Prevention First
ONLINE ISSUE April 2024

In this Issue:

Breakfast with Dr. Ali Asghar– A Houseful session

PCDA International Symposium Starts with a lot of fervor

18th February'2024 morning in Hotel Movenpic Karachi started with enthusiasm and eagerness exhibited by the participants of the 8th. International PCDA Symposium 2024. Equally charged speaker, renowned endocrinologist of the metropolis, Dr. Ali Asghar presented his talk on the "Role of Empagliflozin in the management of type-2 diabetes." He presented the latest data regarding the benefits of empagliflozin in various segments specially cardiac and renal benefits.

He told the audience that Controlling high blood sugar helps prevent kidney damage, blindness, nerve problems, loss of limbs, and sexual function problems. Empagliflozin is also used in patients with type 2 diabetes and heart disease to lower the risk of death from heart attack or stroke. Recently the role of empagliflozin was also highlighted in reducing the progression og kidney functions.

Prof. Abdul Basit, Prof. Jameed Ahmed, Dr. Zahid Miyan, Prof. Asher Fawad, Dr. & Mrs. Sarath and many chapter heads of PCDA Pakistan were among those who very patiently and enthusiastically listened to Dr. Ali Asghar. The energetic and vibrant speaker interacted with the audience and replied their questions and queries.

Afterwards Dr. Ali Asghar received memento and shield from the chief guest of the symposium, Prof. Abdul Basit and the president of PCDA Pakistan Dr. Zahid Miyan.Breakfast was served after the session.

Facilitation Desk was fantastic this year

Registration desk for the participants of PCDA Symposium'24 was managed by the volunteers of STEP with the help of a professional service provider. The desk provided very smooth and fast processing of registration this year. "It was indeed Doctors-Friendly Desk" said Dr. Ahmad Shehzad from Faisalabad. "They were really guiding the participants till their satisfaction."

Dr. Arshad from Parachanar said, "The Facilitation Desk was fast and the persons over there were giving individual attention to every participant. They provided us all conference material in time.

Most of the guests showed their satisfaction over the performance of the Facilitation Desk.

پی سی ڈی اے کی جانب سے

عید الفطر ۱۴۴۵ھ مبارک ہو

All friends of

PCDA

Glimpses of the Breakfast Session

Glimpses of the Breakfast Session

We are committed to play our role in

Breaking the Barriers

Prof. Abdul Basit speaks to the preliminary session of the symposium

Report: ***Dr. Javeria Salman***

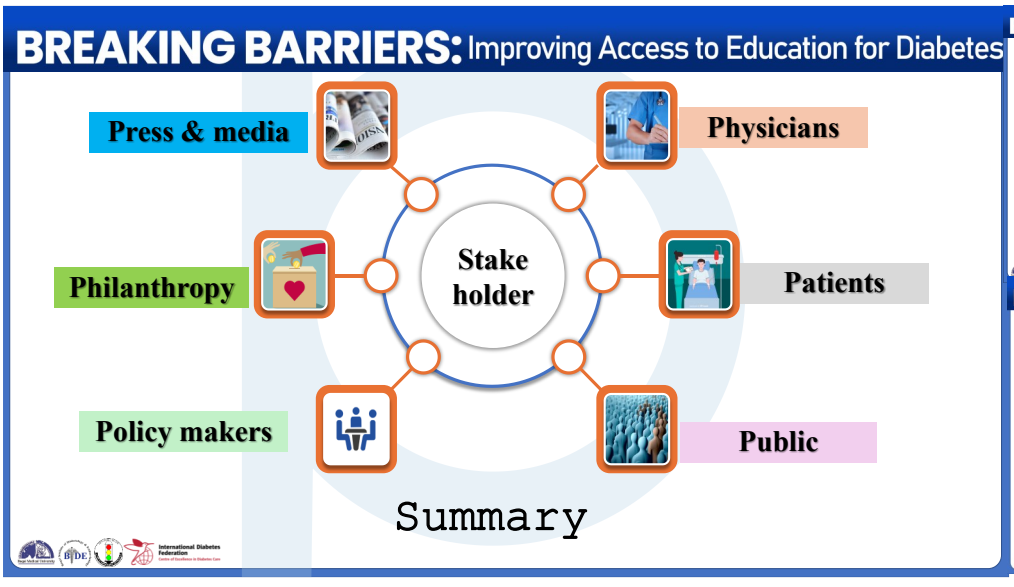
Prof. Abdul Basit was the honorable chief guest of the PCDA Symposium 2024. In his opening address in the preliminary session of the symposium he talked on the need to work harder to break the barriers in controlling the menace of diabetes. He said that Primary Care Diabetes Association Pakistan is struggling hard to break the barriers. He said that in a resource-constrained country like Pakistan, the barriers to diabetes control can be even more pronounced due to limited access to healthcare, medications, and education. Some specific barriers include Limited healthcare infrastructure, lack of access to medications and supplies, poor health literacy, inadequate training for healthcare providers, socioeconomic factors and limited public health initiatives. We need to overcome all these barriers and Alhamdo Lillah we and the PCDA are moving in the right directions.

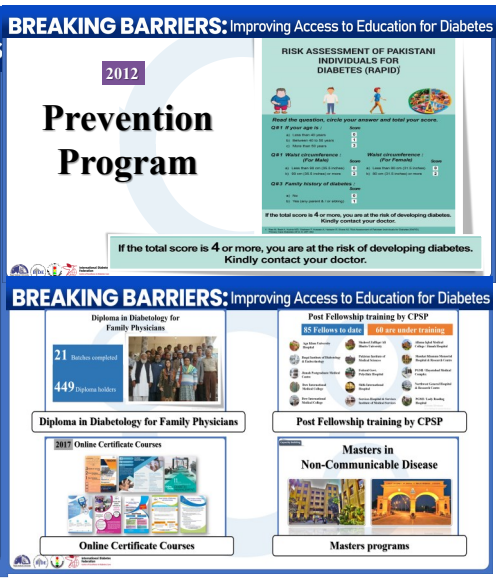
Prof. Abdul Basit (F.R.C.P)
Professor of Medicine | Baqai Medical University
Director | Baqai Institute of Diabetology & Endocrinology
Secretary General | Diabetic Association of Pakistan
President Diabetes in Asia Study Group (DASG)
Ex-Chair | IDF-MENA Region

Prof. Abdul Basit said that insufficient hospitals, clinics, and healthcare professionals can result in long wait times for appointments, limited access to diabetes specialists, and inadequate monitoring and treatment. Also the limited availability and affordability of diabetes medications, insulin, blood glucose monitoring devices, and testing supplies can impede proper management of the condition. Limited education and awareness about diabetes, its complications, and self-management strategies can hinder individuals' ability to effectively control their blood sugar levels and prevent complications. Prof. Abdul Basit was of the opinion that healthcare professionals may lack training in diabetes management, leading to suboptimal care and treatment outcomes for patients with diabetes.

He said that poverty, unemployment, and food insecurity can contribute to unhealthy lifestyle choices, such as poor diet and lack of exercise, which exacerbate diabetes control issues. Similarly the resource constraints may limit the implementation of public health programs aimed at diabetes prevention, education, and early detection, further exacerbating the burden of the disease.

Breaking these barriers in a resource-constrained country requires innovative strategies that focus on improving healthcare infrastructure, increasing access to affordable medications and supplies, enhancing health literacy, and implementing community-based interventions to promote healthy lifestyles and diabetes management. Collaboration between government agencies, healthcare providers, non-governmental organizations, and international partners is essential to effectively address the challenges of diabetes control in resource-constrained settings.





Session-I Speakers: Prof Abdul Basit & Prof. Kasif Shafeeq

Moderater: **Dr. Jaweria** *Speakers:* **Prof. A Basit & Prof. Kashif Shafeeq** *Panelists:* **Prof. Najmul Islam, Prof. Ziaul Haq and Prof. Jameel Ahmed**

Role of Primary Care Physician in breaking barriers

Primary care physicians (PCPs) play a crucial role in breaking barriers in diabetes control through screening, diagnosis, education, counseling, treatment, management, monitoring, follow-up, coordination of care, prevention, early intervention, advocacy and empowerment.

PCPs are often the first point of contact for individuals with diabetes or those at risk. They play a key role in screening patients for diabetes, identifying risk factors, and making accurate diagnoses. They educate patients about diabetes management, including lifestyle modifications, medication adherence, and monitoring blood sugar levels. They provide personalized counseling and support to help patients understand their condition and make informed decisions.

PCPs develop individualized treatment plans tailored to the patient's needs, considering factors such as age, comorbidities, lifestyle, and preferences. They prescribe medications, recommend dietary changes, and advise on physical activity to help patients achieve glycemic control.

They monitor patients' progress regularly, assessing their adherence to treatment plans and adjusting interventions as needed. They conduct regular follow-up visits to track changes in blood sugar levels, review medications, and address any concerns or barriers to adherence.

PCPs coordinate care with other healthcare providers, including specialists, dietitians, and diabetes educators, to ensure comprehensive management of diabetes. They facilitate communication and collaboration among the healthcare team to optimize patient outcomes. They focus on preventing complications and intervening early to address risk factors associated with diabetes. They emphasize the importance of preventive measures such as vaccinations, foot care, and eye exams to reduce the risk of complications such as neuropathy, retinopathy, and cardiovascular disease.

PCPs advocate for policies and initiatives that support diabetes prevention and management at the community and societal levels. They empower patients to take an active role in their own care by providing them with resources, support, and encouragement to make positive lifestyle changes.

By fulfilling these roles, primary care physicians play a vital role in breaking barriers to diabetes control, improving patient outcomes, and promoting overall health and well-being.

Insights into Diabetes and Metabolic Syndrome Patterns in our Community

Prof. Kashif Shafique

Prof. Kashif Shafique

Principal - School of Public Health
Director - Office of Research, Innovation, & Commercialization (ORIC) Dow University of Health Sciences

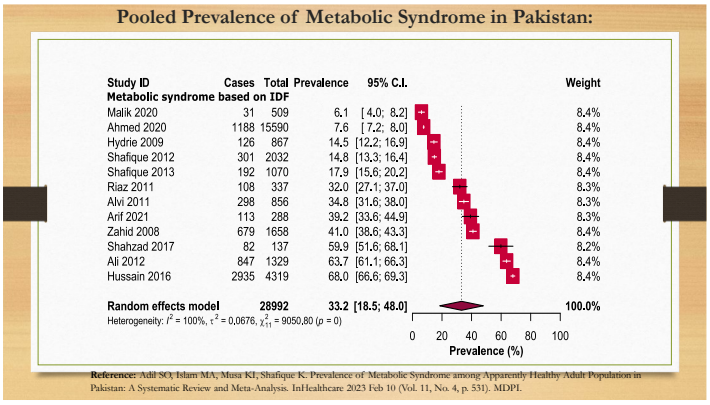
The other speaker who talked in the preliminary session was Prof. Kashif Shafique. He addressed the questions about diabetes and metabolic syndrome. E.g. the burden of metabolic syndrome, the trend of metabolic syndrome and its components, estimation and projection of the trends of diabetes mellitus, how are trends of obesity and diabetes linked, what is the burden of metabolic syndrome and its individual components among the apparently healthy Pakistani population, what is the prevalence of metabolic syndrome and its components among apparently healthy individuals and what are the recent findings of metabolic syndrome, its factors and potential predictors in our population?

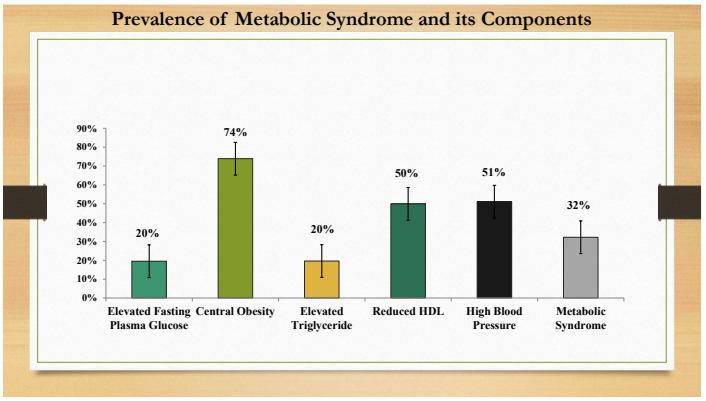
He talked about the cluster of risk factors. He said that metabolic syndrome is not a single disease, but a combination of at least 3 out of 5 health issues: large waistline, high blood pressure, high blood sugar, high triglycerides, and low HDL cholesterol. Having this cluster significantly raises the chances of developing serious conditions like heart disease, stroke, and type 2 diabetes.

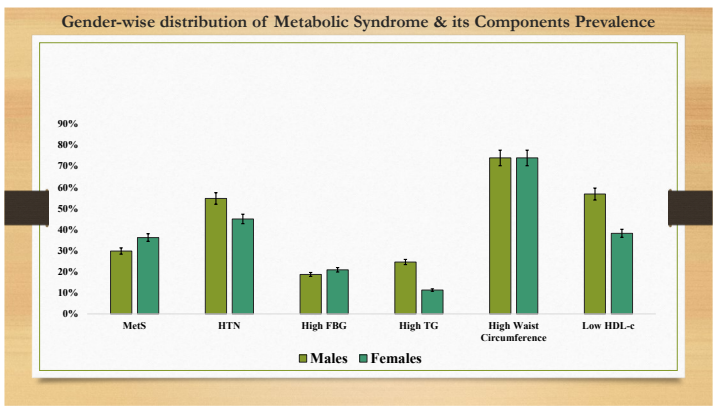
He said that lifestyle modifications often improve metabolic syndrome through healthy changes like diet, exercise, and weight management, while there is no cure.

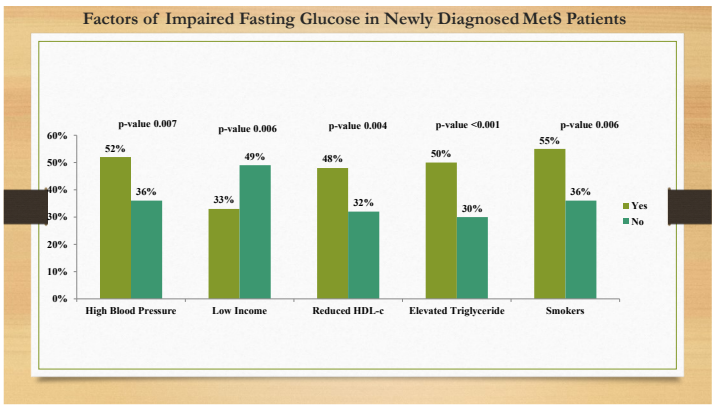
He told that the estimates for 2025 were 300 but it reached to 537 million people in 2021, 1 in 10 Adults (20-79 years) had diabetes. Diabetes increased worldwide by 4.07% per year from 1980-2014 and obesity increased worldwide by 2.78% per year from 1975-2015. Metabolic syndrome cases are rapidly increasing in Pakistan, even among individuals perceiving themselves as healthy.

Newly diagnosed metabolic syndrome patients face heightened diabetes risk with factors including hypertension, low HDL-c, high triglycerides, smoking, and low socioeconomic status. Incorporating anthropometric measurements in routine assessments provides valuable insights into metabolic syndrome and its components and might aid in metabolic syndrome risk evaluation. Timely screening and intervention are paramount for preventing future complications, necessitating proactive healthcare measures









THE AUDIENCE

Session I-B

Diabetes and Bones: Building Resilience Beyond Blood Sugar

by Prof. Sarath Lekamwasam (Sri Lanka)

Session-B of Preliminary Session of 8th. International PCDA Symposium 2024 started with the stat of the art lecture by Prof. Sarath Lekamwasam who came from Sri Lanka for the PCDA Symposium.The session was moderated by Dr. Shehzad Tahir who is head of the Islamabad chapter of PCDA. The topinc of Dr. Sarath's talk was Diabetes and Bones: Building Resilience Beyond Blood Sugar. Innitially he presented an overview of Diabetes and Fragility Fractures which have many similarities.

Prof. Sarath Lekamwasam
MBBS (Peradeniya), MD (Colombo), FRCP (London), PhD (Erasmus) Fellow of the Ceylon College of Physicians Hon. Fellow of the College of Physicians (South Africa) Hon. Fellow of the Royal Australasian College of Physicians Hon. Fellow of the Royal College of Physicians and Surgeons, Pakistan Hon. Fellow of the Sri Lanka College of Endocrinologists. Chair Professor, Department of Medicine, Faculty of Medicine, Galle, Sri Lanka

He said that it's a prevalent disease and more cases are predicted. It has multifaceted etiology, high mortality, morbidity and dependency but unfortunately a high health care cost. Current number of Osteoporotic hip fracture worldwide 3.33 m, Projected no of Osteoporotic hip fracture worldwide in 2025: 6.26 m (3.25 m in Asia)

Talking about Fracture risk in T1DM he said that link between T1DM and low BMD is well established. There is increase in spine fracture risk (FR) by 1-2 fold, 1.5-2 fold at hip and 2 fold at radius. Women with T1DM are 12 times more likely to have a fracture. Meta-analysis shows that there is increased FR seen in T1DM is higher than what BMD would explain (Osteoporosis International 2016;27(1):219-28). There is high fracture risk among diabetics in general. 21 studies show 82,293 hip fracture (HF) events among 6,995,272 participants. DM doubles the risk of HF (RR 2.07; 95 % CI 1.83-2.33). Excess risk is more pronounced in T1DM than that in T2DM (RR 5.76 vs 1.34) Thus patients with DM have an excessive risk of HF, more pronounced in T1DM.

Talking about Diabetes and increased fragility fracture risk Dr. Sarath told that definite association exists but mechanism is uncertain as there is heterogeneity of the study samples and there are discordant results and conclusions. Plausible explanations of these may be confounding factors like obesity, vascular calcification and degenerative changes (osteophytes). There may also be effects of drugs e.g. thiazides, statins. Directly related of diabetes.

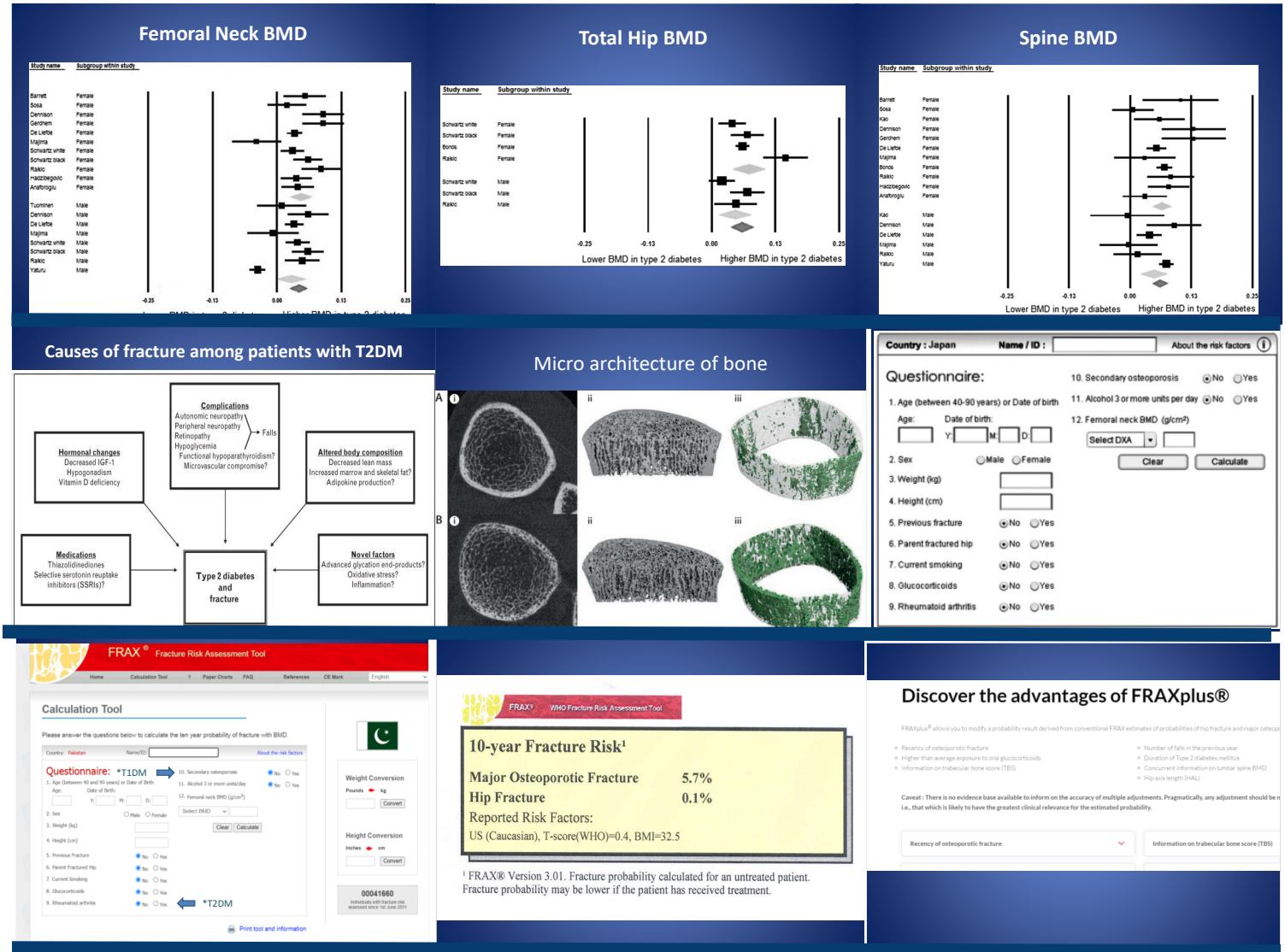
In Diabetes there is bone micro-architectural changes (QCT) manifested by thinning of the cortical bone, increased cortical porosity, redistribution of the cortical and trabecular bone (trabeculation of the cortical bone) and increased trabecular bone. About Bone turnover, there is unclear area/limited information and T2DM is associated with low bone turnover state (reduced OC and OB activities).

Factors associated with high fall risk are hypo to hyperglycemia, (...contd)

Moderater: Dr. Shehzad Tahir

Factors associated with high fall risk are hypo to hyperglycaemia, acute complications: AMI, infections, strokes, etc; chronic complications: neuropathy, retinopathy, postural HT, cardiac decompensation, Sarcopenia and Vitamin D deficiency?

BMD in T1DM is low. Nearly 50% of people with T1DM have BMD lower than expected and 20% meet criteria for OP. Average BMD 0.5-1.5 SDs (z-score) below the mean. There is low peak bone mass and low BMD during lifetime. *Mechanisms envolved are a*bnormalities in GH-insulin-like growth factor-1 axis, lack of insulin, insufficient dietary Ca^{++} intake, increased urinary Ca^{++} excretion, high prevalence of celiac disease and hypogonadism. Potential mechanisms envolved in T1DM, the maturation and functions of OBs are impaired. Chronic hyperglycaemia: increased expression of PPARγ, as PPARγ promotes formation of adipocytes from MC cells instead of OBs. Both hyperglycaemia and PPARγ stimulate OC formation.



Some Important Slides from Dr. Sarath's Presentation

Uncertainties in patient care and some questions are still unanswered. Should all patients with DM be routinely screened for OP and fracture risk? What tools should be used? BMD or FRAX? What drugs should be avoided in a patient considered to have a high fracture risk? Do medications approved for OP have the same anti-fracture efficacy in patients with diabetes?

There is no consensus about Indications for screening but T1DM needs screening and BMD/Trabecular bone score/FRAX if age >40ys. In T2DM, Postmenopausal women there is no consensus. In young women and men there are low energy fracture, multi-morbidity, drugs, low BMI, recurrent falls, etcDiagnosis of osteoporosis in T1D and T2D: same criteria as in the general population. Antiresorptives, the first-line treatment for OP, are effective in T2DM. BPs SERMS, are equally effective in reducing fracture risk and increasing BMD in individuals with and without T2DM. Denosumab has shown similar effects on vertebral fracture risk. Anabolics too have shown same efficacy in people with and without T2DM. Trial data on T1DM is scanty. Considering the low bone turnover T1D and T2D, anabolic therapies, seem more logical and no evidence suggests that anabolic therapy has greater efficacy than antiresorptive drugs.

Risk of Fractures with Glitazones is established. There is accelerated bone loss and an increased risk of

fracture. Glitazones exert their action through activation of proliferator-activated receptor gamma (PPAR-γ) nuclear transcription factor, activation of PPAR-γ inhibits bone formation by primarily diverting mesenchymal stem cells to the adipocytic rather than to the osteogenic lineage. May increase bone resorption by stimulating osteoclasts and increased fracture risk is mostly seen in women, but possibly also for men. Clinicians should carefully assess the fracture risk in patients with T2DM before starting therapy with glitazones.

Use of insulin, sulphonylureas and thiazolidinediones was associated with an increased risk of fracture. Use of metformin was associated with a reduced risk of fracture. Among thiazolidinediones, both pioglitazone (RR 1.38, 95% CI 1.23, 1.54; n = 5) and rosiglitazone (RR 1.34, 95% CI 1.14, 1.58; n = 5) were positively associated with the risk of fracture. "there is compelling evidence to discourage the use of thiazolidinediones in individuals with an increased risk of fracture, whereas metformin appears to have a good safety profile for the risk of fracture" Varied results on the association between other anti-diabetic drugs and fracture risk. Trelagliptin raised the risk of fracture, whereas voglibose and albiglutide showed benefit with statistical difference. Omarigliptin, sitagliptin, vildagliptin, saxagliptin, empagliflozin, ertugliflozin, rosiglitazone, pioglitazone, and nateglinide may increase the risk of fracture.

Dulaglutide, exenatide, liraglutide, semaglutide, lixisenatide, linagliptin, alogliptin, canagliflozin, dapagliflozin, glipizide, gliclazide, glibenclamide, glimepiride, metformin, and insulin may show benefits and the results were independent of age, sex distribution, and the duration of exposure to anti-diabetic drugs. Clinical efficacy of anti-diabetic drugs must be weighed against their effects on fracture

Thus it is better to avoid glitazones in those with a high fracture risk. Ensure good glycaemic control, minimizing of hypoglycemic episodes, prevention of diabetic complications. To assess and prevent falls consider BMI, exercise, Supplementation with calcium and Vit-D, specific medications (antiresorptive or osteoanabolic treatment ,where necessary)

To Summarize patients with diabetes have a high FR, not explained by BMD, causes are diabetes-related, complication-related, treatment-related or completely unrelated.

Many unsolved clinical queries related to screening policies and best methods and optimal diabetes control could minimize the risk. Risk of falls should be assessed specially in older adults and those with complications.

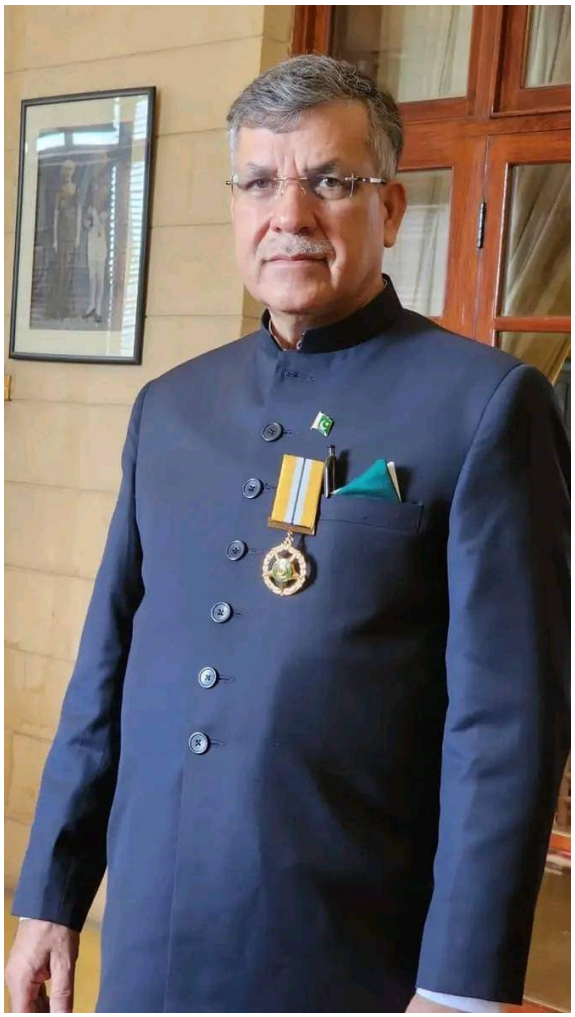
Adequate Ca^{++} and Vit-D should be provided. Standard OP medications are equally effective.

ماتلی کے لئے بڑا اعزاز :
ماتلی کے قریبی گاؤں سے تعلق رکھنے والے اور ابتدائی تعلیم ماتلی سے حاصل کر کے میڈیکل کی فیلڈ میں اپنا نام اور مقام بنانے والے ڈاکٹر اقبال خان أفریدی کو ان کی خدمات کے اعتراف کے طور پر حکومت پاکستان نے ستارہ امتیاز سے نوازا ھے
ھم اھلیان ماتلی ڈاکٹر اقبال أفریدی اور ان کے اھل خانہ کو دل کی گھرائیوں سے مبارکباد پیش کرتے ہیں.
ڈاکٹر عبدالمالک شیخ.

PROF. IQBAL AFRIDI

MBBS, FRCP (Ireland), FCPS (Pakistan) Residency at College of Physicians & Surgeons Pakistan, FRCP (UK), Fellowship at American Psychiatric Association (United States)

Best Teacher (Professor) Award 2019 "Professor Syed Hassan Manzoor Zaidi Medal'Jinnah Sindh Medical University, Tony Buzan Medal Brain Trust UK, Brain Trust Gold Medal Award Brain Trust UK



The Publications Committee of PREVENTION FIRST NEWSLETTER congratulate PROF. IQBAL AFRIDI from the deepest of our hearts for receiving Sitara-e-Imtiaz for life long services in field of Psychiatry/ Mental haelth. This is indeed a great and well deserved achievement.

Fasting Safety in Ramadan Using New Basal Insulin Therapies

Professor Dr. Abdul Jabbar

Later in the corporate session sponsored by Sanofi pharma, moderater Dr. Shezad Tahir invited Prof. Abdul Jabbar to deliver his talk. The topic of Prof. Abdul Jabbar's talk was "Real world Safetey And Efficasy of Insulin Glargine in people with Diabetes who Fast During Ramadan-Results from ORION Study. Diabetes and Ramadan.

Professor Dr. Abdul Jabbar

Consultant Internal Medicine and Diabetologist,
Medcare Hospital Dubai.
Adjunct Associate Professor, Mohamad bin Rashid University, Dubai, UAE
Former Professor and Head of Diabetes/ Endocrine Section,
The Aga Khan University, Karachi
Founder and Former President Pakistan Endocrine Society
LIFETIME ACHIEVEMENT award from PES
LIFETIME ACHIEVEMENT award from SAHF, UK

Prof. Abdul Jabbar who is a member of the advisory Board and/or speakers bureau of Novo, Lilly, Sanofi, Novartis, BI, Abbott, Merck, Getz; said that Diabetes and patient characteristics influence the risk of Ramadan fasting eg Type of diabetes, patients medications, Individual hypoglycaemic risk, Presence of complications and/or comorbidities, Individual social & work circumstances and previous Ramadan experience. He said Health problems may arise from unhealthy eating habits during Ramadan. These are: Large meals>1500 calories, Large amounts of highly processed carbohydrates and sugar, Sugary desserts, Large and frequent snacks, Eating too quickly, Eating suhoor early, Large amounts of high GI carbohydrates at suhoor, frying food and changes in exercise and sleeping patterns.

Results of ORION South Asian Sub-Group Analysis
Only 1 (0.9%) participant each during the pre-Ramadan and Ramadan periods experienced ≥ 1 event of severe and/or symptomatic documented hypoglycemia and no participant during the post -Ramadan period

No participants had reported severe hypoglycemia during the Ramadan and post-Ramadan periods while on treatment with Gla-300
The mean HbA1c value was 8.18% (±1.05%) in the pre-Ramadan period, and a decrease in mean HbA1c values to 7.78% (±0.95%) was noted in the pre- to post-Ramadan period.
The mean change was -0.37% (±0.88%)
Considering the short duration of the ORION study, the reduction in HbA1c of 0.37% in the participants from South Asia over a period of 3 months is noteworthy.
Baseline FPG was lower in the South Asian population in the present subgroup analysis than in the overall ORION study population (close to target FPG of 130 mg/dL) and decreased substantially post-Ramadan.
A slight numerical increase was observed in SMPG in the current subgroup analysis of 3.7±20.6.
However, the starting SMPG levels were lower in this sub-group than in the overall ORION study population, and despite the increase, the SMPG level remained within the target range.
The mean (SD) daily dose of Gla-300 reduced by -1.30(3.25)U [-0.017 (0.04) U/kg] during Pre-Ramadan to Ramadan period.

A relative reduction in the Gla-300 dose of >15% in the pre-Ramadan to Ramadan period was seen in a total of 27 (25.8%) participants.
Only 2 (1.9%) participants reported AEs from the South Asia group during the study period;
No participant reported a serious AE from this group.
In daily clinical practice, use of second-generation basal insulins and BI + GLP1 FRC in T2D people during Ramadan fasting was shown to be safe

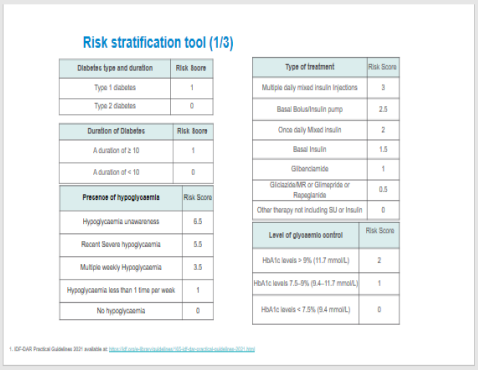
Hypo incidence was low with both insulin regimens even a minimum dose adjustment was performed

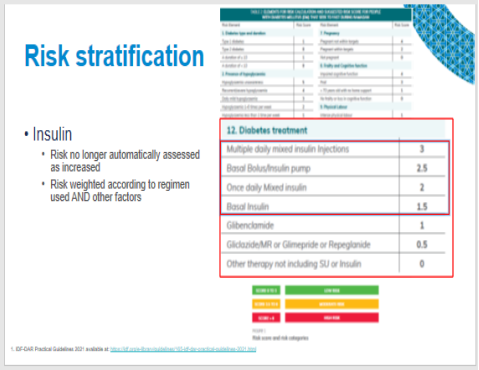
Large part of participants in both studies were able to fast for the entire Ramadan period with improvement in their glycemic control and body weight

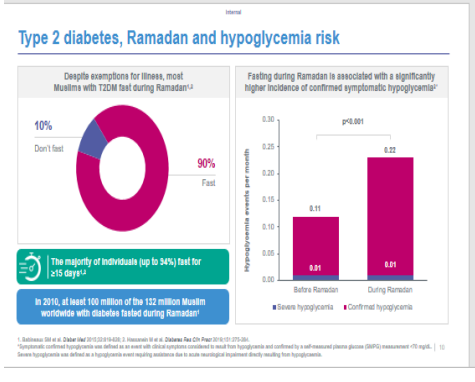
Key Takeaways:
With the correct guidance, many people with diabetes can fast during Ramadan safely but they must be under the close supervision of HCPs and made aware of the risks of fasting
In the daily clinical practice, use of second-generation basal insulins and BI + GLP1 FRC in T2D people during Ramadan fast was shown to be safe.

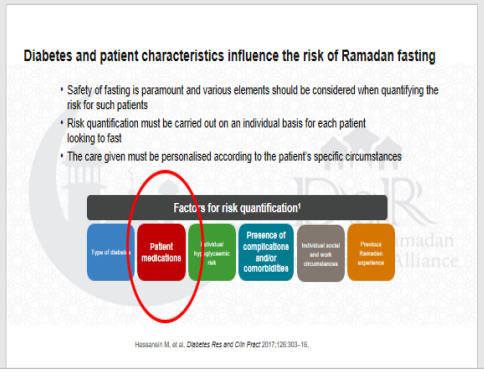
THE AUDIENCE

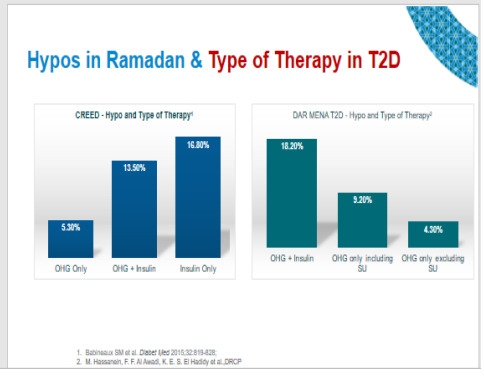
FEW SLIDES FROM DR. ABDUL JABBAR'S PRESENTATION











Session-II 18 Feb'24

UNDERSTANDING THE INTERPLAY BETWEEN DIABETES AND HYPERTENSION; EFFECTIVE MANAGEMENT STRATEGIES

By: Prof. Shahbaz A. Kureshi

Session-II on the 2nd. Day of 8th. International PCDA Symposium 2024 started with the moderation by Dr. Veru M Lohano. The Title of this session was "Diabetes and its complications." Dr. Veru then introduced the panelists for this session, namely Prof. Zaman Shaikh, Prof. Shabeen Naz Masood, Prof. Feroz Memon and Dr. Musarrat Riaz. He then invited the first speaker of the session Prof. Dr. Shahbaz A. Kureshi to speak on "Understanding the interplay between diabetes and hypertension-Effective management strategies."

Professor Dr. Shahbaz A. Kureshi, FRCP (London)
Consultant Interventional Cardiologist/ Heart Failure Specialist (ESC)
Chair, Heart Failure Counsel, Pakistan Cardiac Society

In the beginning of his talk Prof. Shahbaz Kureshi presented the history of the understanding of hypertension. He sai that in 1931, John Hay, Professor of Medicine at Liverpool University, wrote that "there is some truth in the saying that the greatest danger to a man with a high blood pressure lies in its discovery, because then some fool is certain to try and reduce it

US cardiologist Paul Dudley White in 1937, suggested that hypertension may be an important compensatory mechanism which should not be tampered with, even if we were certain that we could control it.

A prominent individual with severe hypertension was Franklin D. Roosevelt. He was documented as having hypertension at age 54, but did not receive treatment for another four years when he was prescribed phenobarbital and massage therapy for a blood pressure of 188/105 in 1941.

Hypertension is a leading cause of the global burden of non-communicable diseases, responsible for cardiovascular diseasez, chronic kidney disease, stroke and 25% of the world's adult population is hypertensive. This by 2025 will rise to 29%. A large population based survey to record the prevalence of hypertension is awaited. Last national health survey of Pakistan (NHSP) 18.9% of people in Pakistan above 15 years were hypertensive.

Prevalence of hypertension is higher in urban than in rural population, more in men than women. National diabetes survey of Pakistan 2016-2017 the prevalence of Hypertension was 46.2%. High rates of uncontrolled hypertension. .....*contd*

Panelists for the session-II: Prof. Zaman Shaikh, Prof. Shabeen Naz Masood, Prof. Feroz Memon and Dr. Musarrat Riaz.

HYPERTENSIN

burden was found disproportionately higher in south Asian children.

The prevalence of diabetes around the world in 2021 was 537 million adults (20-79 years) are living with diabetes - 1 in 10. This number is predicted to rise to 643 million by 2030 and 783 million by 2045. Over 3 in 4 adults with diabetes live in low - and middle-income countries.

Moderater of the Session:
Dr. Veru M. Lohano

Approximately 463 million adults worldwide have diabetes, and 90% of these people suffer from type 2 diabetes mellitus. According to an article by "The News", Pakistan ranks 3rd in the world in diabetes prevalence after China and India. The prevalence of diabetes in Pakistan in 2016, 2018 and 2019 was 11.77%, 16.98%, and 17.1%, respectively. According to the International Diabetes Federation, in 2022, 26.7% of adults in Pakistan are affected by diabetes making the total number of cases approximately 33,000,000. This number is alarmingly high and is also increasing with each passing year. There is also reason to believe that many patients go undiagnosed, making both the actual prevalence and the risk of complications due to the absence of treatment much higher.

Epidemiological studies have documented that insulin resistance and diabetes not only constitute metabolic abnormalities but also predispose to hypertension, vascular stiffness, and associated cardiovascular disease. Meanwhile, excessive arterial stiffness and impaired vasorelaxation, in turn, contribute to worsening insulin resistance and the development of diabetes. Molecular mechanisms promoting hypertension in diabetes include inappropriate activation of the renin-angiotensin-aldosterone system and sympathetic nervous system, mitochondria dysfunction, excessive oxidative stress, and systemic inflammation. This review highlights recent studies which have uncovered new underlying mechanisms for the increased propensity for the development of hypertension in association with diabetes. These include enhanced activation of epithelial sodium channels, alterations in extracellular vesicles and their microRNAs, abnormal gut microbiota, and increased renal sodium-glucose cotransporter activity, which collectively predispose to hypertension in association with diabetes. This review also covers socioeconomic factors and currently recommended blood pressure targets and related treatment strategies in diabetic patients with hypertension.

Diabetes & hypertension are said to be the siamese twins. Globally type 2 diabetes is in increasing trend with projected 366 million by 2030.

The number of adults with hypertension is predicted to increase by 60% to a total of 1.56 billion people by 2025. 70% patients with DM have hypertension and hypertension is approximately twice as common in persons with diabetes as in those without. In the Hong Kong Cardiovascular Risk Factor Prevalence Study, 58% of people with diabetes had HTN and 44% of people with hypertension had dysglycemia. Diabetes and hypertension constitute the Siamese twins in the tragic story cardiovascular forum.

In type 2 DM, HTN dictates the story of metabolic syndrome where as in type 1 it figures at the onset of nephropathy. Hypertension increases the risk of DM and vice versa explaining the symbiotic lethal chemistry between two.

Contd.






Hypertension

substantially increases the risk of both macro vascular and micro vascular complications, including stroke, coronary artery disease, peripheral vascular disease, retinopathy, nephropathy, and possibly neuropathy in diabetes mellitus. Coexistence of hypertension and diabetes can pose serious risks in subpopulations like pregnant women being at risk for pre-eclampsia and children being particularly vulnerable to end-organ disease and accelerated atherosclerosis with aging.

Diabetes carries 2 fold risk of CVD in men and four fold risk of CVD in post-menopausals. Diabetes and HTN in combination has 2 fold more CVD than hypertension alone. They potentiate the complication of each other. In UKPDS study 10 mmHg decrease in SBP decreased any complication by 12%, mortality by 13%, MI by 11% and micro vascular complication by 13%. As the disease progress the diabetics acquire HTN, dyslipidemia, atherosclerosis and CVD. Obesity, inflammation, oxidative stress and insulin resistance are the common to the duos. DM and HTN share common pathways of SNS, RAAS, oxidative stress, adipokines, insulin resistance, PPARs and both cause a vicious cycle.

Currently, South Asia accounts for a quarter of the world population, yet it already claims ≈60% of the global burden of heart disease. Besides the epidemics of type 2 diabetes mellitus and coronary heart disease already faced by South Asian countries, recent studies suggest that South Asians may also be at an increased risk of heart failure (HF), and that it presents at earlier ages than in most other racial/ethnic groups.

Although a frequently underrecognized threat, an eventual HF epidemic in the densely populated South Asian nations could have dramatic health, social and economic consequences, and urgent interventions are needed to flatten the curve of HF in South Asia.

In this review, we discuss recent studies portraying these trends, and describe the mechanisms that may explain an increased risk of premature HF in South Asians compared with other groups, with a special focus on highly relevant features in South Asian populations including premature coronary heart disease, early type 2 diabetes mellitus, ubiquitous abdominal obesity, exposure to the world's highest levels of air pollution, highly prevalent pretransition forms of HF such as rheumatic heart disease, and underdevelopment of healthcare systems. Other rising lifestyle-related risk factors such as use of tobacco products, hypertension, and general obesity are also discussed. We evaluate the prognosis of HF in South Asian countries and the implications of an anticipated HF epidemic.

Finally, we discuss proposed interventions aimed at curbing these adverse trends, management approaches that can improve the prognosis of prevalent HF in South Asian countries, and research gaps in this important field.

Conclusion of my talk is that hypertension, diabetes and cardiovascular diseases constitute the tripod of a fatal sink the present race is moving towards.

Timely intervention towards dysglycemia, hypertension and dyslipidemia can candle a bright outcome in future.

Treat blood pressure to below 140/90 mmHg, HbA1C below 7% and use moderate or high intensity statin; the epic will come to an end. No intensive;

It is the conventional strategy to win the game. Thanks to the age old saying:

''Slow and steady wins the race''

Dear Readers of PFN-Online:

In this issue we have covered the proceedings of Sessions I & II of the day-2 (Sunday 18th. February) of the 8th. International PCDA Symposium 2024. The coverage of the subsequent sessions of the 2nd day will be included in the forthcoming issues. Please stay tuned.

In-Charge PFN Online: Dr. Shahid Akhter

PRIMARY CARE DIABETES ASSOCIATION PAKISTAN

The Executive Committee

of

Primary Care Diabetes Association Pakistan

endorses the

2024 RECOMMENDATIONS BY CDC– USA FOR THE VACCINATION AGAINST SHINGLES

Press Release

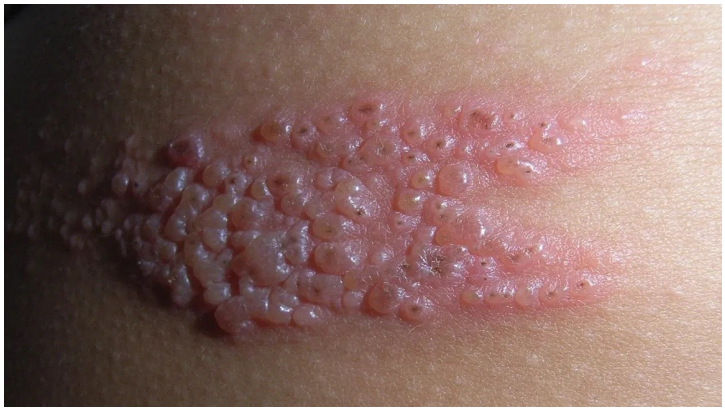
Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2024

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	1 or more doses of updated (2023-2024 Formula) vaccine (See Notes)			
Influenza inactivated (IIV4) or Influenza recombinant (RIV4)	1 dose annually			
or	or			
Influenza live, attenuated (LAIV4)	1 dose annually			
Respiratory Syncytial Virus (RSV)	Seasonal administration during pregnancy. See Notes.			≥60 years
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, see notes
Varicella (VAR)	2 doses (if born in 1980 or later)		2 doses	
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23)				See Notes
				See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y				

PCDA endorses recommendations by CDC about Shingle Vaccine

Report: Dr. Shahid Akhter

During a recent meeting of the executive committee of PCDA Pakistsn, a resolution was unanimously passed to endorse the recommendations by CDC-United States of America, about the shingle vaccine. Not currently available in Pakistan but it is expected that it will be available very soon. Because most people with diabetes are immune -compromised, this will help them protect from the serious complications of this preventable disease.



Shingles is caused by the varicella-zoster virus — the same virus that causes chickenpox. After someone had chickenpox, the virus stays in the body for the rest of the life. Years later, the virus may reactivate as shingles.

Shingles causes a painful rash. It can occur anywhere on the body. It typically looks like a single stripe of blisters that wraps around the left side or the right side of the torso.

Shingles isn't life-threatening. But it can be very painful. Vaccines can help lower the risk of shingles. Early treatment may shorten a shingles infection and lessen the chance of complications. The most common complication is postherpetic neuralgia. This is a painful condition that causes shingles pain for a long time after blisters have cleared.

Recommendations for Shingle Vaccination:

CDC recommends two doses of recombinant zoster vaccine (Currently not available in Pakistan) to prevent shingles and related complications in adults 50 years and older. Shingle vaccine is also recommended for adults 19 years and older who have weakened immune systems because of disease or therapy.

*Whether or not they report a prior episode of herpes zoster

*Whether or not they report a prior dose of Zostavax, a shingles vaccine that is no longer available for use in the United States.

It is not necessary to screen, either verbally or by laboratory serology, for evidence of prior varicella.

Recombinant and adjuvanted vaccines, such as Shingrix, can be administered concomitantly, at different anatomic sites, with other adult vaccines, including COVID-19 vaccines. Coadministration of RZV with adjuvanted influenza vaccine (Fluad) and COVID-19 vaccines is being studied.

Vaccination of Immunocompromised Adults 19 Years and Older:

CDC recommends two doses of RZV for the prevention of shingles and related complications in adults aged ≥19 years who are or will be immunodeficient or immunosuppressed because of disease or therapy.

The second dose of RZV should typically be given 2–6 months after the first. However, for persons who are or will be immunodeficient or immunosuppressed, like many of our diabetic patients, and who would benefit from completing the series in a shorter period, the second dose can be administered 1–2 months after the first.

Dr. Ahmad Shahzad reports from Punjab Chapter

Diabetes Pakistan Conference in Faisalabad

A meeting was held in Serena Hotel Faisalabad which was chaired by Prof Dr Zahid Yasin Hashmi. Prof Dr. Hafeez Chauhdary, Prof. Aamir Shaukat Pro Vice Chancellor Fisalabad Medical University, Dr. Ijaz Anwar, Dr. Masood, Dr. Tariq, Dr. Yousaf Ikram and Dr. Ahmad Shahzad were among the participants. After discussion on various suggestion brought forward by the participants, consensus was developed in principle, on holding a "**Diabetes Pakistan Conference**" which will cover various topics related to diabetes and metabolic Syndrome.

This 2 days international conference will be held on 1st. & 2nd. November 2024 in collaboration with Faisalabad Medical University, Pakistan Society of Internal Medicine, Primary care Diabetes Association Pakistan and Lyallpur Diabetes Foundation.

Dr. Riasat Ali Khan (President Elect) reports

FDA approves Rezdiffra

The U.S. Food and Drug Administration approved Rezdiffra (resmetirom) for the treatment of adults with noncirrhotic non-alcoholic steatohepatitis (NASH) with moderate to advanced liver scarring (fibrosis), to be used along with diet and exercise.

"Previously, patients with NASH who also have notable liver scarring did not have a medication that could directly address their liver damage," said Nikolay Nikolov, M.D., acting director of the Office of Immunology and Inflammation in the FDA's Center for Drug Evaluation and Research. "Today's approval of Rezdiffra will, for the first time, provide a treatment option for these patients, in addition to diet and exercise."

Dr. Zulfiqar Ali from Peshawer Chapter reports.

INSULIN SECRETING COW !

A groundbreaking achievement has been made as scientists at the University of Illinois have developed the world's first transgenic cow capable of producing human insulin in her milk with an impressive 94% efficiency.

Published in Biotechnology Journal, the study details how researchers used sophisticated techniques to introduce human insulin genes into cow cells, harnessing the mammary gland's efficiency in protein production.

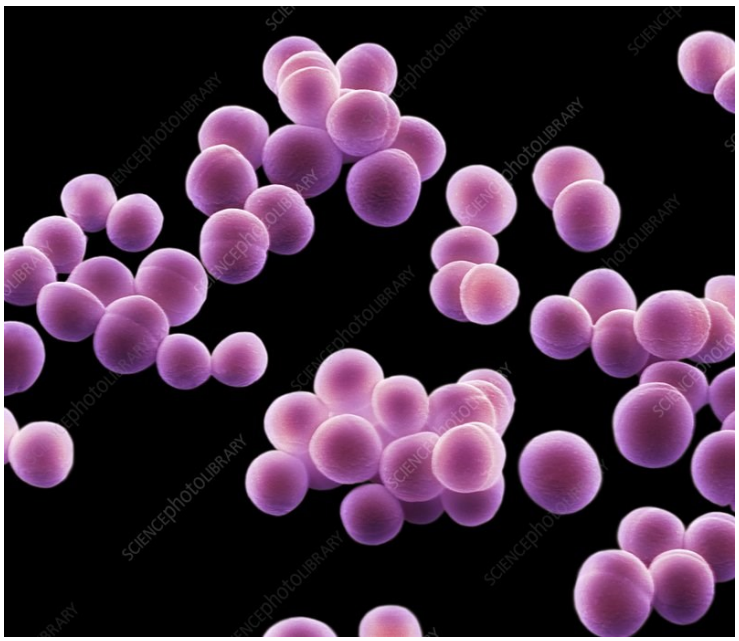
This proof-of-concept innovation, utilizing somatic cell nuclear transfer, holds promise pending further testing and FDA approval.

"Mother Nature designed the mammary gland as a factory to make protein really, really efficiently. We can take advantage of that system to produce a protein that can help hundreds of millions of people worldwide," said Matt Wheeler, professor of biotechnology and developmental biology at the University of Illinois and co-author of the study.

Our Skin bacteria will produce insulin for us

Reports **Dr. Shahid Akhter**

Insulin Producing *Staph Epidermidis*



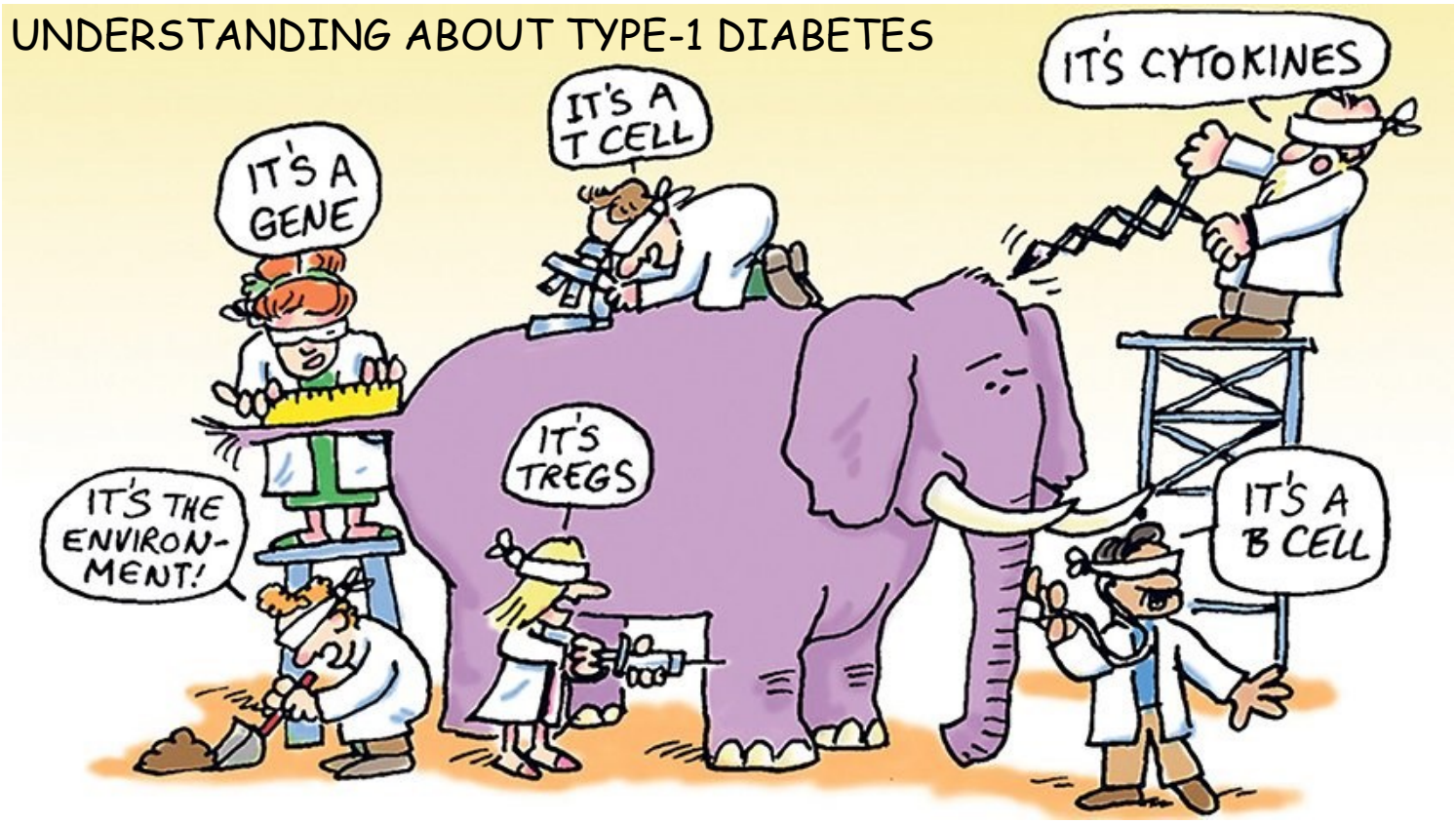
External insulin will not be the only option for long. Scientists are engineering skin microbes into a diffuse network of continuous glucose monitors and insulin factories inside the body. Restoring the body's insulin production through microbes or other means is on the horizon.

Microbes began making insulin for us, thanks to recombinant DNA technology. Since 1978, synthetic human insulin is made by inserting DNA into the bacterium *Escherichia coli*. But we can not insert insulin producing E. coli in the gut as insulin wouldn't survive well in the gut. Enzymes located there would degrade it.

Staphylococcus epidermidis bacteria reside so far below the surface of the skin, around two millimeters, that some can interact with blood vessels. The bacterial insulin pump project focuses on altering *Staphylococcus epidermidis'* DNA so that it senses a wearer's raised blood sugar and churns out insulin accordingly. The bacterium is found in almost everyone. Its genome has adapted to human skin, and human skin's adapted to us. So we will permit a certain amount of *Staph epidermidis* to live on us. *S. epidermidis* would do this job without the immune threat. And since the engineered bacterial insulin pumps just need access to the skin, they can be applied in a lotion.

Thus far, scientists have synthesized a gene that instructs *S. epidermidis* to manufacture an insulin analog made of one amino acid chain. (Naturally-occurring human insulin contains two connected chains.) The single-chain insulin functions like the typical version but is more stable at warm temperatures and is easier for skin bacteria to construct. Treating diabetes is "a balancing act. The exact right amount of insulin should be produced by these bacteria, so that you don't get hypoglycemia or hyperglycemia.

Moving insulin manufacturing from bioreactor facilities to the skin of individual users could make it cheaper and more effective than current options. Scientists are working hard on the biological control that the bacteria offer.



Dr. Muhammed Irfan Rashed reports from Toba Tek Singh

Dr. Muhammed Irfan Rashed has prepared a powerpoint presentation on "**Diabetes And Ramadan**" in Urdu language to make it easy to understand. This is really a wonderful job. This presentation is available on PCDA WhatsApp Groups. Here are pics of his presentation

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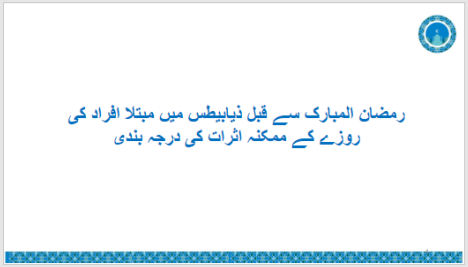

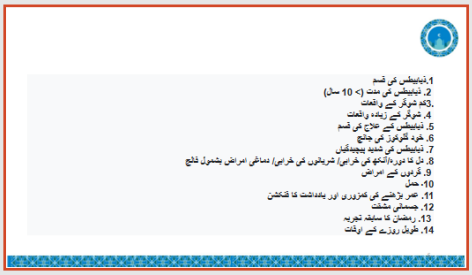

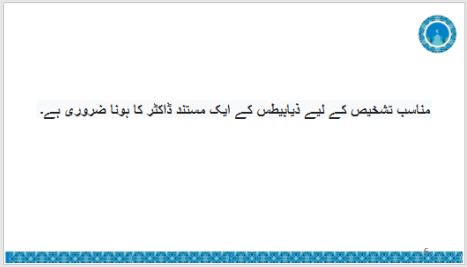

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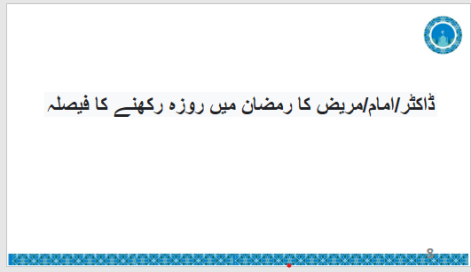

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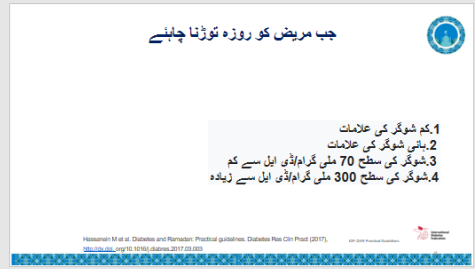

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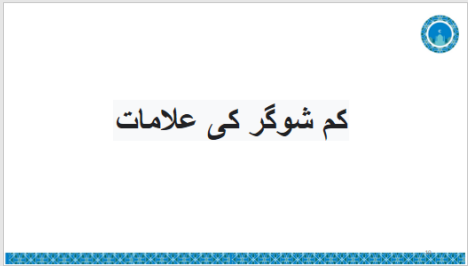

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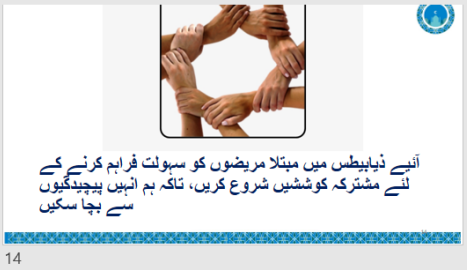

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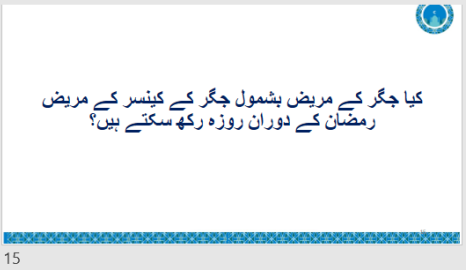

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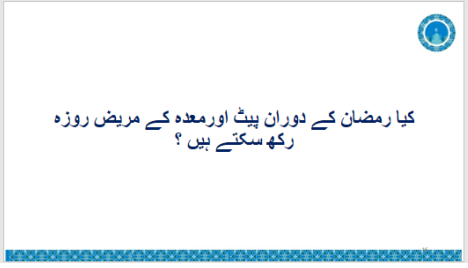
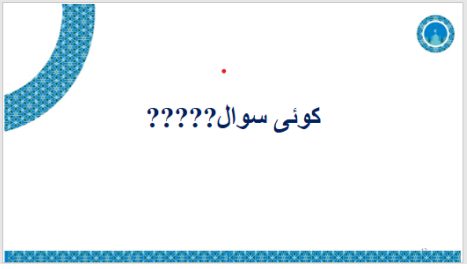
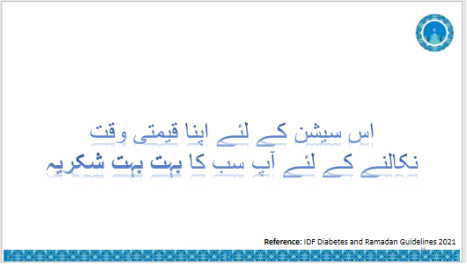






PCDA REPORTERS

Dr. Tanveer Ahmed reports from Sargodha Chapter

Dr. Tanveer Ahmad Chaudhary is very active in educating the people with diabetes, specially about foot care. He not only arranges free camps at hid AHMAD DIABETES & FOOT CARE CENTRE SARGODHA, but very regularly uploads awareness videos on social media. Here are some glimpses of his activities

احمد ذیابیطس سینٹر میں رمضان کے پورے مہنےمیں شوگر کی آگہی کے لئے پروگرام کیے جائیں گے _پورا مہینہ مریضوں کی اور عام لوگوں کی شوگر فری چیک کی جاے گی اور شوگر سے بچاؤ کے لئے رہنمائی فراہم کی جاے گی
مریضوں کو اور عام لوگوں شوگر چیک کرنا اور بلڈ پریشر چیک کرنا سکھایا جاے گا

شوگر کی آگہی کے حوالے سے رضاکار رجسٹر کر کہ انھیں شوگر سی بچاؤ کی آگہی دینے کے علاوہ شوگر چیک کرنا اور بلڈ پریشر چیک کرنا سکھایا جاے گا
انھیں اس سال کے لئے ٹارگٹ بھی دے جائیں گے

Chat of the month

PCDA Members (We All Friends)
Abdul, AGP, Ameer, Ashraf, Bashir, Dr Riasat, Dure, Ganesh, Ghotki Sindh, GSK

PCDA Sagheeruddin Turbat
Asalam walikum everyone hope all are fine with good health and all fasting and Ramzan Karim going in a bless way i want to need opinion for patients 7:20 pm

24 years old male with no comorbids having complained of frequent urniation average 2 times in an hour his fasting blood sugar is 244 mg/dL and random sugar is 546mg/dL and HbA1c is 15.4% kindly suggest treatment urea creatinine is with in normal range 7:23 pm

PCDA Sohail Tariq Bahawalpur Chapter Head
Start with insulin initiate intensify n optimised for 1 month 7:24 pm

PCDA Sagheeruddin Turbat
Patient belong to remote areas of balochistan that can't come to a major setup for indly suggest treatment requests to all seniors. Thanks 7:25 pm

> PCDA Sohail Tariq Bahawalpur Chapter Head
> Start with insulin initiate intensify n optimised for 1 month

Sir dose 7:25 pm

PCDA Sohail Tariq Bahawalpur Chapter Head

> PCDA Sagheeruddin Turbat
> Sir dose

0.5 units per kg 2/3 in morning 1/3 evening 7:25 pm

Or according to patient meal preference 7:26 pm

What about the weight 7:26 pm

PCDA Kalra
I think should be kept on basal bolus ! 7:26 pm

PCDA Sagheeruddin Turbat

> PCDA Sohail Tariq Bahawalpur Chapter Head
> What about the weight

56kg sir 7:26 pm

> PCDA Kalra
> I think should be kept on basal bolus !

Dose dr saab for basal bolus 7:27 pm

PCDA Kalra
Long acting (Lantus?)
14-18 units HS

Actrapid 8 units TDS with frequent sugar monitoring 7:55 pm
2

PCDA Vijay Kumar Larkana
I think 18 unit morning and 9 unit in night time.also monitor Blood sugar level two times with monitor vital signs.in DM diet chart with physical exercise is also too much helpful. 7:56 pm

PCDA Muhammad Ashfaq Utmanzay Chars...
Sorry for the jumping
But why not stick to guidelines
Is there any guideline which starts from insulin? 7:56 pm

PCDA Kalra
Or alternatively if not available as said belongs to remote area
Humulin N
8-10 units BD
Humulin R
8-10 units TDS
With frequent monitoring 7:56 pm
2

With titration accordingly 7:57 pm

I think the said patient is 25 years
Possiblity of Type 1 can't be ruled out 7:58 pm

Seniors may guide better ! 🙏 7:59 pm

PCDA Sohail Tariq Bahawalpur Chapter Head
1:18 8:04 pm

PCDA Kanwal Fayyaz Karachi
I think this patient is probably type 1 ...and if type 1 then as there is no insulin resistance...the starting dose ll be 0.1 to 0.2 unit/kg..... 8:08 pm

An interesting case study was dicussed recently in PCDA WhattsApp Group **"PCDA Members"**, initiated by Dr. Sagheeruddin from Turbat Baouchistan. We highly appreciate it and would encourage more such academic posting in all the PCDA

1 unit of insulin in type 1 decreases 40 to 50 mg/dl of blood sugars coz no resistance.... 8:09 pm

Age 24 so it can be MODY....check your patient accordingly 8:09 pm

Irshad Khan Dr. Hyd
Start insulin first,then do work up for type 1 or type 2 diabetes. 8:10 pm

PCDA Sagheeruddin Turbat

> PCDA Sohail Tariq Bahawalpur Chapter Head
> 1:18

Thanks you sir for precious advice 8:18 pm

> Irshad Khan Dr. Hyd
> Start insulin first,then do work up for type 1 or type 2 diabetes.

Sure 8:19 pm
2

PCDA Qamarudduja Dr.

> PCDA Sagheeruddin Turbat
> 24 years old male with no comorbids having complained of frequent urniation average 2 times in an hour his fasting blood sugar is 244 m...

As per the brief history , firstly we need to sit with the patient for Dietary counsil as well as exercise. Approximately 60% sugar control can be achieved by this two things. In terms of drugs I prefer to give him 70/30 insulin with gradual titration. After accessing the weight of the patient prescribe the dose with titration of insulin either positive or negative. We need to keep it simple. Frequent follow up initially required or what's app call will be fine. 8:22 pm
4

PCDA Syed Parvez Ali Shah left

PCDA Kishore Kumar

> PCDA Sagheeruddin Turbat
> 24 years old male with no comorbids having complained of frequent urniation average 2 times in an hour his fasting blo...

Must check K. Bodies
Onset 8:29 pm

PCDA Sagheeruddin Turbat

> PCDA Qamarudduja Dr.
> As per the brief history , firstly we need to sit with the patient for Dietary counsil as well as exercise. Approximately 60% sugar c...

Thankyou sir 8:29 pm

PCDA Ambreen Salman Karachi

> PCDA Kanwal Fayyaz Karachi
> I think this patient is probably type 1 ...and if type 1 then as there is no insulin resistance...the starting dose ll be 0.1 to 0.2 unit/kg.....

I second, plus regardless of type, he seems to be in a catabolic state right now, hx of recent weight loss should be enquired as well 8:2

PCDA Maria Noor Lahore
Could it be LADA 8:43 pm

Irshad Khan Dr. Hyd
Yes may be. 10:08 pm

PCDA Shahid Pervaiz Rauf

> PCDA Kalra
> Long acting (Lantus?)
> 14-18 units HS...

The patient belongs to remote area of Balochistan 10:54 pm

PCDA Sohail Tariq Bahawalpur Chapter Head

> PCDA Maria Noor Lahore
> Could it be LADA

Not the age 10:55 pm

Dr. Sulaiman Khan reports from Kohat Chapter

Head of Kohat chapter of PCDA Dr. Sulaiman Khan

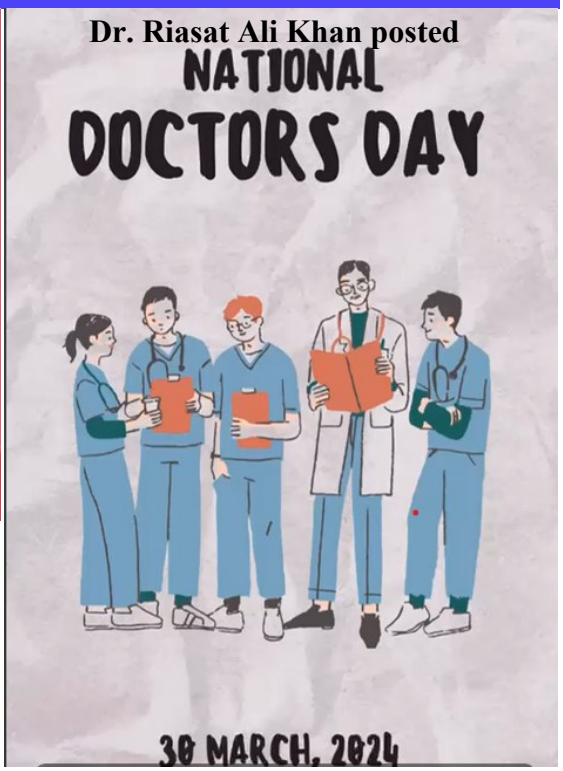
very regularly uploads awareness videos on social media. This recent video is about one of his diabetic patients, Mr. Rehmatullah Wazir. He is SHO police and was suffering from many diseases. But when he followed the instructions and education given by Dr. Sulaiman Khan things changed and his quality of life dramatically changed.

Dr. Sulaiman have many more such stories to tell on his social media accounts. Important thing is that Dr. Sulaiman Khan shares his experience with PCDA friends on WhatsApp groups and is also envolved in the continued medication of the primary care physicians of his area.

Dr. Tariq Mahmood Malik posted

Happy National Doctors Day !
To those enjoying a well-deserved day with family, cherish every moment. And to those at work, thank you once again for your hard work#NationalDoctorsDay

Dr. Riasat Ali Khan posted



Latest from D-FOOT international

ONLINE EDUCATION SERIES

Prof. Frances L Game

BSc, MBBCh, MRCP, MRC Path, FRCP

Consultant Diabetologist at University Hospitals of Derby and Burton NHS Foundation Trust.

Clinical Director of R&D and the Derby Clinical Trials Support unit and Honorary Professor at the University of Nottingham.

Topic

Wound Classification According to IWGDF 2023 Guidelines

Date and Time

8th June, 2024

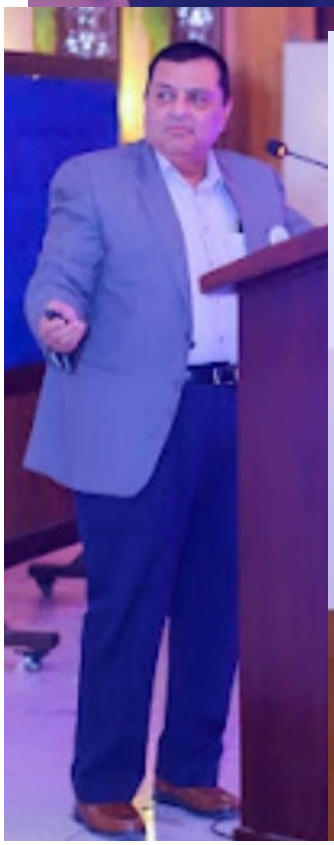
At 2:00 PM CET

SCAN ME TO REGISTER

For more details email;
secretariat@d-foot.org

Dr. Nazeer Soomro reports from Jacobabad Chapter

Dr. Irfan Shaikh reports from Multan Chapter



PCDA REPORTERS

Dr. Khalid Mazari reports from Multan Chapter

Dr. Abdul Samad Memon from Mirpur Khas Chapter

PCDA REPORTERS

Dr. Ashraf Raheem reports about PCDA Sehri Seminar'24

Continuing its annual tradition, PCDA hosted a seminar on March 24, 2024, at Hotel Marriot Karachi, attracting numerous primary care physicians, diabetologists, and cardiologists from all parts of Karachi. Esteemed and renowned professionals such as Prof. Zaman Shaikh, Prof. Abdul Rasheed, and Dr. Najum F. Mahmudi graced the event as panelists.

With the moderation by Dr. Riasat Ali Khan, president elect of PCDA, the seminar featured two presentations, with Dr. Shahid Akhter delivering the first on "The Role of Sitagliptin and Metformin Combination in the Management of T2DM," and the other with Dr. Zeeshan Ali on "Role of Bisoprolol in the management of hypertension-Specially in people with diabetes.".

Dr. Shahid Akhter delved into the established core defects underlying hyperglycemia in T2DM, tracing their evolution and their implications for drug selection. He elaborated on the transition from the "Triumvirate Triplet" to the "Egregious Eleven," offering insights to aid physicians in treatment decision-making for T2DM.

Dr. Shahid Akhter emphasized the merits of metformin in managing hyperglycemia, citing its high efficacy in reducing HbA1c levels, minimal risk of hypoglycemia when used alone, weight neutrality or potential for modest weight loss, favorable safety profile, cost-effectiveness, and recommendation as a first-line therapy for type 2 diabetes.

Dr. Shahid Akhter also discussed the potential benefits of early combination therapy to prolong treatment effectiveness.

He highlighted the advantages of selecting DPP4 inhibitors, exemplified by sitagliptin, during his presentation. He informed the audience that DPP-4 inhibitors are oral medications designed to inhibit the enzymatic inactivation of endogenous incretin hormones. This action leads to glucose-dependent insulin release and a reduction in glucagon secretion. Additionally, they offer a more modest glucose-lowering efficacy, a neutral effect on weight, minimal risk of hypoglycemia, high tolerability, and modest efficacy. Cardiovascular outcome trials (CVOTs) have established their cardiovascular safety without reducing cardiovascular risk. DPP4 inhibitors can be initiated alongside metformin at the outset of type 2 diabetes management, as evidenced by the Verify Trials. Indeed metformin can be combined with most of the medicines used in the treatment of T2DM. This mimics the role of "POTATO" among all vegetables that can be combined with most of the dishes.

Furthermore, Dr. Shahid Akhter discussed the efficacy and safety of treating inpatient hyperglycemia with basal insulin combined with DPP-4 inhibitors, which has been demonstrated to be effective and safe in older adults with type 2 diabetes. This approach results in similar mean daily blood glucose levels but lower glycemic variability and fewer hypoglycemic episodes compared to a basal –bolus insulin regimen.

Additionally, Dr. Shahid Akhter explored the potential benefits of early combination therapy to extend treatment effectiveness. He emphasized several advantages of combination therapy, including increased durability of the glycemic effect to overcome therapeutic inertia, simultaneous targeting of multiple pathophysiological processes characteristic of type 2 diabetes, reduced medication burden, improved medication-taking behavior and treatment persistence, and complementary clinical benefits such as enhanced glycemic control, weight management, and cardiovascular risk reduction.

Sehi Seminar'24

Second presentation was on "Role of Bisoprolol in the management of hypertension-Specially in people with diabetes," by Dr. Zeeshan Ali.

In the beginning he recapped the overall burden of hypertension globally and in Pakistan. He said that according to IDF, it is estimated that over 33 Million people in Pakistan are affected by diabetes, with more than 396,625 deaths in 2022. Evidence showed more than 70 % of diabetic patients (23 million approx) also have hypertension. All leading guidelines recommend RAAS inhibitors (ACE or ARBs) as first line antihypertensive for the management of hypertension with diabetes. Evidence showed that diabetic patients need more than one drug to treat hypertension. Uncontrolled hypertension with diabetes can cause endothelial dysfunction, insulin resistance, erectile dysfunction and cardiovascular diseases.

Dr. Zeeshan Ali said that evidence showed that diabetic hypertensive patients are associated with increased risk of all cause mortality and cardiovascular related mortality. And nebivolol appears to be logical choice to add on with ACEi or ARB to treat diabetic hypertensives due to nitric oxide induced vasodilation. Due to the side effects use of conventional beta blockers have restricted their usage in diabetic hypertensive patients. There were many issues related to the older conventional beta blockers like peripheral arterial disease, sexual dysfunction, disturbed glucose profile, disturbed lipid profile, decrease exercise tolerance, asthma and chronic obstructive pulmonary disease. Conventional β-Blockers Decreased blood flow in the Corpora Cavernosa due to Vasoconstriction.

Dr. Zeeshan Ali said that what we need today is an antihypertensive drug, which not only provides good blood pressure reduction but also significantly improves erectile function, endothelial function and insulin sensitivity. He said that Nebivolol is the synergic add-on anti hypertensive for Diabetic Hypertensives. It has core USP-HTN control, ultra selectivity to β-1 receptor and FMD improvement. He said that Nebivolol improves the insulin sensitivity ultimately aiding in improving glycemic control, helps improving the insulin resistance, improves erectile function and improves quality of life.

Regarding the dosage recommendation for nebivolol Dr. Zeeshan Ali said that For the treatment of hypertension, the recommended starting dose is 5 mg to 10mg once daily in combination with ACEi/ARB for effective blood pressure control. The recommended starting dose of Nebivolol in patients with CHF is 1.25 mg once daily. The dose should be doubled at 1 to 2 week to 2.5 mg, 5 mg, and up to the intervals to 2.5 mg, 5 mg, and up to the maximum dose of 10 mg once daily.

THE PANELISTS

Prof. Abdul Rasheed Khan

MBBS, MD, FACP, Consultant Cardiologist

Prof. Zaman Shaikh

Professor of Medicine and HOD , Sir Syed Medical College, Director, Sir Syed Institute of Diabetes and Endocrinology,

Dr. Najum F. Mahmudi

Sen. Vice President PCDA Pakistan

Sehi Seminar'24

Panel Discussion

After the two presentations, moderator Dr. Riasat Ali Khan invited the esteemed panelists to their respective seats in the panel. They were Prof. Abdul Rasheed Khan, Prof. Zaman Shaikh Dr. Najum F. Mehmudi.

The discussion started with Prof. Abdul Rasheed Khan who praised the presentations by both of the speakers.

Replying to a question about comparing cardiovascular safety of sitagliptin and vildagliptin. Professor Abdul Rasheed said that there were two studies in that regards. One from Japan and the other from Korea. Both show that the chances of QT interval prolongation are less with sitagliptin than vildagliptin. Yet in terms of heart failure, the data of a head-to-head comparison meta-analysis of about 57,000 patients is not in favor of sitagliptin, but vildagliptin was found to have a slight edge over sitagliptin with reference to the incidence of heart failure. But still sitagliptin has established its overall cardiovascular safety and an effective treatment modality for the hyperglycemic control. I would advise pleas always do an ECG when using any DPP4i . About nebivolol he said its safe and effective anti-hypertensive.

Professor Zaman shaikh praised the audience presence and attention. He said, "It is marvelous to see HOUSE Full at the time of sehri. Hats off to PCDA and its team, specially Dr. Riasat, Dr. Najam and all of PCDA. You have really done a wonderful job." He said both the presentations, one from Dr. Shahid Akhter other by Dr. Zeeshan Ali were excellent. He reminded the audience that in earlier guidelines step care management use to be recommended, i.e. initially use one drug for six months, then one and a half drugs for next six months, then go on increasing number of drugs. But now are the recommendations that nip the evil in the butt, means to be aggressive from the beginnings.

About VARIFY Trials he said it was a block buster and landmark study done in 34 countries in 2016. This trial showed some newer results. The inclusion criteria of this study was HbA1c between 6.5% and 7.5%, i.e. newly diagnosed diabetics. Although this study was done on vildagliptin but we can translate this study with sitagliptin because of the class effects of DPP4 inhibiters.

About the details of core defects in blood glucose homeostasis, presented by Dr. Shahid Akhter, he said it was very informative for me even. Talking about the GUT FLORA, he added that much of the work is being done about its role in the pathogenesis of diabetes and obesity. He quoted Dr. Peter Schwartz saying that regular cold drink is less risky than diet cold drink, because of the presence of heavy amounts of Non-Nutritive Sweeteners present in diet cold drinks.

He liked the comments by Dr. Shahid Akhter about labelling metformin like Aaloo (Potato). He endorsed that metformin can be combined with most of other anti-diabetes medicines as potatoes can be combined with most of the meals.

Commenting on Dr. Zeeshan's presentation on Nebivolol Prof. Zaman Shaikh said "In the past it was said that beta blockers are poison for the people with diabetes, main concern being erectile dysfunction. Other important concerns were bronchial asthma, producing new diabetes, heart failure and the hypoglycemia unawareness." He said, "This was true for the older beta blockers. But Nebivolol is supposed to do no harm." "Why can't be nebivolol given at the initiation of the treatment? We should form our own strategy, our own guidelines," he said.

Dr. Najum F. Mehmudi said the credit of the success of the sehri seminar goes to the audience and their faith in PCDA. Its highly appreciable and admirable. He thanked the audience for attending the sehri seminar and for their calm and patient listening.

Dr. Najum F. Mehmudi who is senior vice president of PCDA Pakistan, said "I liked the presentations by Shahid Akhter very much. Dr. Zeeshan also spoke well. He favored the use of nebivolol and avoid the older beta blocked. He expressed his concern of the hepatotoxicity with vildagliptin. This gives an edge to sitagliptin." According to him the damage to the liver cell after using vildagliptin was seen in many trials. This effect was consistent in many trials.

After the panel discussion Dr. Riasat called Associate director of Searle Mr. Irfan on the podium to say few word about the seminar. Mr. Irfan thanked PCDA, the panelists and the audience for making the sehri seminar a great success. He said I've never seen such a charged gathering in the odd hours of sehri. He briefed the audience about various projects of Searle.

Vote of thanks was presented by Dr. Fareeduddin, the president past of PCDA. He said during these odd hours when every one gets sleepy, such an interactive audience is really a matter of pride for PCDA. The sehri was getting late, thus the audience was requested to proceed to the restaurant.

PCDA REPORTERS

Dr. Qazi Mujahid reports about PCDA meeting at Sehri

A scheduled meeting of the members of the core committee of PCDA held before sehri on Sunday 31st. March'24 in Chaupal Restaurent at Shahreh Faisal Karachi. Forthcoming programs and plans were discussed, and the critical analysis of the and the critical analysis of the past symposium'24 performance of the organizing committees of past symposium'24 was done during the meeting. Prof. Zaman Sheikh later joined the meeting and honored the committee with his valuable suggestions and guidance. Here are some glimpses of the meeting:

Prevention First Newsletter-Online

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