



Proceedings of

WORLD DIABETES CONGRESS

July 15-17, 2019 Rome, Italy

Hosting Organization:
Inovine Conferences
2C Pecan Hill Drive Clinton
Mississippi, 39056 USA
Phone: +1-408-648-2233
contact@inovineconferences.org





DAY 1 JULY 15, 2019

Olimpica 1

09:00-09:30 – Registrations

09:30-10:00 – Opening Ceremony

KEYNOTE FORUM

10:00-10:45

Title: Diabetic Foot Infections-A practical approach for assessment and management

Nabil Al-Kayssi, University of Alberta, Canada



10:45-11:30

Title: Prescribing patterns of SGLT2 inhibitors in three tertiary Endocrinology referral centres in south Indian urban locations

Ramakrishnan Santosh, Magna Centres for Obesity, Diabetes and Endocrinology, India



GROUP PHOTO

Networking and Refreshments Break: 11:30-12:00 @ Foyer

SESSIONS

Diabetes | Diabetes in Pediatrics | Clinical Nutrition and Diet | Prevention and Treatment of Diabetes | Epidemiology and Genetics | Insulin Resistance & Medication | Education and Exercise

Session Chair: **Nabil Al-Kayssi**, University of Alberta, Canada

Session Co-Chair: **Miriam Kidron**, Oramed Pharmaceuticals Inc, Israel

12:00-12:30	Title: Pollution and Diabetes: The Link <i>Nagendra Kumar Singh, Diabetes and Heart Research Centre, India</i>
12:30-13:00	Title: Influencing the Human Micro biome for Better T2DM <i>Sean Hall, Medlab Clinical LTD, Australia</i>

Lunch Break: 13:00-14:00 @ Restaurant

14:00-14:30	Title: The end of injections? - Oral insulin as a model <i>Miriam Kidron, Oramed Pharmaceuticals Inc, Israel</i>
14:30-15:00	Title: New Onset Diabetes after Transplant Presenting in Diabetic Ketoacidosis <i>Mary Slessor Limbe, Aga Khan University, Kenya</i>
15:00-15:30	Title: Self-Monitoring of Blood Glucose in Gestational Diabetes Mellitus: Improvements in the remote monitoring by the doctor <i>Ramakrishnan Santosh, Magna Centres for Obesity, Diabetes and Endocrinology, India</i>

Networking and Refreshments Break: 15:30-15:45 @ Foyer

15:45-16:15	Title: Precision Medicine in Diabetes: Precision Medicine in Diabetes: Are we at a cross road? <i>Nagendra Kumar Singh, Diabetes and Heart Research Centre, India</i>
16:15-16:45	Title: Knowledge, Attitude and Practice towards Diabetes among Nationals and Long-term Residents of Qatar <i>Aiman Hussein Farghaly, Ministry of Public Health, Qatar</i>

16:45–17:15	Title: Knowledge Gap in Diabetes and Associated Factors among adult Population in the State of Qatar
	<i>Kholood Ateeq Al-Mutawaa Al Ahmed, Ministry of Public Health, Qatar</i>

Panel Discussion

DAY 2 JULY 16, 2019

Olimpica 1

KEYNOTE FORUM

10:00–11:00

Title: New Canadian Guideline for Basal Bolus Insulin Therapy (BBIT)

Nabil Al-Kayssi, University of Alberta, Canada



SESSIONS

Diabetes | Clinical Nutrition and Diet | Prevention and Treatment of Diabetes | Epidemiology and Genetics
| Insulin Resistance & Medication | Education and Exercise

Session Chair: **Nabil Al-Kayssi**, University of Alberta, Canada

Session Co-Chair: **Miriam Kidron**, Oramed Pharmaceuticals Inc, Israel

11:00–11:30	Title: The Circulating Level of Sirtuins and Superoxide dismutases in Type2 Diabetes
	<i>Abdullah M. AlKhalidi, King Fahad Armed Forces Hospital, Saudi Arabia</i>

Networking and Refreshments Break: 11:30-12:00 @ Foyer

12:00–12:30	Title: Oral Insulin and Exenatide: Further Steps Toward Reality
	<i>Miriam Kidron, Oramed Pharmaceuticals Inc, Israel</i>
12:30–13:00	Title: Education for Diabetes
	<i>Neto Mendes, CAJUFAC, Guinea Bissau</i>

Lunch Break: 13:00-14:00 @ Hotel Restaurants

POSTER PRESENTATIONS: 14:00-15:30 @ CATULLO

WDC 01	Title: Depressive Tendency of Patients with Type 2 Diabetes Mellitus on the Control of Metabolism and Blood Glucose
	<i>Minhee Lee, Gangnam Severance Hospital, South Korea</i>
WDC 02	Title: Knowledge, Attitude and Practice towards Diabetes among Nationals and Long-term Residents of Qatar
	<i>Aiman Hussein Farghaly, Ministry of Public Health, Qatar</i>
WDC 03	Title: Knowledge gap in Diabetes and associated factors among adult population in the state of Qatar
	<i>Kholood Ateeq Al-Mutawaa Al Ahmed, Ministry of Public Health, Qatar</i>

Networking and Refreshments Break: 15:45-16:00 @ Foyer

B2B Networking & Panel Discussion

Awards & Closing Ceremony

DAY 3 JULY 17, 2019

Networking & Lunch @ Restaurant

World Diabetes Congress

JULY 15-17, 2019 | ROME, ITALY



KEYNOTE FORUM

Day 1

WORLD DIABETES CONGRESS

July 15-17, 2019 | Rome, Italy



Nabil Al-Kayssi
University of Alberta, Canada

Diabetic Foot Infections-A practical approach for assessment and management

It is well known that one of major complications of diabetes is foot infection, which is defined as ‘soft tissue or bone infection below the malleoli’. It is the most common complication of diabetes mellitus leading to hospitalization and the most frequent cause of non-traumatic lower extremity amputation. Diabetic foot infections are diagnosed clinically based on the presence of at least two classic findings of inflammation or purulence. Infections are classified as mild, moderate, or severe. Most diabetic foot infections are polymicrobial. This type of infections are serious as most of the patients ignores them until get more serious as the patient usually does not feel any pain or feel minimal pain due to peripheral neuropathy and vasculopathy. In this presentation I will shed a light on this very important and serious diabetic complication and practical methods for management

The presentation will discuss the following points:

1. Clinical assessment of infected foot in diabetic patients and whether it is cellulitis, infected ulcer, septic arthritis and/or osteomyelitis.
2. Investigations, including blood and diagnostic imaging help in reaching the diagnosis.
3. The most common pathogens causes foot infections and appropriate selection and use of antibiotics

Biography:

Graduated from medical college in Baghdad/ Iraq and granted M.B.Ch.B. in 1984, then he finished a master degree in Human anatomy, embryology and neuroscience in 1994 from Iraq. He was a lecturer and assistance professor of Human Anatomy in Iraq for 12 years. In 1999 Dr. Al-Kayssi immigrated to Canada and obtained a full licence of medical council of Canada in 2005 and then Canadian board in Family medicine in 2009. Dr. Al-Kayssi worked as family and emergency physician and as a Hospitalist at different Canadian hospitals from 2001. Now Dr. Al-Kayssi works as a Hospitalist and intravenous Clinic staff physician, infectious diseases at Sturgeon Hospital, Site Lead, East Edmonton Health Centre and Clinical lecturer at University of Alberta, Faculty of Medicine in Alberta, Canada

nalkayssi@doctor.com

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Ramakrishnan Santosh
Magna Centres for Obesity, India

Prescribing patterns of SGLT2 inhibitors in three tertiary Endocrinology referral centres in south Indian urban locations

SGLT2 inhibitors are the latest entrants in the management of Diabetes. Ever since their introduction for diabetes care, numerous advantages like good efficacy, weight loss, no hypoglycemia and improvement in blood pressure have made it one of the frontline choices in management of hyperglycemia. Cardiovascular and renal outcome trials have shown outstanding benefits of the drugs. The latest diabetes management guidelines make a provision stating that may be the drug of choice if a patient has established CV disease or declining renal function. In this presentation, we look at how prescribing patterns of SGLT2 inhibitors are in a referral tertiary endocrinology centre. Patient characteristics for which these drugs have been preferred will be analyzed. Changes in the prescribing patterns after the CVOTs have been published will be presented. Also the factors that determine the choice of individual SGLT2i will also be presented. A comparison between the guidelines and actual practice as far as the position of these molecules in the algorithm of diabetes management will be presented.

Biography:

Ramakrishnan Santosh is the chief Consultant Endocrinologist at the Magna Centres for Obesity, Diabetes and Endocrinology, at its Hyderabad Filmnagar unit. He is a visiting consultant at Fernandez hospital, Hyderabad and Apollo Hospitals, Hyderabad. He has got done his MD Medicine training at JIPMER Pondicherry and done his DM (fellowship) in Endocrinology at the prestigious PGIMER, Chandigarh. He has 36 publications that include articles in indexed journals and text book chapters. He has addressed in more than 450 scientific forums. He has a keen interest in reproductive endocrinology, psychosocial aspects of Diabetes management and Gender dysphoric conditions.

dr.santosh@gmail.com

Notes:



World Diabetes Congress

JULY 15-17, 2019 | ROME, ITALY



SCIENTIFIC TRACKS & ABSTRACTS

Day 1

Day 1 July 15, 2019

Sessions:

Diabetes | Diabetes in Pediatrics | Clinical Nutrition and Diet | Prevention and Treatment of Diabetes | Epidemiology and Genetics | Insulin Resistance & Medication | Education and Exercise

Session Chair: **Nabil Al-Kayssi**, University of Alberta, Canada
Session Co-Chair: **Miriam Kidron**, Oramed Pharmaceuticals Inc, Israel

Session Introduction

Title: Pollution and Diabetes: The Link

Nagendra Kumar Singh, Diabetes and Heart Research Centre, India

Title: Influencing the Human Micro biome for Better T2DM

Sean Hall, Medlab Clinical LTD, Australia

Title: The end of injections? - Oral insulin as a model

Miriam Kidron, Oramed Pharmaceuticals Inc, Israel

Title: New Onset Diabetes after Transplant Presenting in Diabetic Ketoacidosis

Mary Slessor Limbe, Aga Khan University, Kenya

Title: Self-Monitoring of Blood Glucose in Gestational Diabetes Mellitus: Improvements in the remote monitoring by the doctor

Ramakrishnan Santosh, Magna Centres for Obesity, Diabetes and Endocrinology, India

Title: Precision Medicine in Diabetes: Precision Medicine in Diabetes: Are we at a cross road?

Nagendra Kumar Singh, Diabetes and Heart Research Centre, India

Title: Knowledge, Attitude and Practice towards Diabetes among Nationals and Long-term Residents of Qatar

Aiman Hussein Farghaly, Ministry of Public Health, Qatar

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Pollution and Diabetes: The Link

NK Singh

Diabetes and Heart Research Centre, India

In last few decades there has been an explosion in the prevalence of diabetes which cannot be fully explained only by the changes of classical lifestyle-related risk factors. There is limited evidence to suggest that decrease in physical exercise and increase in food intake are of large enough magnitude to explain this speed of epidemic of type 2 diabetes (T2D) in the present time. Recently, the role of other nontraditional risk factors is emerging. An increasing number of high to low quality studies indicates that persistent organic pollutants (POPs), air pollution and noise pollution could provide answer to unexplained explosive rise in diabetes prevalence. Time has come to look beyond gluttony and laziness in causation of T2D.

Persistent organic pollutants are organic compounds which have become part and parcel of modern lifestyle. These are resistant to environmental degradation and persist in the environment, these bioaccumulate in human and animal tissue and also in food chain. These act as endocrine-disrupting chemicals (EDCs) and thus interfere with the production, release, transport, metabolism, binding, action or elimination of natural hormones. Link with POPs and diabetes is of moderate grade. Among prospective data, most show positive results but results are not consistent across different POPs. An association between organochlorine exposure and T2D exists which includes also DDE, heptachlor, hexachlorobenzene (HCB), DDT and trans-nonachlor. Mechanistic studies do support this link. It is a serious public health issue which is so far not in limelight. Preventive measures exist to check POPs exposure but due to lack of awareness, nothing significant is being done.

The role of air pollution is underestimated. Not all of human studies of air pollution and T2D show positive associations, the clear majority do, although there is high risk of bias. A number of biological pathways can cause oxidative and endoplasmic reticulum stress, systemic and visceral adipose tissue inflammation and endothelial and mitochondrial dysfunction, which lead to abnormal insulin signaling and insulin resistance. Most of the studies have been derived from outdoor air pollution which also holds true for indoor air pollution. Taken together though not all findings from every study were positive, the majority of epidemiological studies support an association between air pollution and diabetes. But it must be appreciated that not all aspects of this relationship have been strongly elucidated at this time.

Noise and diabetes link is an emerging subject. Recent studies have raised the concern for the plague-spreading pattern of noise as a risk factor of diabetes. Noise has been classified as a nonspecific environmental stressor. Recently, multiple observational and experimental studies have shown that noise exposure leads to arousal of the autonomic nervous system and endocrine system. The stress of noise elevates circulating cortisol and catecholamine level which leads to insulin resistance and development of T2D. So far no direct evidence has been found to establish the potential causative relationship between noise exposure and the onset of T2D. Taken together, available studies do tell us to further explore the association between noise and diabetes as quality of the evidence till date is low enough to substantiate. Noise pollution and diabetes is also not a fairy tale.

Biography:



Nagendra Kumar Singh serves as Director at Diabetes and Heart Research Centre [DHRC]. As a Consultant physician & Diabetologist, he serves as Executive member of cardio logical society of India. He also Received WHO Fellowship at Bangkok 2001 by Ministry of Health. He is also chairman of APland RSSDI, Jharkhand

drnksingh60@gmail.com, drnks@yahoo.com

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Influencing the Human Micro biome for Better T2DM

Sean Hall

Medlab Clinical LTD, Australia

Diabetes is a complex and potentially life limiting disease, confounded by patient compliance and the use of standard therapies. When one thinks Diabetes, one must weigh heavily on the type 2 and pre-diabetic population. Unlike their type 1 counterpart, type 2 and pre-diabetic patients are a result of today's lifestyle, whereby the best treatment approaches include lifestyle modification and the use of Metformin. Both treatment options, by and large have failed as witnessed by the staggering growth in patient numbers. Neither treatment option addresses the role of the human microbiome, and how by positively influencing the human microbiome you can significantly enable current treatment options. This talk will focus on the role pro-inflammation cytokines play, the role a dysfunction gastrointestinal tract plays, and how a new investigative product based on probiotics can potentially be one of the most important adjuvants to standard treatment.

Recent Publications:

1. Hall Sean, The Medical Cannabis Landscape. Asia-Pacific Biotech News. Marijuana as Medicine. Vol.23 No.2. 2019.
2. Vitetta L, Vitetta G, Hall S. The Brain-Intestinal Mucosa-Appendix-Microbiome-Brain Loop. Diseases. 2018 Apr 1;6(2). pii: E23. doi: 10.3390/diseases6020023.p
3. Luis Vitetta, Joyce Zhou, Rachel Manuel, Serena Dal Forno, Sean Hall and David Rutolo Route and Type of Formulation Administered Influences the Absorption and Disposition of Vitamin B12 Levels in Serum Vaccines 2018
4. Luis Vitetta, Emma Saltzman, Michael Thomsen, Tessa Nikov, Sean Hall. Adjuvant Probiotics and the Intestinal Microbiome: Can Vaccines and Immunotherapy be Enhanced? Journal of Functional Biomaterials 2018, 9(1), 12; doi: 10.3390/jfb9010012

Biography:



Sean Hall founded Medlab in August 2012. Sean has over 20 year's experience in nutraceutical sales and development, as well as early drug discovery in Australia, Asia and the US. Sean has led and inspired his teams to author multiple patents, write peer reviewed articles and deliver lectures at global scientific conferences. His passion is leading his researchers into novel areas and strong commercialisation opportunities. Sean is also an active member of Research Australia, Medicines Australia, AusBiotech, American Federation of Medical Research (AFMR), The American Academy of Anti-Ageing Medicine (A4M), World Medical Associated (WMA), Special Operations Medical Association (SOMA), and a Board Member of the International Probiotics Association (IPA).

Sean_hall@medlab.co

Notes:

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The end of injections? - Oral insulin as a model

Miriam Kidron

Oramed Pharmaceuticals Inc, Israel

Subcutaneously administered insulin is a cornerstone of diabetes therapy, offering highly effective anti-hyperglycaemic activity. Yet, despite its centrality in diabetes management, it is currently only available in injectable forms. Aside from enhanced patient convenience and compliance, and reduced costs, an oral insulin alternative is expected to provide physiological advantages when compared to its subcutaneous counterpart. However, as with many protein/peptide-based drugs, insulin uptake is limited by both its physicochemical properties and by various physiological barriers. Oramed Pharmaceuticals has developed the POD™ technology, an oral delivery platform designed to enhance the bioavailability of active pharmaceutical ingredients (API) by both shielding them from degradation and enhancing their transit across the intestinal epithelium. This is achieved by encapsulating the formulation in a pH-sensitive capsule, which only disintegrates in environments with a close-to-neutral pH. The active ingredient is then simultaneously released with broad-specificity protease inhibitors, that protect the API from brush border proteases within the small intestine. In addition, the added absorption enhancer both chelates calcium, a co-factor necessary for protease activity, and increases paracellular permeability, easing API translocation across the gut wall. Preclinical and clinical data collected upon oral administration of glucagon, insulin (ORMD-0801) or a GLP-1 analog (exenatide) (ORMD-0901) formulated with POD™, demonstrate absorption and bioactivity of the delivered compounds. To date, ORMD-0801 has been tested in numerous clinical studies, including four Phase II trials, involving both type 1 (T1DM) and type 2 (T2DM) diabetes patients. The formulation has been associated with blunted postmeal glucose excursions, stabilized glucose swings and reduced bolus insulin requirements in type 1 diabetes patients. When delivered at bedtime, it has led to lowered nighttime, morning fasting and daytime blood glucose levels in type 2 diabetes patients. The delivery platform is projected to revolutionize drug bioavailability and patient care.

Recent Publications:

1. Eldor R, et al. Open-label study to assess the safety and pharmacodynamics of five oral insulin formulations in healthy subjects. *Diabetes Obes Metab.* 2010;12(3):219-223.
2. Eldor R, et al. Novel glucagon-like peptide-1 analog delivered orally reduces postprandial glucose excursions in porcine and canine models. *J Diabetes Sci Technol.* 2010;4(6):1516-1523.
3. Eldor R., et al. Glucose-reducing effect of the ORMD-0801 oral insulin preparation in patients with uncontrolled type 1 diabetes. A Pilot Study. *PLoS ONE* 2013; 8(4):e59524.

Biography:



Miriam Kidron serves as Oramed's Chief Scientific Officer and Director since the company's establishment. As a pharmacologist and biochemist, Kidron earned her PhD in biochemistry from the Hebrew University of Jerusalem. For close to 20 years, Dr. Kidron has been a senior researcher in the Diabetes Unit at Hadassah-Hebrew University Medical Center in Jerusalem, Israel, earning the Bern Schlanger Award for her work on diabetes research. She was formerly a visiting professor at the Medical School at the University of Toronto and is a member of the American and Israeli Diabetes Associations.

miriam@oramed.com

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New Onset Diabetes after Transplant Presenting in Diabetic Ketoacidosis

Mary Slessor Limbe

Aga Khan University, Kenya

A fifteen-year-old boy presented in diabetic ketoacidosis (DKA) five months after a successful renal transplant. He required very high doses of insulin to try and control his blood glucose (up to 3.2 I.U/kg/day) even after resolution of DKA. The insulin requirement reduced dramatically when metformin was added to the treatment. After several months he was taken off insulin and continued to have good glycemic control on Metformin alone.

Biography:



Mary Slessor Limbe Pediatric endocrinologist and assistant professor in the department of Pediatrics and Child Health at the Aga Khan University, Nairobi, Kenya. A tutor at the Pediatric Endocrinology Training Centre for Africa (PETCA) in Nairobi, as well as a pediatric life support instructor, and course director. She has supervised several research projects by both residents and fellowship students. Dr. Limbe's areas of research interest are neonatal hyperinsulinism, diabetes, childhood obesity, and disorders of growth and development. She was instrumental in establishing pediatric endocrinology and diabetic services as well as pediatric life support courses at The Aga Khan University Hospital.

mary.limbe@aku.edu

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Self-Monitoring of Blood Glucose in Gestational Diabetes Mellitus: Improvements in the remote monitoring by the doctor

Ramakrishnan Santosh

Magna Centres for Obesity, Diabetes and Endocrinology, India

Self-Monitoring of Blood Glucose (SMBG) plays an extremely important role in management of Gestational Diabetes Mellitus. The hallmark of Gestational Diabetes is the constantly changing blood glucose values till delivery due to changes in the insulin resistance. Confusion exists about the frequency of monitoring, timing of monitoring (whether pre-prandial or postprandial, one or two hour postprandial) and sample preferred (venous or capillary). We also review the acceptance and adherence to SMBG in various studies. In this presentation, we review the historic and the latest guidelines on the same. Remote monitoring of blood glucose values is now possible with the use of technology. We review the different ways of doing so. We also present the improvement in compliance to SMBG, acceptability of remote monitoring of glucose and the improvements in the trend of blood glucose control in our centre using email and mobile applications as tool for the same.

References:

1. Rainey PM, Jatlow P: Monitoring blood glucose meters. *Am J Clin Pathol* 1995;103:125–126.
2. Foss-Freitas MC, et al: Comparison of venous plasma glycemia and capillary glycemia for the screening of type 2 diabetes mellitus in the Japanese- Brazilian community of Mombuca (Guatapara -SP). *DiabetolMetab Syndr* 2010;2:6.
3. de veciana M1,major CA,morgan MA,asar T,Tooshey JS ,lien JM,Evans AT.Postprandial versus preprandial blood glucose monitoring in women with gestational diabetes mellitus requiring insulin therapy. *N Engl J Med.* 1995 Nov 9;333(19):1237-41
4. Weisz et al, One hour versus two hours postprandial glucose measurement in gestational diabetes: a prospective study. *J Perinatol.* 2005 Apr;25(4):241-4.
5. Leguizamón G1, et al. Blood glucose monitoring in gestational diabetes mellitus: 1- versus 2-h blood glucose determinations. *J Matern Fetal Neonatal Med.* 2002 Dec;12(6):384-8.
6. Sivan E1, Weisz B, Homko CJ, Reece EA, Schiff E. One or two hours postprandial glucose measurements: are they the same? *Am J Obstet Gynecol.* 2001 Sep;185(3):604-7.
7. Emmanuel Cosson, Baz Baz, Françoise Gary, Isabelle Pharisien, Minh Tuan Nguyen, Dorian Sandre-Banon, Yahya Jaber, Camille Cussac-Pillegand, Isabela Banu, Lionel Carbillon and Paul Valensi *Diabetes Care* 2017 Jul; Reliability and Poor Adherence to Self-Monitoring of Blood Glucose Are Common in Women With Gestational Diabetes Mellitus and May Be Associated With Poor Pregnancy Outcomes .

Biography:



Ramakrishnan Santosh is a practicing clinical endocrinologist for ten years. He has 34 papers in various journals and has authored three text book chapters. He has presented in more than 400 scientific forums which include many international conferences of repute. His significant extracurricular activities include lecturing in management schools and having authored 3 fiction novels.

mary.limbe@aku.edu

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Precision Medicine in Diabetes: Are we at a cross road?

NK Singh

Diabetes and Heart Research Centre, India

It is a hard fact that we have fallen short in cataloging risk factors, identifying triggering events, elucidating pathophysiological pathways, outlining prognostic course, selecting effective therapies, and predicting complication in diabetes. These days when recent CVOT trials are constantly changing the therapeutic paradigms, it is matter of concern that still Hb1Ac control is far from satisfactory in most parts of the world. Sometimes most of medications we use in diabetes appears to be a waste. Precision Medicine is making big news to overcome these hurdles. This decade has seen tremendous progression in technological and analytical advances. These have led to an explosion in the discovery of genetic loci associated with diabetes. Precision medicine is defined as a modern approach which combines traditional clinical phenotypic information (from history and physical examination) with molecular profiling of disease in a particular individual gleaned from data about genetic predispositions to diseases, biomarker information about disease prognosis and drug responses to create rich patterns that can predict risks and responses in a very precise way. Precision Medicine is rapidly evolving and likely to change the landscape of diabetes care. This field is different from personalized medicine. The precision medicine is for tailored treatment to the individual characteristics of each patients. MODY and neonatal diabetes are the cleanest example of significant success of Precision Medicine. Neonatal diabetes is caused by activating mutations in the genes encoding the sulfonylurea receptor (ABCC8) or it's ATP –dependent potassium channel (KCNJ11). In such cases the genetic defect can be overcome by high doses of the sulfonylureas. At present 93% of patients with monogenic diabetes are not recognized. They are misdiagnosed as having type 1 or type 2 diabetes and thus receive wrong treatment. It is now possible to test all genes involved in monogenic diabetes in a single gene panel test, both quickly and efficiently. MODY (Maturity onset diabetes of the young) cases overlap with type 1 and type 2 diabetes patients with regard to age of onset, BMI, history of parental diabetes, HbA1c levels and treatment. Because of their rapid failure with oral drugs, lack of insulin resistance and young onset of presentation, MODY patients are frequently misdiagnosed as type 1 diabetes and initiated on life-long insulin therapy. On the other hand, because of their low risk of ketosis and strong familial history they might be misclassified as type 2 diabetes. Genetic subtypes of MODY each with distinct clinical characteristics and responsible genes have been discovered till date. In these individuals with family history young onset diabetes, genetic testing is required to increase the precision of diagnosis, which has implications on treatment selection and family screening. In type 2 diabetes, it is unlikely that differences in treatment will be as marked as in monogenic diabetes. But even in unexplored areas of type 2 diabetes Precision Medicine is witnessing impact. Now by knowing genetic variants we can predict Metformin adverse effects and efficacy. The organic cation transporter member 1 (OCT1) is considered to be the most important transporter in the pharmacological action of metformin and is mainly expressed on the basolateral side of hepatocytes. Most focus has been on the role of genetic variation in OCT1 on metformin efficacy because OCT1 has an established role in metformin uptake. Recently it has been established that the 8% of white Europeans who carry reduced-function variants in OCT1 are nearly twice as likely to develop severe metformin intolerance as those who have normal function in OCT1. Sulphonylureas are primarily inactivated in the liver by the cytochrome P450 2C9 enzyme. A GoDARTS study from Tayside, UK, established that this 6% of the population with loss of function of CYP2C9 are 3.44 times more likely to achieve an HbA1c target < 7%. It seems likely that these patients would benefit from a personalized approach to therapy, with lower starting doses of sulphonylurea (SU).

EMR (Electronic Medical Record) data tells us that female gender and Obesity are associated with markedly better glucose lowering response to TZD than SU therapy, at the expense of greater weight gain. Also DPP4 inhibitor response is reduced with clinical features or biomarkers of insulin resistance. Virtual Therapeutics is a technique which individualizes treatment by creating a simulated “virtual Image of Patient” by genomic data, EMR data, physiologic data [Metabolic models], Real time sensing data [CGM, activity] and creating a simulated digital twin and gives insight to medication adjustments and closed loop control of diabetes. Although precision medicine criticism is widely rampant, gradually physicians will understand its importance and new horizon in diabetes care. The vision of DM care in the era of personalized medicine is that patients and physicians, using decision support systems embedded in the electronic medical record at the point of care, will have access to the results of individualized genomic, proteomic, and metabolic information, as well as the most current evidence-based guidelines and literature updates. This will provide them with up- to-date, accurate, and actionable information on risk for DM

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and its diverse manifestations, allowing them jointly to prioritize and optimize diagnostic, treatment, and monitoring plans. In this way, the most cost-effective and best-tolerated treatments can be directed at the manifestations of disease most likely to impact that individual's health and life expectancy, while avoiding treatments that are unlikely to be of benefit.

Publications:

1. Singh Dr. N K, Air pollution and diabetic and Link, RSSDI Diabetes Update 2018, page no. 62-64
2. Medicine update API 2018, How to hold the HOLD (Hypertension, Obesity Lipid and Diabetes)
3. Medicine Update API 2017, approach to a case of stress disorder
4. Medicine Update API 2016, Emerging Role of POPs (persistent Role of Diabetes)
5. Articles in Medicine UPDATE of 2016, 2017 and 2018

Biography:



Nagendra Kumar Singh serves as Director at Diabetes and Heart Research Centre [DHRC]. As a Consultant physician & Diabetologist, he serves as Executive member of cardio logical society of India. He also Received WHO Fellowship at Bangkok 2001 by Ministry of Health. He is also chairman of API and RSSDI, Jharkhand

drnksingh60@gmail.com, drnks@yahoo.com

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Knowledge, Attitude and Practice towards Diabetes among Nationals and Long-term Residents of Qatar

Aiman Hussein Farghaly
Ministry of Public Health, Qatar

This study aims to examine the level of knowledge, attitude and practices (KAP) towards diabetes among 2400 Qatar nationals and long-term residents and its association with participants' selected demographics. Data were obtained through face-to-face interview using a pre-tested questionnaire from July to October 2018. Analyses were performed using descriptive statistics & Chi-squared test at 5% level. Majority of participants had poor knowledge (69%), average in attitude (55%), and more than a third (37%) were high in practice towards diabetes. Participants' KAP level differed significantly by gender, age and nationality, with $P < .001$ - more men had low KAP (56%) while women were average (66%); older participants ages 35 years and above had average KAP level while younger age groups of 34 and below were poor; more Qataris (54%) and Arab expatriates (59%) in average level while non-Arabs were either average (48%) or poor (49%). Unaware individuals if they were screened for diabetes (75%) had poor KAP level while diagnosed (63%) and undiagnosed (54%) participants were in average level. Participants were deficient in some areas related to: diabetes types, risk factors, signs and symptoms, complications, recommended daily exercise, normal fasting glucose level, preventive measures, management and control, and understanding about complexity of diabetes. Findings of this study will serve as the baseline data in extending diabetes health programs and campaigns to improve public knowledge, attitude and behaviours towards diabetes targeting men, young people, and both nationals and expatriates; help the public assess the risks and be proactive in their own health to curb the threats caused by the disease.

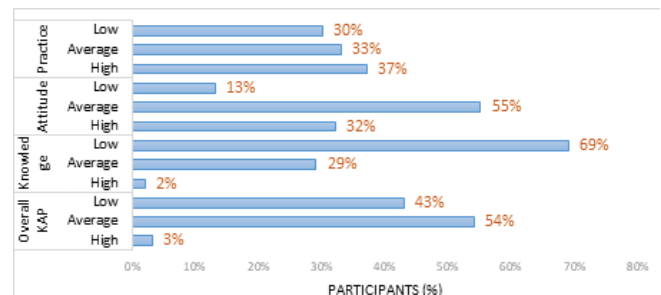


Figure 1. Level of Knowledge, Attitude and Practice (KAP) towards Diabetes among Qatar Nationals and Long-term Residents

Biography:



Aiman Hussein Farghaly is a consultant in public health and currently the manager of Qatar's National Diabetes Strategy in the Ministry of Public Health, Qatar. He was a lecturer in public health and preventive medicine in the Faculty of Medicine, Suez Canal University, Egypt and a public health specialist in Kuwait.

afarghaly@moph.gov.qa

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July 15-17, 2019 | Rome, Italy

Knowledge Gap in Diabetes and Associated Factors among Adult Population in the State of Qatar

Kholood Ateeq Al-Mutawaa Al Ahmed

Ministry of Public Health, Qatar

This study aims to identify the knowledge gaps in diabetes and associated factors among adult population in Qatar. Data were obtained from 2400 participants from the public through face-to-face interview using a pre-tested English and Arabic questionnaire for a period of 4 months in 2018. Data were analysed using descriptive statistics. The participants were equally distributed by gender; predominantly Arab expatriates (37.6%) and Qataris (33.3%), aged 25-34 years old (39.8%), married (59.5%), attained or completed tertiary level education (58.4%), gainfully employed (66.1%), and with monthly modal income range of 5,001-15,000 Qatari Riyals (\$4,110-8,219)(28.2%). Forty-two percent of the participants do not know any of the main types of diabetes and majority have low awareness of T2DM (21%) and T1DM (40%). Most common knowledge gaps identified were fallacies that diabetes can be cured (37%), Type 2 diabetes can be prevented (49%), and only Type 1 diabetes needs insulin (36%). Participants had low knowledge on diabetes (43±15%) particularly on areas of risk factors, signs and symptoms, complications, and disease management. On the other hand, majority believed that diabetes is not contagious (84%), it affects both children and adults (90%), and healthy lifestyle reduces the risk of diabetes (92%). Increasing understanding about diabetes is essential for better disease prevention and management. Wider diabetes communication campaign is required to address the knowledge gaps among the studied population.

Literature Cited:

1. National Health Strategy. Qatar National Health Strategy 2011–2016.
2. Qatar National Diabetes Strategy Preventing Diabetes Together 2016-2022
3. Stepwise Report 2012.

Biography:



Kholood Ateeq Al-Mutawaa Al Ahmed is the current head of Non-Communicable Disease in the Ministry of Public Health, Qatar. She is highly involved in the implementation of health promotions including diabetes projects and many public health-related research in the country.

kalahmed@moph.gov.qa

Notes:



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KEYNOTE FORUM

Day 2

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Nabil Al-Kayssi
University of Alberta, Canada

New Canadian Guideline for Basal Bolus Insulin Therapy (BBIT)

Insulin dose calculation and adjustment to reach an optimum glycemic control is a challenging mission for physicians both as an outpatient and inpatient settings. Those challenges are applied on diabetes mellitus of both type I and II when insulin is indicated. In Alberta, Canada a new Basal Bolus Insulin Therapy (BBIT) guideline for adults with diabetes mellitus was established to make calculating and adjusting Insulin dose easier for all medical staff including physicians, pharmacists and nurses to accomplish a good glycemic target for inpatients in all acute facilities (hospitals) in Alberta. In this presentation I will discuss this new guideline and how it makes glycemic control by calculating and dose adjustment easier to reduces the risk of errors in administering bolus and basal insulin. To apply this guideline we need collaborative efforts of all medical staff involved in patient's management.

Biography:

Graduated from medical college in Baghdad/ Iraq and granted M.B.Ch.B. in 1984, then he finished a master degree in Human anatomy, embryology and neuroscience in 1994 from Iraq. He was a lecturer and assistance professor of Human Anatomy in Iraq for 12 years. In 1999 Dr. Al-Kayssi immigrated to Canada and obtained a full licence of medical council of Canada in 2005 and then Canadian board in Family medicine in 2009. Dr. Al-Kayssi worked as family and emergency physician and as a Hospitalist at different Canadian hospitals from 2001. Now Dr. Al-Kayssi works as a Hospitalist and intravenous Clinic staff physician, infectious diseases at Sturgeon Hospital, Site Lead, East Edmonton Health Centre and Clinical lecturer at University of Alberta, Faculty of Medicine in Alberta, Canada

nalkayssi@doctor.com



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SCIENTIFIC TRACKS & ABSTRACTS

Day 2

Day 2 July 16, 2019

Sessions:

Diabetes | Clinical Nutrition and Diet | Prevention and Treatment of Diabetes |
Epidemiology and Genetics | Insulin Resistance & Medication | Education and Exercise

Session Chair: Nabil Al-Kayssi, University of Alberta, Canada
Session Co-Chair: Miriam Kidron, Oramed Pharmaceuticals Inc, Israel

Session Introduction

Title: The Circulating Level of Sirtuins and Superoxide dismutases in Type2 Diabetes

Abdullah M. AlKhaldi, King Fahad Armed Forces Hospital, Saudi Arabia

Title: Oral Insulin and Exenatide: Further Steps Toward Reality

Miriam Kidron, Oramed Pharmaceuticals Inc, Israel

Title: Education for Diabetes

Neto Mendes, CAJUFAC, Guinea Bissau



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The Circulating Level of Sirtuins and Superoxide dismutases in Type2 Diabetes

Abdullah M. AlKhalidi

King Fahad Armed Forces Hospital, Saudi Arabia

Background: Sirtuin 1 (SIRT1) and sirtuin 3 (SIRT3) proteins have an important role in counteracting oxidative stress. Hyperglycemia in T2D has been proposed to augment the release of reactive oxygen species (ROS) leading to oxidative stress. Consequently, adaptive cellular response results in neutralization of ROS through the antioxidant enzymes, for example, superoxide dismutase (SOD). The mechanisms are not fully understood.

Aim: To evaluate systemic levels of SIRT1, SIRT3 and SOD2 in whole blood of patients who have type 2 diabetes and healthy subjects.

Methods: Gene expression of SIRT1, SIRT3, and SOD2 was measured using real-time PCR. SOD2 protein level in serum was measured by ELISA, in 37 T2D patients (21 male, 16 female) and 21 control subjects.

Results: Results showed both SIRT1 and SIRT3 mRNA expressions were significantly reduced in patients group compared to control subjects at p value < 0.05.

SOD2 mRNA expression and protein levels were significantly increased in T2D at p value < 0.05 and < 0.021 respectively.

Conclusion: This study showed alteration of circulating levels of sirtuins and superoxide dismutase in T2D patients, which might be, at least, in part due to oxidative stress.

Biography:



abmk2004@hotmail.com

Notes:

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Oral Insulin and Exenatide: Further Steps Toward Reality

Miriam Kidron

Oramed Pharmaceuticals Inc., Israel

Orally delivered protein-based drugs have been described to better mimic physiological gradients and natural sites of action. In addition, oral delivery promotes patient compliance and adherence, typically supporting early intervention and improved clinical results. However, such drugs are poorly absorbable and are susceptible to degradation along the gastrointestinal tract (GIT). In pursuit of a universally applicable oral protein delivery platform, Oramed Pharmaceuticals has developed the POD™ technology, which both thwarts degradation and facilitates drug absorption across the intestinal epithelium. The basic formulation involves a simple blend of extensively applied pharmacopoeia and has thus far been formulated with insulin (ORMD-0801) and exenatide (ORMD-0901), indicated for diabetes management. In a prospective, randomized, placebo-controlled, double-blind Phase 2a study designed to evaluate the impact of preprandial ORMD-0801 on exogenous insulin requirements in T1DM patients over a 7-day period, ORMD-0801 was administered 45 min before meals to 15 patients, while 10 received placebo. Fasting plasma glucose (FPG) levels among ORMD-0801-treated patients showed a peak -60.2 ± 63.3 mg/dL change from baseline, while a mere -10.2 ± 55.7 mg/dL change was measured for the placebo cohort. Reduced FPG levels directly correlated with reduced rapid-acting insulin requirements, reaching a mean difference of -5.9 mIU insulin intake between active versus placebo-treated patients. An equal number of hypoglycemic events requiring clinical intervention was reported for each cohort. Similarly, 10-day preprandial ORMD-0801 treatment of six patients with uncontrolled T1DM was associated with a 24.4% reduction from baseline frequencies of glucose readings >200 mg/dL and a mean 16.6% decrease in glucose area under the curve (AUC). In a first-in-human assessment of the safety of and induced insulinogenic responses to ORMD-0901 in four fasting, healthy volunteers, mean insulin AUC values were 17.6% higher following exenatide treatment, when compared to their counterpart placebo sessions, reflecting exenatide absorption and bioactivity. In addition, ORMD-0901 was well tolerated and no adverse events were reported. Taken together, application of the POD™ platform for oral delivery of insulin and exenatide, is both safe and effective and is projected to bear broad pharmaceutically applicative prospects toward revolutionizing drug bioavailability and patient care.

Recent Publications:

1. Eldor R, et al. Open-label study to assess the safety and pharmacodynamics of five oral insulin formulations in healthy subjects. *Diabetes Obes Metab.* 2010;12(3):219-223.
2. Eldor R, et al. Novel glucagon-like peptide-1 analog delivered orally reduces postprandial glucose excursions in porcine and canine models. *J Diabetes Sci Technol.* 2010;4(6):1516-1523.
3. Eldor R., et al. Glucose-reducing effect of the ORMD-0801 oral insulin preparation in patients with uncontrolled type 1 diabetes. A Pilot Study. *PLoS ONE* 2013; 8(4):e59524.

Biography:



Miriam Kidron serves as Oramed's Chief Scientific Officer and Director since the company's establishment. As a pharmacologist and biochemist, Kidron earned her PhD in biochemistry from the Hebrew University of Jerusalem. For close to 20 years, Dr. Kidron has been a senior researcher in the Diabetes Unit at Hadassah-Hebrew University Medical Center in Jerusalem, Israel, earning the Bern Schlanger Award for her work on diabetes research. She was formerly a visiting professor at the Medical School at the University of Toronto and is a member of the American and Israeli Diabetes Associations.

miriam@oramed.com

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Education for Diabetes

Neto Mendes

CAJUFAC, Guinea Bissau

Introduction: Structured self-monitoring of blood glucose (SMBG) improves glycemic control in patients with non-insulin treated type 2 diabetes (T2D)¹

Aim: To determine changes in simple indices of glycemic variability (GV) when utilizing structured SMBG to improve glycemic control in persons with T2D. Examine changes in GV associated with the number of additional orally administered glucose lowering medication during the study.

Methods: People with non-insulin treated T2D undertook structured SMBG over 12 months, with SMBG measurements and the number of medication prescription/s recorded at the start and at 12 months². Measures of glycemic control (HbA1c, mean blood glucose (M-BG) and fasting blood glucose (FBG)) were determined for each participant during the first and final 3 months of the study. GV (standard deviation of blood glucose (SD-BG), coefficient of variation of blood glucose (CV-BG) and mean absolute glucose change (MAG)) were also derived for these periods of time. Differences in these measurements were compared based on the number of additional diabetes medication prescribed over the course of the study.

Results: One-hundred and eighty-five T2D participants with a median age 64.3 years (58.2% male) were included for analysis. The median HbA1c was 68.0 mmol/mol (8.4%) at baseline compared with 55.0 mmol/mol (7.2%) at 12 months ($p < 0.001$). Participants were prescribed a mean 1.67 diabetes medications at the start of the study and 2.22 diabetes medications at the end of the study ($p < 0.001$). Participants with no medication changes demonstrated improvements in each of the observed measures of glycemic control and GV. Participants with an increasing number of new diabetes medication prescribed during the study demonstrated greater improvements in M-BG, FBG, and HbA1c, but not GV (SD-BG) or MAG. Those participants with the highest number of new diabetes medication had a significantly greater GV (CV-BG) at completion of the study.

Biography:



I attended Escola Ensino Basico de Pandim, is a primary school from primary 1 to 6 2005 to 2011 in Guinea-Bissau. I attended Licio Regional de HO CHIMI, secondary school in Canchungo grade 7 to grade 12 in year 2011 to 2017, in Guinea-Bissau. I got admission in to CAJUFAC orphanage skill training school from 2017 to 2019. Where I studied food and Nutrition Health, for 3 years and I am currently on industrial attachment with CAJUFAC community Health Care project, under Department of Clinic Nutrition, in Guinea-Bissau.

cajufacorg@gmail.com

Notes:



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POSTER

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Depressive Tendency Of Patients With Type 2 Diabetes Mellitus On The Control Of Metabolism And Blood Glucose

Minhee Lee

Gangnam Severance Hospital, Korea

Although the depressive tendency in chronic patients is predicted, the psychiatric aspects of patients with diabetes mellitus tend to be neglected. This study determined the degree of the depressive tendency in patients with type 2 diabetes mellitus and assessed the risk levels of relevant factors for metabolic control.

Methods: A survey was conducted with 430 patients randomly sampled out of 1,235 patients with type 2 diabetes mellitus who visited the family practice and endocrinology outpatient units of a university hospital from October 1, 2016 to January 31, 2018. Medical records and electronic prescriptions were examined to obtain HbA1c, blood lipid, blood pressure, BMI (kg/m²), and prescription drugs were identified.

Results: Of the 356 patients with type 2 diabetes mellitus, the depressed group with BDI score of 11 or higher accounted for 35.4% while the severely depressed group with that of 21 or higher accounted for 6.8%. Compared to the non-depressed group (BDI≤10), the depressed group (BDI≥11) had higher mean values of HbA1c (P=0.000) and LDL-cholesterol (P=0.046). Furthermore, it was shown that the exercise performed less than 4 times a week (cross ratio=1.97; 95% CI=1.18 ~ 3.28), the zero-exercise per week (cross ratio=2.94; 95% CI=1.28 ~ 6.77), the LDL-cholesterol level greater than 100 mg/dL (cross ratio=1.94; 95% CI=1.35 ~ 3.18), and depression with BDI scores greater than 11 (cross ratio=2.20; 95% CI=1.35 ~ 3.60) were significantly correlated with the control of blood glucose (HbA1c < 7.0%) as risk factors.

Conclusion: A significant correlation was observed between the glucose index and the depressive tendency in patients with type 2 diabetes mellitus, and the active interest and control of the depressive tendency for the management of diabetes mellitus is necessary.

Biography:



Minhee Lee was born in Seoul and spent most of her life in Seoul, Republic of Korea. After graduating from Sook-Myoung girl's High School, she earned a Bachelor of Science in Chemical Engineering from Yonsei University. After the graduation she worked for 2 years as a researcher in Takeda Pharmaceutical company. She earned her medical degree from Chosun university, School of medicine and graduated in 2017 to perform her internship in Family Medicine at Yonsei University, Gangnam Severance Hospital. She wants to treat the patient as a whole; she felt Family medicine provided her with best opportunities to accomplish her goals. Her current areas of interest include metabolic diseases and integrative medicine, osteopathic manipulative medicine, and sports medicine. She is especially happy to be back near home around family and friends while training at several other branches of Severance hospital. In her spare time she enjoys spending time reading books (especially romantic thrillers), drawing, and trying new restaurants. She also enjoys outdoor activities such as tennis, cycling, and hiking. She love to experience new cultures.

mini1792@yuhs.ac

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Knowledge, Attitude and practice towards Diabetes among Nationals and Long-term Residents of Qatar

Aiman Hussein Farghaly
Ministry of Public Health, Qatar

Abstract: The growing epidemics of diabetes in Qatar demands urgent attention at the population level and diabetes awareness is a logical strategy that can address the huge public health burden imposed by diabetes. This study aims to examine the level of knowledge, attitude and practice (KAP) towards diabetes of Qatar nationals and long-term residents and its association with participants' selected demographics.

Methodology: A cross-sectional study among 2400 Qatari nationals and long-term residents was conducted through face-to-face interview using a pre-tested questionnaire from July to October 2018. Analyses were performed using descriptive statistics & Chi-squared test at 5% level.

Results and Discussion;

- Self-reported diabetes prevalence among the public was at 14%-significantly higher among women (18%), Qataris (19%), and highest rate at 36% among 55+ years, $P < .000$.
- Overall KAP level of most participants was average (54%)-majority had poor knowledge (69%), average in attitude (55%) and more than a third (37%) were high in practice towards diabetes.
- Participants' KAP level differed significantly by gender, age and nationality, with $P < .001$ – more men have low KAP (56%) while women were average (66%); older participants ages 35 years and above had average KAP level while younger age groups 34 and below were poor; more Qataris (54%) and Arab expatriates (59%) were average while non-Arabs were either average (48%) or low (49%).
- Unaware individuals if they were screened for diabetes (75%) had poor KAP level while diagnosed (63%) and undiagnosed (54%) participants were average level.
- Areas where participants were deficient include: diabetes types, risk factors, signs and symptoms, complications, recommended daily exercise, normal fasting glucose level, preventive measures, management and control.

Conclusion: Participants have positive attitudes and practices regarding diabetes but poor knowledge in diabetes-related factors. To focus communications on educating the public and conduct mass campaigns about diabetes to improve knowledge targeting men, young people, and nationals and expatriates.

Literature Cited:

1. Al-Thani AA, Farghaly AH, Akram H, Abou-Samra AB, et al. Knowledge and Perception of Diabetes and Available Services among Diabetic Patients in the State of Qatar. *Central Asian Journal of Global Health*. 2019;8(1).
2. National Health Strategy. Qatar National Health Strategy 2011–2016.
3. Qatar National Diabetes Strategy Preventing Diabetes Together 2016- 2022. Ministry of Public Health 2016. September 2016.
4. Qatar STEP wise report for chronic disease risk factor surveillance. 2012.

Biography:



Aiman Hussein Farghaly is a consultant in public health and currently the manager of Qatar's National Diabetes Strategy in the Ministry of Public Health, Qatar. He was a lecturer in public health and preventive medicine in the Faculty of Medicine, Suez Canal University, Egypt and a public health specialist in Kuwait.

afarghaly@moph.gov.qa

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Knowledge Gap in Diabetes and Associated Factors among adult Population in the state of Qatar

Kholood Ateeq Al-Mutawaa Al Ahmed

Ministry of Public Health, Qatar

Abstract: Lack of knowledge is a strong barrier in fully understanding diabetes and its determinants towards better disease prevention and management. This study aimed to identify the knowledge gaps in diabetes and associated factors among adult population in Qatar

Methodology: Data were obtained through face-to-face interview of 2400 participants from the public using a pre-tested English and Arabic-translated questionnaire. Data were analyzed using descriptive statistics.

Results:

- The 2400 participants were equally distributed by sex; predominantly Arab expatriates (37.6%) and Qataris (33.3%), aged 25-34 years old (39.8%), married (59.5%), attained or completed tertiary level education (58.4%), gainfully employed (66.1%), and with monthly modal income range of 5,001-15,000 Qatari Riyals (\$4,110-8,219; 28.2%).
- 42% of participants do not know any of the main types of diabetes and majority have low awareness of T2DM (21%) and T1DM (40%).
- Most common knowledge gaps identified were participants' belief that diabetes can be cured (37%), Type 2 diabetes can be prevented (49%), and only Type 1 diabetes needs insulin (36%).
- Participants had low knowledge on diabetes (43±15%) particularly on areas of risk factors, signs and symptoms, complications, and disease management.
- On positive note, majority believed that diabetes is not contagious (83%), diabetes affects both children and adults (90%), and healthy lifestyle reduces the risk of diabetes

Discussion: Studied populations have low knowledge on different aspects of diabetes. Identification of knowledge gaps in diabetes is significantly beneficial to national health and diabetes strategy in customizing its diabetes campaigns and education for better prevention.

Conclusion: Diabetes awareness is an important strategy in translating diabetes prevention to public sector. Wider diabetes communication campaign is required to address the knowledge gaps among the studied population.

Literature Cited:

1. National Health Strategy. Qatar National Health Strategy 2011–2016.
2. Qatar National Diabetes Strategy Preventing Diabetes Together 2016-2022. Ministry of Public Health 2016. September 2016.
3. Qatar STEP wise report for chronic disease risk factor surveillance. 2012

Biography:



Kholood Ateeq Al-Mutawaa Al Ahmed is the current head of Non-Communicable Disease in the Ministry of Public Health, Qatar. She is highly involved in the implementation of health promotions including diabetes projects and many public health-related research in the country.

kalahmed@moph.gov.qa

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E-POSTER

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July 15-17, 2019 | Rome, Italy

Evaluation of insulinotherapy education in Diabetic patients accompanied at a medical specialties center in Brazil

Beatriz Amaral Costa Savino

Centro Universitario do Estado do Para

Diabetes mellitus type 2 (DM2) occurs due to insufficient secretory response or defective action of insulin, which leads to inadequate use of glucose by tissues. The main consequence is hyperglycemia. When the patient reaches a critical state, where oral hypoglycemic agents are no longer able to reduce glucose levels, insulin therapy is used to stabilize the condition. However, in order to use insulin, it is necessary to know the techniques of handling and to be aware of the doses prescribed by the doctors, in order to avoid sub or overdose, interfering in the success of the treatment.

Methods: Questionnaires were applied in a sample of 75 diabetic patients who underwent insulin therapy for at least 6 months to evaluate the application techniques and whether the patients followed the prescribed insulin dosages. **RESULTS:** Insulin aspiration according to the medical prescription was not adequate in 47.7% of the cases, of which 67.7% had superdose and 32.3%, a subdose. Of the total number of patients, 58.7% presented hyperglycemia and 64.0%, hypoglycemia in the last 6 months. Regarding the technique of application, 90.8% apply the insulin in the appropriate place and 76.9% do with an angle of 90° with the skin.

Conclusion: It is concluded that the errors observed in insulin aspiration and failure to prepare the application, are directly related to the occurrence of complications such as hypoglycemia, hyperglycemia and lipodystrophy. Thus, it is noticeable that factors such as low visual acuity or lack of knowledge about the disease lead patients to apply super or subdoses, making the success of treatment unfeasible.

Biography:



Beatriz Savino is a academic of medicine, attending the second year at the University Center of the State of Pará (CESUPA). In 2018, did a internship, in the infectology department, at the Nucleus of Tropical Medicine (NMT- UFPA). Now is a former university monitor in computing (2018) and the current president of the Academic League of Cardiology of Pará SBC (LAC).

beatrizacsavino@gmail.com

WORLD DIABETES CONGRESS

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Clinical complications in Diabetic Mellitus Type 2 patients: A Population study in Brazil

Julia Nicolau da Costa Chady
Universidade do Estado do Para

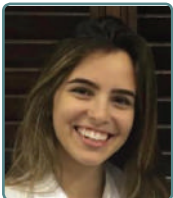
Introduction: Diabetes mellitus type 2 (DM) is a worldwide health issue that affects millions of patients and Brazil represents the fourth country with the highest number of cases. The late diagnosis, poor clinical follow-up and the unsuccessful treatment may contribute to significant complication rates, therefore, the present study aims to specify and quantify the clinical complications of DM in Brazilian patients that lives in the State of Pará.

Methods: Retrospective, transversal, populational and ecological study in which all diabetic type 2 patients followed up in primary health care centers in the State of Pará (Brazil) were included.

Results: One hundred and sixty-six patients were diagnosed with diabetes type 2. Among them, 471 (44,18%) were men and there were: 8 kids (0 – 19 years old), 736 adults (20 – 59 years) and 322 elderly (over 60 years). In addition, 238 were from metropolitan cities while 828 lived in smaller cities or rural areas. Additionally, 178 (16,69%) were smokers, 440 (41,27%) did not practiced any physical activity (sedentary) and 304 (28,51%) had elevated Body Mass Index (IMC). Moreover, 18 (1,68%) patients have presented at least one episode of Acute Myocardial Infarction while 10 (0,93%) related the occurrence of other coronary disease and 27 (2,53%) reported a previous stroke. Furthermore, 70 (6,56%) were diagnosed with diabetic nephropathy and 31 (2,90%) with diabetic foot, between them, 19 (1,78%) had already suffered at least one amputation.

Conclusion: The most frequent complication in diabetic patients was diabetic nephropathy followed by diabetic foot and stroke. Although the complication rates weren't as high as those from other countries, a significant number of patients evidenced associated risk factors, which may be emphasized as a focus to reduce future complicated cases in Brazil. Keywords: Diabetes Mellitus, Diabetes Complications, Complications, Risk factors.

Biography:



Julia Chady is fifth-year medicine student of the University of State of Pará (UEPA). Was a formal member and director of both Academic League of Surgery of Pará (LAPAC) and Academic League of Immunology and Infectiology of Pará (LAIIP). Performed as official University Monitor of pediatrics, gynecology and obstetrics for a year. In 2017, received a government scholarship to perform a study about malaria disease and volunteered in 2017 and 2018 to perform official studies about HIV, syphilis and toxoplasmosis.

crcacampus2@hotmail.com

Notes:



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Email: eurodiabetes@inovineconferences.com

