reasons for the sharp increase stillbirths in the pandemic period. For this purpose, search was conducted with the following 4 databases: PubMed, Google scholar, Scopus, Science Direct. Search terms included: COVID-19, stillbirth, fetal death, pregnancy outcome, SARS-COV-2, and these were used in different combinations. Search was limited to the year 2019-2021. 7 related studies were extracted and reviewed in this study. All studies showed increases in institutional stillbirth rate and neonatal mortality. They adjusted that institutional still birth rate during the pandemic period was 4times that of the per-pandemic period. Reasons include: not going to the hospital due to fear of contracting infection, no wanting to increase the burden of health services, reduce prenatal visits, change in obstetric services. Our results show that a direct impact of COVID-19 pandemic on prenatal care and pregnancy out come. However, more studies are needed to demonstrate intrauterine transmission of the virus and its effect on increasing stillbirth.

Fatemeh Karimi

Prevalence of depression after abdominal and vaginal hysterectomy

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Background and Aim: Abdominal and vaginal hysterectomy is the second most common cause of gynecological surgery after cesarean section in children of reproductive age. This surgery is performed as a treatment to get rid of benign problems in women, such as abnormal and prolonged bleeding and uterine prolapse. Many studies have shown evidence of an increased risk of depression after hysterectomy. Many women experience long-term depression due to loss of feminine traits, decreased sexual satisfaction, loss of fertility and menstruation. The purpose of this study is to review the prevalence of depression after hysterectomy.

Materials and Methods: The present study was conducted by searching Persian and English databases such as PUBMED, SID, IRANMAG with the keywords Hysterectomy, Anxiety, Depression until 2019.

Results: Studies show that the overall risk of developing chronic depression in women is about 10 to 15%. Many studies show that there is evidence of an increased risk of depression after hysterectomy and that there is a high risk of developing depressive symptoms up to 5 years or more after surgery. Some researchers have also reported depression and an increased incidence of psychological symptoms after a hysterectomy. According to the results of a study, the type of hysterectomy performed vaginally or abdominally has no effect on psychological complications, but the mental state of hysterectomized women is related to individual personality and support received before and after surgery or clinical signs of gynecological disease.

Conclusion: By reviewing the studies, there is a need for a study in a larger dimension and with a larger sample size. In all the articles found, studies have been conducted in countries such as Taiwan and Australia. Therefore, according to the studies, it is suggested that a study be conducted in this regard in Iran

Niloufar Yazdanpanah

A novel Variant of a *RAG-1* Mutation in a Patient with Cyclic Neutropenia

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Background: Recombination activating genes (RAG)-1 mutations result in severe combined immunodeficiency (SCID) with variable clinical manifestation spectrum. SCID is a group of rare inherited fatal disorders. Impaired frequency, development and function of T cells are featured in SCID. These patients develop a broad spectrum of severe infections at the first years of their life, which could be lead to the diagnosis. About 20 genetic defects are attributed in association with SCID. Recombinase-activating gene 1 and 2 (RAG1 and RAG2) represent crucial role in rearrangement of immunoglobulin and T cell receptor genes through B cell and T cell development processes. RAG deficiency is reported in association with a spectrum of immune-related disorders. Herein, we present a case of SCID patient with novel variant of RAG1 mutation.
Case Presentation: A 14-year old boy was referred to our clinic for evaluation of cyclic neutropenia. He had an episode of severe sepsis in the age of 20-day resolved by antibiotic therapy after 15 days. His past medical history was remarkable for recurrent episodes of pneumonia, otitis media, and upper respiratory tract infections since infancy. He got the routine vaccination regimen without any complication. He was born to a consanguineous family and the family history was negative for similar symptoms. No infantile death due to unknown or related diseases was known in the relatives. Other than a large wart on the sole, his physical examination was unremarkable. Laboratory data indicated cyclic neutropenia in his lifetime and normal levels of immunoglobulins. Bone marrow aspiration and biopsy revealed normal quantity and maturation in all three cellular lineages. Furthermore, flow cytometry was in the normal range. Whole exome sequencing of the patient demonstrated a homozygous RAG-1 variant c.1421G>A; p.Arg474His. He has been on no treatment without any complication.
Conclusion: We reported a novel benign variant of RAG-1 mutation (R474H) in a patient presenting with cyclic neutropenia. Nevertheless, this variant was reported in a patient with atypical SCID/Omen syndrome (a variant of SCID).

Fatemeh Qasempoor

Nurse shortage: What are the ethical issues in patient care? Is there a solution?

Fatemeh Qasempoor
Tehran University of Medical Sciences, Tehran, Iran

Lack of nurse staff is a global problem that in its simplest form is called the lack of balance in the supply and demand of health services. Ethical issues in patient care are one of the problems facing the lack of nurse staff. This study aims to review the ethical issues in patient care and solutions to this problem. PubMed, Medline, Google Scholar databases, WHO, SID, Magiran, and the IRNA news sites were used to achieve this goal, and the search was limited from 2000-2020. Several challenges were explained in the selected studies of which the quality loss in patient care in the form of medication and treatment errors, clinical accidents, early discharge and readmission, and ignoring the ethical and human relations were the most important ones. Key strategies include managers taking leads to change policies through regular periodic reviews, Making positive changes in workplace, Allocating more financial resources, Employing nurses in areas other than hospitals, Improving the social perception of nursing discipline, Empowering Nurses as moral agents in Moral Decision Making, Educate students by emphasizing the importance of the Nursing Code of Ethics and the Charter of Patients' Rights. Finally, awareness at the national level to address this issue from a macro level. The practical use of the mentioned solutions in solving the ethical issues created in patient care resulting from the lack of nurses seems beneficial since the lack of nurses is an important challenge in nursing in Iran. However, further studies are suggested in the future concerning implementing the mentioned strategies and their effectiveness.

Gita Khadivi

COVID-19 and Vitamin D

Gita Khadivi
Shahid Beheshti University of Medical Sciences, Tehran, Iran

These days we are in the grip of coronavirus disease 2019(covid_19) outbreak. A pandemic disease which is caused by Sars-Cov2. Hypo vitaminosis D is a widespread condition, too. The current study aimed to review articles that evaluated the possible correlation.

Methods: pubMed and science direct were searched for English language publications from March 2020 to November 2020 using specific keywords covid_19 and vitamin D. The research identified 63 articles.

Result: most studies approve the association of poor vitamin D status and increased risk of infection as well as prognosis when it occurs. Vitamin D has been proved to be protective against respiratory tract infections. It is an immunomodulator hormone with an antimicrobial effect by increasing defensin and cathelisidin. It might prevent the development of ARDS(acute respiratory distress syndrome) caused by Sarscov2 by reducing the level of renin, ACE(angiotenisin converting enzyme),angiotensin ll and increasing level of ACE2. Also vitamin D has an anti inflammatory role which can prevent cytokine storms induced by the virus. However few studies provided no evidence to support a potential link between vitamin D status and covid_19 infection.

Conclusion: We suggest that further studies are needed to determine the possible association between Sarscov2 infection and vitamin D status. On the basis of common vitamin D deficiency and increasing evidence supporting the use of oral vitamin D and its safety in low doses, it might be a great supplemention in the prevention and management of the covid_19 infection.

Hamidreza Ghazizadeh

COVID-19 and Occurrences of Acute Kidney Injury

Fatemeh Qasempoor
Tehran University of Medical Sciences, Tehran, Iran

Introduction: COVID-19, caused by the SARS-CoV-2 virus, was first discovered in Wuhan, China, and has since been declared a global pandemic and has caused significant mortality. By March 2021, about 115 million infections and about 2.5 million deaths from the SARS-CoV-2 virus have been reported. Main complications present as fever, dry cough, fatigue, and shortness of breath. COVID-19 aggrieves multiple organ systems, with acute kidney injury (AKI) a main complication in COVID-19 patients. SARS-CoV-2 also effects kidney function and acute kidney injury (AKI) has been reported up to 25% of patients.

Method: A literature search from 2019 to 2021 was done in PubMed, Web of Science, and Scopus, using keywords of COVID-19 and kidney injury due to find related studies.

Finding: Totally 9 studies included during this review. The results indicate that AKI is common in COVID-19 patients. AKI is forcefully related to hospital mortality. Angiotensin-converting enzyme 2 (ACE2) receptors, imbalanced Renin–angiotensin system (RAAS), microthrombosis, kidney infarction, systemic tissue hypoxia, reduced renal perfusion, endothelial and epithelial infection with SARS-Cov-2, and immune-mediated damage are important pathogens in AKI occurrence. AKI could be from the synergistic effect of virus-induced direct cytotropic effect and cytokine-induced systemic inflammatory response. Antiviral agents leading to tubulointerstitial diseases and some antibiotics which have been implicated in AKI, given for COVID-19 patients. Early detection, good hydration, nutritional support, regulating the circadian rhythm and expression pattern of RAAS, adequate hemodynamic support, abstinence of nephrotoxic drugs, and Renal replacement therapy (RRT) may help to management and treatment of COVID-19 patient with AKI.

Conclusion: The results indicate that AKI in patients with COVID-19 is related to Angiotensin-converting enzyme 2 (ACE2) receptors, imbalanced Renin–angiotensin system (RAAS), microthrombosis, kidney infarction, reduced renal perfusion, endothelial and, and immune-mediated damage. Further research is needed to determine the greater relationship between the occurrences of AKI in patients with Covid-19.

Kuzhnyova A.

Obesity effect on the menstrual function of women in reproductive age

Kuzhnyova A.
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Topicality: Worldwide, an increase in obesity and overweight is detected, which negatively affect certain functions of the human body, especially reproductive health. In predominantly, in women with obesity, there is a violation of the ovarian axis of the hypothalamus-pituitary gland, which often leads to menstrual dysfunction, leading to anovulation and infertility.
Goal: In this study, we examine the correlation between body mass index (BMI), waist circumference (WC) with oligomenorrhea (OMR) or irregular menstruation in women of fertile age.
Research methods and materials: This prospective cohort study enrolled 68 women aged from 18 to 40 years. All members were required to fill out a menstruation questionnaire. The criterion for inclusion in the OMR group was the duration of menstruation ≥38 days. The irregular menstruation is the duration of menstruation more than 8 days. WC, height, weight were measured in women, and BMI was calculated. Participants were divided into 4 groups according to BMI (≤18.5,18.5-24.9,25-29.9,≥30 kg/m^2). Women were also divided into 4 groups according to WC (≤70,70-79.9,80-89.0,≥90cm). Using binary logistic regression models, we assessed the odds ratio(OR) of different BMI and WC groups in reporting menstrual function. The ROC curve was used to compare the forecasted effects of BMI and WC with OMR and not regular menstruation.
Results and discussion: 63 participants completed the questionnaire correctly. Of the 63 participants, 5 women (7.9%) had a BMI ≥ 30 kg/m^2,10 (15.9%) had a WC≥ 90 cm, 5 (7.9%) had an OMR and 14 (22.2%) had irregular menstrual periods. Typically, women with BMI ≥30 kg/m^2or WC ≥ 90 cm should have longer menstrual cycle. The occurrence of not regular menstruation was over with BMI ≥ 30 kg/m^2(OR=2.5), WC ≥ 90 cm(OR=2.3). The ROC curve showed that all anthropometric parameters had a forecast effect, but there was insignificant difference in the prognosis of OMR. WC was better prognostic factor of irregular menstruation than BMI.
Conclusion: Obesity, OMR and not regular menstruation are spread in women of reproductive age, and obesity was associated with OMR and irregular menstruation. Abdominal obesity may have a greater prognostic effect for not regular menstruation.

Lakhno M.

The development of the adenohypophysis in the human embryo

Lakhno M.
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Embryogenesis of the pituitary begins in the embryo at the 12th Carnegie's stage, when the epithelium of the anterior part of the roof of the stomodeum forms the Rathke's pocket.
Stage 13 – conditions are created for the realization of the phenomenon of embryonic induction in the area of contact of the diencephalon, the underlying mesenchyme and the epithelium of the stomodeum. The initiating part of the formation of Rathke's pocket is the medial part of the epithelium of its anterior wall. The space separating the neural and epithelial parts is filled with mesenchyme.
Stage 15 – the thickening of a wall of a diencephalon (future neurohypophysis) is formed. Rathke's pocket retains a slit-like cavity and grows along with the brainstem curves, projecting the lateral walls of the stomodeum.
Stage 17-18 Carnegie – the thickening of the wall of the diencephalon forms a growth, which in the 19th stage occupies a position of the posterior lobe. The growth and movement of the neurohypophysis lead to deformation and final separation of the pharyngeal pocket from the stomodeum.
At stage 20 the epithelial and neutral rudiments of the pituitary gland are located in the position of the definitive pituitary gland. Around the epithelial rudiment is a loose fibrous connective tissue with an unformed differentiating capillary network.
In the following stages of the embryogenesis in the human adenohypophysis, the processes of definitive organogenesis are activated, zones of epithelial growth into the underlying mesenchyme of the intussusception type are formed, which are then transformed into tubular epithelial growths.

Mahmood Moradi

An Introduction to Fascial Distortion Model

Mahmood Moradi
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Fascial Distortion Model (FDM) is a novel diagnosis and treatment model developed in the early 1990s by an American osteopath named Stephen Typaldos. As an emergency physician, he found it a frustrating experience to learn how little medical and osteopathic treatments could help patients suffering from injury. Instead he developed FDM in an attempt to improve treatments by basing them on a more anatomical approach. FDM is rooted in the hypothesis that all musculoskeletal complaints can be traced back to three-dimensional deformation or distortion of a specific connective tissue structure: the fasciae. Manual techniques applied directly to these distortions purportedly reverse them. Six principal types of fascial distortions are described by Typaldos: Triggerband (twisted or cracked banded fascia), Herniated Triggerpoint (abnormal protrusion of tissue through fascial plane), Continuum Distortion (alteration of transition zone between fascia and bone), Folding Distortion (overly stretching or compression of folding fascia), Cylinder Distortion (entanglement of cylindrical fascial coils) and Tectonic Fixation (loss of gliding ability of fascial surfaces). Each of these distortions has its own clinical characteristics and patients show and describe it in a specific way. Treatment technique is also highly specific and so only suitable for that distortion.

I would like to present concept of FDM, its history of development and establishment, scientific proofs behind it and results of clinical trials.

Mehrnoosh PartoviRad

Response to the challenge of performing cardiopulmonary resuscitation in COVID-19 positive patients

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Background: In the pre- COVID-19 times, cardiopulmonary resuscitation (CPR) was indispensable in all patients with even a small chance of survival. About 7% of hospitalized COVID-positive patients develop cardiac arrest, of which only 3% survive. Today, resuscitators face the challenge of how to perform the best service at the best time, despite the high risk of virus transmission during CPR.
Methods: A review was done in available databases such as Pubmed and Google Scholar without time restriction, and 14 articles had inclusion criteria.
Results: Based on the results of studies, observing the following items helps solve related challenges: 1) Before performing CPR, its usefulness and salvage must be determined. 2) Manage scarce hospital resources and facilities. in times of crisis, follow a just and transparent triage system. 3) Personal Protective Equipment must always be available. also, it is necessary to pay attention to the rapid replacement of resuscitation during CPR to reduce fatigue and the quality of the resuscitation process. 4) The presence of personnel at the site of resuscitation should be limited to those whose presence is essential for CPR. 5) Resuscitation should be performed in a room that is separate and closed.

Discussion: Many treatment priorities have changed due to the COVID-19 epidemic. The most important principle in resuscitation, which is associated with risk-taking procedures (such as chest compression, intubation, and ventilation), is that "first do no harm to yourself" Instead of "first do no harm". Adherence to the above as well as the protocols specified for CPR minimizes the challenges facing resuscitators in dealing with CPR for COVID-19 positive patients.

Mikhaylova S.

Immunological features in adolescents with depressive disorders

Co-authors: E. Mykhailova, N. Bagatska
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Background and Aims: to compare immunological differences in the blood serum of children and adolescents as well as immunological comparison between girls and boys suffering from depressive disorders.

Patients and methods: Immunological analysis has been carried out in 20 adolescents with depressive disorders, who were under clinical observation in the State Institution "ICAHC NAMS", with no previous history of any psychiatric disorder or any medical disease that can affect the immune system. The immunological researches included: determination of serum C-reactive protein (CRP), hemolytic complement activity, and A, M, G immunoglobulins. Statistical treatment: SPSS Statistics 17.0.

Results: The results obtained do not show any significant differences in the levels of complement and C-reactive protein in all patients with depressive disorders. Serum IgA level has a statistically significant increase in 100% of boys, while in girls its increase is 38.5 % ($p<0.05$). Slight differences (38.5%) have been noticed in the serum IgG level of girls 8. Blood serum IgM levels demonstrate a statistically significant increase (57.1%) in boys ($p<0.05$). A significant increase in IgA level has been registered in children of 7-10 years as compared with adolescents of 15-17 years (100.0 % and 75.0 %, respectively; $p<0.05$), and the same result has been revealed in children of 11-14 years and adolescents of 15-17 years (67.7 % and 75.0 %, respectively; $p<0.05$), while there is no significant difference in IgA content in children of 7-10 years and 11-14 years. As for IgM, its level is not significantly increased in children of 7-10 years and adolescents of 15-17 years (67.7 % and 0.0 %; respectively; $p<0.01$).

Conclusion: Finally, depression may be a behavioral byproduct of early adaptive advantages conferred by genes that promote inflammation.

Mohammad Goudarzi Rad

The effect of auditory stimulation with job sound on consciousness level in comatose traumatic brain injury patients

Mohammad Goudarzi Rad
Tehran University of Medical Sciences, Tehran, Iran

Background and Objective: Traumatic brain injuries can cause significant changes in patients' level of consciousness. One of the consequences of brain damage is coma. Comatose patients are often at risk for sensory deprivation. Auditory stimulation is a treatment that awakes the brain's reticular activating system, which helps brain re-organization. This study aimed to investigate the effect of auditory stimulation with job sound on consciousness level in comatose traumatic brain injury patients.

Material and Methods: This clinical trial study was applied to 50 comatose traumatic brain injury patients admitted in the intensive care unit of Qom Forghani hospital. Patients were assigned to control and intervention groups with block allocation. Patients in the intervention group received auditory stimulation with their own job sound for 10 days, twice a day in the morning and evening shift and about 15-20 minutes for each time. The level of consciousness of patients in the intervention group before and after each stimulation (4 times daily) was evaluated. Patients in the control group did not receive auditory stimulation, and the level of consciousness of the patients in the control group was assessed 4 times a day with the same intervals as the intervention group. Patient's level of consciousness was measured by the standard Glasgow Coma Scale. The data were analyzed by SPSS 25 software.

Results: The results of this study showed that the GCS score on the first day was homogeneous in two groups (P=0/700). Increase of GCS score on the tenth day in the intervention group was more statistically significant than the control group (P=0/038).

Conclusion: Auditory stimulation with job sound increase the consciousness level in comatose traumatic brain injury patients.

Narges Shakerian

Potential Prophylactic and Therapeutic Effects of Respiratory Physiotherapy for COVID-19

Narges Shakerian
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New coronavirus disease 2019 (COVID-19) has succeeded in surprising the world with infecting more than 12 million people and claiming 560,000 lives in only six months. COVID-19 is associated with a spectrum of respiratory symptoms, especially dyspnea. Patients who progress to severe or critical condition display peripheral and posterior lung lesions bilaterally. These patients require admission to the intensive care unit (ICU); therefore, they are prone to ICU-related complications during disease and after recovery. Respiratory physiotherapy techniques, in particular, active techniques, might help the improvement of airway clearance and lung capacity in addition to the reduction of breathing effort during the active disease. In parallel, it might lead to the prevention of disabilities, resulting from infection and extended hospitalization in patients who recovered from COVID-19. This supports physiotherapy both as a prophylactic and therapeutic strategy for COVID-19.

Pegah Barat, Ali Bahreini, Erfan Teymuri

How nurses have been adapted to Covid-19 in Iran and all around the world

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Increasing in the number of corona virus patients who should stay in the hospitals puts many countries' health system under an unprecedented pressure which is beyond their capacity. We have nurses in frontline of this battle who are performing a great role to manage, classify and giving care to the patients who infected to this virus.
Their duties have been increased and it caused many problems for them such as their tiredness which comes from the overload in their responsibilities in one hand and in another hand we can see the huge amount of fear for getting infect by the virus and also transmit this to their families and relatives who are in contact with them.
Based on investigations, early into the pandemic, shortage of preventive and diagnosis equipment, as well as low usability of personal protective equipment were the most important challenge of nursing.
In this study we wanted to check out the nursing job characteristics and protocols that helped nurses to adapt to this situation in iran and the entire world.

Sadaf Takalloabdali

Influence of vitamin D deficiency on dental caries and eruption of primary teeth in children

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Dental caries can be one of the most common oral cavity diseases in children. Malnutrition and deficiency of some vitamins can be the reasons for appearing dental caries. Vitamin D deficiency is reported as one of the reasons for appearing dental caries in different ages like childhood. Lack of this vitamin can arise from lack of exposure to sunlight in some countries and malnutrition, especially in a low socioeconomic family.

Severe Vitamin D deficiency can increase defective tooth mineralization and cause dentin and enamel defects so these kinds of impairments can lead to elevation and progression of dental caries. Because of this reason physicians prescribe vitamin D supplements for children who are at risk of deficiency of this important vitamin and vitamin D supplement is suggested for children with severe early childhood caries for decreasing the prevalence of dental caries.

The delayed dental eruption can be caused by systemic disease or local problems. Also, Vitamin D level can be related to the eruption status of primary teeth. One of the reasons for the late eruption of primary teeth can be the severe deficiency of vitamin D.

Thus we can conclude that evaluating the level of vitamin D in the body is necessary because vitamin D deficiency not only can be one of the reasons for the late eruption of primary teeth but also can lead to the prevalence of dental caries in childhood. However, more clinical trials are required to test empirically this hypothesis.

Showkeena Qazi

Primary Immunodeficiency Diseases(PIDs)

Showkeena Qazi
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Although primary immunodeficiency disorders are relatively rare, intensive investigation of these disorders has yielded a great wealth of understanding of basic immunologic mechanisms in host defense, inflammation, and autoimmunity. In the late 1960s, observations on these diseases, with their associated infections and genetics, bisected the immune system into humoral immunity and cell-mediated immunity. Beginning in 1970, a unified nomenclature for the then-known primary immunodeficiency diseases was created by a committee convened by the World Health Organization. Since then, and later under the aegis of the International Union of Immunological Societies, an international committee of experts has met every 2 to 3 years to update the classification of PIDs. These advances have led to important developments for the treatment not only of the primary immunodeficiencies but also for patients with secondary immunocompromised states, autoimmune disorders, hypersensitivity, graft rejection, and graft versus host disease. Correction of a form of severe combined immunodeficiency represents the first true success of human gene therapy. Studies of immunodeficiency provide the most direct evidence concerning the nature of the immune response in man, and hence are of wide general interest. It is critical for the practicing primary care provider and allergist to maintain an index of suspicion for immunodeficiency. Early diagnosis offers the best opportunity for reduced morbidity and survival and is critical for accurate genetic counseling.

Timokhina D.

Poor oral hygiene among young people undergoing the adaptive quarantine

Timokhina D.
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Given the COVID-19 situation a lot of dental patients prefer to stay at home, which leads to the impossibility of control by the dentist of oral hygiene and the development of carious lesions of the teeth. Therefore, the topic of our study was to assess the risk factors of dental diseases among young people undergoing the adaptive quarantine. The survey on the Google forms platform received responses from 97 students at the age of 18-22. 23 students were examined. 91.7% of respondents considered that health status of their gums and teeth is well. The most common problems are difficult biting and chewing, speech disorder, xerostomia, bleeding gums. We also analyzed the diet of students. It was found that 95.8% of students eat high-carbohydrate food every day or often. 22.9% and 60.5% of students smoking and drink alcohol regularly respectively. 12.5% of students suffer from gastrointestinal and endocrine diseases. The results of the dental examination: 1) CFR – 7.2 (medium caries intensity); 2) OHI-S – 1.85 (poor hygiene); 3) CPITN – 16.7% of students showed bleeding during probing, the presence of supra- and subgingival plaque, probing depth – up to 3 mm (CODE 2). We found the most important risk factors – malnutrition (95.8%), alcohol (60.5%), poor hygiene (35.5%), smoking (22.9%) and general somatic pathology (12.5%). Thus our recommendation for students undergoing adaptive quarantine will include proper hygiene, diet and regular visits to dental office.

Yasaman Shafaie

Effect of COVID-19 on Kawasaki syndrome

Yasaman Shafaie
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Introduction: The Coronavirus disease 2019 (COVID-19) pandemic caused by a novel mutant coronavirus, also known as severe acute respiratory syndrome coronavirus2 (SARS-CoV-2), rapidly spread throughout China, and later on throughout the world, resulting in a global health crisis affecting all ages. SARS-CoV-2 infection is usually responsible for mild to moderate respiratory symptoms in children While COVID-19 infection in children is less severe and has lesser mortality, compared to adults. Kawasaki disease (KD) is the most common systemic vasculitis in children, predominantly affecting the medium sized and small vessels. There is some evidence indicating infectious agents as possible triggers for KD During the COVID-19 pandemic, vasculitis has been a presentation of COVID-19 in children. Multisystem inflammatory syndrome associated with the SARS-CoV-2 pandemic has recently been described in children (MIS-C), partially overlapping with Kawasaki disease (KD). acute febrile illness with abdominal pain and loose stools followed by shock, bulbar conjunctivitis and extremity edema are Symptoms of inflammatory syndrome with clinical features Were Kawasaki disease simulations.

Method: A literature search from 2019 to 2021 was done in PubMed, Web of Science, and Scopus, using keywords of COVID-19 and Kawasaki syndrome due to find related studies.

Finding: Totally 8 studies included during this review. The results provides evidence of a temporal association between the outbreak of Kawasaki-like disease and COVID-19 pandemic, with a 13 fold increase in the incidence of patients admitted with KD during the COVID-19 pandemic. This result also confirms that children with KD-SARS-CoV-2 have specific characteristics compared to children from a control cohort of classic KD. Patients with KD-SARS-CoV-2 presented gastrointestinal and neurological symptoms, and manifestations consistent with myocarditis. There is some evidence indicating that COVID-19 might present in children as a vasculitis. This condition is called “pediatric inflammatory multisystem syndrome temporally associated with SARS-CoV-2 infection (PIMS-TS). KD is suspected to have correlation with COVID-19 infection since an increase in KD incidence and changes in its clinical features were observed during the COVID-19 pandemic; however, some controversies exist.

Conclusion: Children and adolescents with KD-SARS-CoV-2 have specific features when compared with those with classic KD. These findings should raise awareness and facilitate the study of their pathogenesis but the association between COVID infection and KD is not conclusively proven.

Abdulrahman Almirza

Utilization Patterns of Antihypertensive drugs in the Management of Hypertension among Patients with Chronic Kidney Disease at Sultan Qaboos University Hospital

Abdulrahman Almirza
School of Medicine, Sultan Qaboos University, Oman

Objective and rationale: This study aimed to identify the patterns of utilization of antihypertensive drugs among hypertensive patients with chronic kidney disease (CKD) at Sultan Qaboos University Hospital (SQUH).
Subjects and Methods: This is a retrospective study in which medical records of 181 hypertensive patients with CKD who were above 18 years old who were treated during the period between 1st of January to 1st of July of 2019 were reviewed. SPSS program was used for the descriptive analysis. The categorized data were analyzed using the Chi-square test to determine the relationship between different variables investigated.
Results: 66.9% were having uncontrolled hypertension. Diuretics were prescribed for 63.5% of the study cohort followed by β-blockers (61.3 %). 90% of the patients were using the drugs orally. Furosemide was utilized by 55.8% of patients followed by Amlodipine (55.2%). majority of the patients were on multiple antihypertensive medications. Among patients with albuminuria; the most common group of drugs being used was β-blockers (63.3%) followed by diuretics (60.0%). Among patients without albuminuria, the most common group of drugs being used was β-blockers (63.6%) followed by CCBs (50.0%). The prescription of diuretics, CCBs, ARBs and direct vasodilators showed a significant difference among different stages of CKD.
Conclusion: Efforts should be emphasized on the importance of using antihypertensive drugs among CKD patients. Using preferred agents and optimal number of drugs is an important consideration to improve treatment outcome among CKD patients. Further research is needed to understand the reasons for the low utilization rates of ACEIs and ARBs used for CKD patients. Our findings suggest that there is a potential need to increase awareness among healthcare providers of the importance of using ACEIs/ARBs among CKD patients.

Hordiienko Polina, Kniazkova Iryna

The analysis of opportunities of the usage of artificial intelligence technologies in patients with COVID-19

Hordiienko Polina, Kniazkova Iryna
Kharkiv National Medical University, Kharkiv, Ukraine

Introduction: COVID-19 shook the world at the beginning of the 2020, and caused a crisis in the public health system of many countries. Information from patients with COVID-19 can be analyzed by using artificial intelligence (AI) technology for improving the diagnosis process, prediction of the course of the disease, developing treatment strategies and further medical rehabilitation.
Aim. To analize the opportunities of the usage of AI technologies in patients with COVID-19.
Materials and methods: We have analized the scientific materials of the usage of AI in patients with coronavirus disease, which were published in the National Medical Library "PubMEd.gov" from March 2020 to March 2021. 1197 works were found, 8 of them were selected for analysis.
Results: The analysis of scientific articles showed that the elements of AI are used for surveying patients with the questionnaires, for filling out patient documentation (filling out case-histories and prescriptions). Also it is used for laboratory and instrumental researching (the analysis of computer tomography and determination of areas of lung tissue damaging), for analysing clinical blood tests and biochemical parameters (BP). These BP are used to confirm the diagnosis of coronavirus disease: D-dimer, C-reactive protein, procalcitonin and interleukin-6. AI is used for assessment of the prognosis of the disease, determining the tactics of the patient treament and developing a rehabilitation programs for physical therapy (the analysis of respiratory and cardiovascular systems to correct distance and pace of walking, breathing exercises, etc.), psychological techniques, yoga, etc.
Conclusion: The usage of AI technologies can accelerate the diagnostic process, identify groups of unfavorable prognosis. Also it allows to timely adjust the diagnostic and treatment process of outpatients' and inpatients' treatment and medical rehabilitation of patients with coronavirus disease.

Vlasenko Olha

Prediction of intrauterine infection of high-risk pregnant women

Vlasenko Olha
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Relevance: An infection in the mother's body can be a risk factor for inauspicious results of pregnancy and childbirth. Despite the numerous researches devoted to intrauterine infection (IUI), it continues to occupy a leading position in the structure of maternal and perinatal morbidity and mortality.

Purpose of the study: To identify the factors contributing to the development of intrauterine infection of high-risk women according to the anamnesis.

Materials and methods: The research was carried out by the clinical base of the Obstetrics, Gynecology and Pediatric Gynecology Departments of KhNMU. There were carried out a retrospective survey of 130 birth histories. Statistical data processing was carried out using the general-purpose data processing software package "Statistica for Windows version 6.0".

Research results: Two groups were identified during the study: First (women with a physiological course of pregnancy) - 60 patients, which amounted to 46% of the total number of patients; Second (pregnant women with IUI) - 70 patients (54%). At the anamnesis assessing of these patients was found that inflammatory diseases of the upper respiratory tract of second group women were two times more frequent than in the first group. Diseases of the urinary system suffered 2.5 times more often than patients in the second group, sexually transmitted infections in the second group were registered 3 times more. Postponed childhood infections have occurred at the same rate in both groups.

Conclusions: The availability of inflammatory diseases of high-risk pregnant women provides to the development of intrauterine infection in this category of patients.

Bugaiev Vladyslav, Hrybyniuk Vladyslav

The features of nutritional behavior and the oral health of schoolchildren, being in quarantine on

Bugaiev Vladyslav, Hrybyniuk Vladyslav
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It is well known that a person's lifestyle can affect dental health. The lifestyle has changed greatly in the face of the pandemic. In quarantine, children spend more time at home, than usually. If bored or anxious, the child may exhibit negative nutritional behavior. The study of the features of nutritional behavior that schoolchildren represented on quarantine has a preventive focus.

Material and methods: The thirty-seven schoolchildren aged 9-12 years, who attended the clinic after the quarantine were questioned and examined, with determination of the Green-Vermillion and PMA index. Results: During the survey, 29 of respondents (78.4%) admitted changes in the daily routine and mode of action associated with distance learning. Objectively, 19 patients (51.4%) showed clinical signs of chronic catarhal gingivitis, 5 (13.5%) participants had initial manifestations of caries on previously intact surfaces and symptoms of secondary caries. The average value of the Green-Vermillion index was 1.8 ± 0.1 points, which refers to a satisfactory level, while in 4 children (10.8%) the index value exceeded 2.5 points. The PMA index was 13.03 ± 2.17%, which indicates mild gingivitis. Also children obtained habits of “forgetting to brush their teeth,” “constantly holding a lolypop in their mouth during a remote lesson,” “frequent snacking per day”, combined with decreased physical activity and open air walking time. Conclusions. Such habits increase the risk of dental diseases development.

Conclusion: Study shows that children obtained habits of “forgetting to brush their teeth,” “constantly holding a lolypop in their mouth during a remote lesson,” “frequent snacking per day”, combined with decreased physical activity and open air walking time. Such habits increase the risk of dental diseases development.

Stoian A.O.

Study of the distribution of risk factors of premature birth and their influence on pregnancy

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Background: Premature infants account for about 65-75% of early neonatal mortality, and stillbirth in PP is 9-14 times higher.
Aim: To study the prevalence of risk factors for premature birth and their impact on pregnancy.
Materials and methods: The analysis of PP risk factors was performed on the basis of survey data of 58 pregnant women in the first trimester. The mean age of the studied women was 29.8 ± 1.1, and every third patient (32.75%) was older than 35 years. 27.58% of the surveyed women were under 18 years old.
Results of the research: According to the assessment of the main indicators that affected premature birth, the following results were obtained: overweight (BMI = 25-30) - 32.2%, the age of the pregnant woman (less than 18, 18-35 years, older than 35 years) - 20.7 %, smoking during pregnancy - 17.9%, spontaneous termination of pregnancy up to 16 weeks - 12.3%, two or more scrapings of the uterine cavity - 9.8%, episodes of bleeding in the I trimester - 7.1%.
Conclusions: The study showed that the implementation of the strategy of stratification of risk factors for preterm birth from the moment of the first treatment of a pregnant woman allows to form a high-risk group of PE, which must be subjected to intensive monitoring during pregnancy. In particular, to conduct an additional examination - cervicometry, as well as to form and conduct preventive and curative measures aimed at preserving the pregnancy.

Sventozelska T.V., Pliekhova O.O.

Early postnatal period features in high-risk group women

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Relevance: The postpartum period is the first 6 weeks after delivery. During this time, significant physiological changes occur in the woman's body. The early postpartum period begins from the moment of placenta birth and lasts 2 hours. Blood loss during delivery is 250-300 ml, but no more than 0.5% of the woman's body weight.

Purpose of the study: To determine the features of early postpartum period course in high-risk group women.

Materials and methods: A retrospective analysis of the delivery histories of women who were hospitalized in maternity hospital No. 1 in Kharkov (clinical base of the Department of Obstetrics, Gynecology and Pediatric Gynecology) during for 2018 to 2020 was carried out. All examined women were divided into two clinical groups: Group I (control) - 20 birth histories of healthy pregnant women, II (main) - 25 birth histories of pregnant women with concomitant extragenital and gynecological pathology. Statistical data processing was carried out using the general-purpose data processing software package "Statistica for Windows version 6.0".

Results: In the early postpartum period, all women were injected with 10 IU of oxytocin intramuscularly, the pulse, blood pressure, and the state of the uterus were monitored, characteristics and volume of secretions and urine were assessed. In 10 (40%) patients of the II clinical group, the early postpartum period was complicated by bleeding, in a volume of 300-400 ml, in 2 (8%) - the volume of bleeding was more than 500 ml, in 8 (32%) - a defect in the placental lobule. In 2 (10%) women of the 1st clinical group, bleeding in the amount of 300-400 ml was registered and in 1 (5%) - a defect of the placental lobule.

Conclusions: The early postpartum period of high-risk group women is characterized by a complicated course and requires additional monitoring by medical staff.

Rusanov O.D., Bazian A.A.

Structural analysis of cognitive dysfunction in patients in the early postoperative recovery phase (EPRP)

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Relevance of the research: Early postoperative recovery phase psychoneurological disorder that develops in the early and persists in the late postoperative recovery phase and is characterized by multiple disorders of higher nervous activity.
Aim: Analyze the structure of cognitive dysfunction in the EPRP.
Materials and methods: The study was conducted by examination and neuropsychological testing using the Montreal Scale of Assessment of Cognitive Functions (MoSA) of 48 patients. All patients underwent abdominal surgery under general anesthesia without intraoperative complications.
Results: According to the results of the research, 5 patients (10.42%) entered the range of 20-22 points, which corresponds to a moderate degree of cognitive dysfunction, 41 patients (85.42%) had a score in the range of 23-25, which corresponds to a mild degree of cognitive dysfunction. , and 2 patients (4.16%) received 26-28 points, which is normal. The maximum number of points (30) was not registered in any of the patients (0%). We analyzed the structure of this syndrome.
Impaired concentration and attention of varying severity were recorded in 47 patients (97.92%), memory loss was observed in 39 patients (81.25%), speech disorders were detected in 23 patients (47.92%), executive function was affected in 22 patients (45.83%), conceptual thinking was impaired in 16 patients (33.3%), optical-spatial activity did not correspond to normal in 10 patients (20.83%), orientation was impaired in 33 of examined (68.75%), the ability to calculate was reduced in 11 patients (37.5%).
In 46 patients (95.83%) there were disorders in two or more areas of higher nervous activity, in 2 tested (4.16%) only one of these areas was affected.
Conclusions: In the EPRP, the most common ones are impaired concentration and attention, impaired orientation, memory loss and speech disorders. Of particular importance are the combination of lesions of two or more areas of higher nervous activity.

Nazal Ethar

Ultrasonographic parameters of common carotid artery in patients with comorbidity of non-alcoholic fatty liver disease and hypertension»

Nazal Ethar
Kharkiv National Medical University, Kharkiv, Ukraine

This study is conducted due to the high prevalence of non-alcoholic fatty liver disease (NAFLD) and hypertension (AH), which often have a comorbid course.

There were one main group: a group of patients with comorbidity of NAFLD and AH (121 people) and comparison groups: NAFLD (60 people), AH (30 people). The control group consisted of 20 healthy individuals. To study properties of the common carotid artery (CCA), was provided according to conventional methods.

Changes in all studied indicators were recorded in all groups of patients. Thus, disorders in the vascular wall were manifested by an increase in complex intima-media (CIM), pulse wave velocity (PWV) in the CCA, as well as a decrease in the degree of endothelium-dependent vasodilation (EHR), which significantly ($p<0,001$) distinguished these groups from the control.

The worst rates were in two groups of patients with AH, and these groups did not differ significantly. It should be noted that these indicators deteriorate in the comorbidity group, but without a significant difference ($p>0.05$). The PWV CCA was 8.30 ± 1.17 m/s in the comorbidity group and 7.89 ± 1.07 m / s in the isolated AH group ($p> 0.05$). The EDV was 7.73 ± 1.52% vs. 8.33 ± 1.26%, respectively ($p> 0.05$).

Thus, we found violations of speed indicators, CIM and EDV both in the NAFLD group and in the AH group (more serious). The worst indicators were found in the group of combined course of these diseases

Adriana Viola Miranda

Digital technologies for public health responses during COVID-19 pandemic: A literature review

Adriana Viola Miranda
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Since the COVID-19 pandemic started in December 2019, various digital technologies have been utilized for disease surveillance and symptoms screening. Many countries have incorporated digital technologies, including Internet of Medical Things (IoMT) systems or sensor-based contact tracing applications, in their public health responses/policies. The main advantage of these technologies is their ability to affordably provide real-time information and assessment. However, privacy concerns remain as a significant problem that resulted in public hesitancy to use the platforms. Developing countries also faced additional issues pertaining to their limited technology capabilities. In this review, we address the advantages and challenges of digital health technologies utilization to respond the public health issues related to COVID-19 pandemic.

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