307

SCIENTIFIC PUBLICATIONS

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ABSTRACTS FROM MEDICAL PUBLICATIONS FACILITATED BY GETZ PHARMA

VOL IV - 2025

THE VAULT

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THE VAULT is a collection of scientific and medical research conducted by Health Care Professionals (HCPs) across Pakistan, facilitated by Getz Pharma over the years.

The first issue of THE VAULT was dedicated to 100 publications supported by Getz Pharma since 1995, while the second issue highlighted 40 publications supported in 2022.

The third issue of THE VAULT featured 50 publications supported by Getz Pharma in 2023, followed by 52 publications in the fourth issue covering 2024.
All four issues can be accessed by scanning the QR codes below.

This fifth issue of THE VAULT is dedicated to 65 publications supported by Getz Pharma in 2025.

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Since its inception in 1995, Getz Pharma has embraced the motto of 'Care for your Health.' Over the past 29 years, we have evolved into the largest pharmaceutical company in Pakistan and expanded our presence in over 45+ countries globally. This achievement is attributed to our dedication to producing safe, effective, quality medicines while also benefitting the community through our numerous CSR projects.

When we claim to deliver world-class products, we mean it. Getz Pharma's manufacturing facility is pre-qualified by the World Health Organization (WHO), Geneva, and approved by the member countries of the Pharmaceutical Inspection Co-operation Scheme (PIC/S) and Eurasian Economic Union (EAEU). Our unwavering dedication to excellence extends beyond manufacturing our medicines; we have remained at the forefront of supporting the medical and healthcare community through grants and assistance in research and development initiatives.

Regrettably, Pakistan allocates only a fraction of its GDP to enhancing the public healthcare system. Recognizing this shortfall, we consider it our duty to contribute significantly to fostering a conducive environment for continuous research, development, and the dissemination of knowledge. Such efforts benefit the medical fraternity and the patients they serve.

Today, we take pride in surpassing 307 publications supported by Getz Pharma authored by eminent healthcare providers and researchers and published worldwide. Through collaborative endeavors with healthcare professionals nationwide, we have established a robust network that promotes research and knowledge-sharing within the medical community.

We remain steadfast in our commitment to support and facilitate further advancements in research and development within this field.

Zeeshan Ahmed

Deputy Managing Director
Getz Pharma

At Getz Pharma, we remain committed to supporting the medical community through initiatives that strengthen clinical research, foster scientific exchange, and encourage the development of evidence based practice.

By enabling healthcare professionals to contribute to the scientific literature, we hope to advance a deeper understanding of regional health needs and promote meaningful improvements in patient care.

Across many healthcare settings, opportunities for structured research and publication remain limited. By encouraging scientific writing, supporting local data generation, and creating avenues for peer reviewed work, we hope to make these opportunities more accessible.

Each contribution included in this volume is a reminder of the dedication shown by healthcare professionals who continue to push for better patient outcomes through evidence-based practice.

Our aim is to help build an environment where research is valued, collaboration is encouraged, and learning remains continuous.

Through sustained support for medical initiatives such as The Vault, we hope to play a meaningful part in strengthening healthcare systems and improving the quality of care available to patients.

Dr. Jahanzeb Kamal

Vice President
Global Medical Affairs, PV &
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Getz Pharma

Getz Pharma is a leading pharmaceutical company driven by a robust commitment to research. Guided by our core values, we seamlessly integrate research throughout the entire lifecycle of our products—from formulation development and manufacturing to rigorous testing and delivering a diverse range of safe, effective, and quality medications. This unwavering dedication positions us at the forefront of scientific data generation and discourse across Pakistan and internationally.

The Medical Affairs team at Getz Pharma is dedicated to highlighting the innovative science underpinning our work. We strive to foster open dialogue among researchers, clinicians, and the broader medical community, ensuring transparency and collaboration at every step.

Expanding our collaborations in clinical research services and publications is paramount to us. By doing so, we aim to maximize our impact on patients suffering from various diseases. With this objective in mind, we actively engage and support healthcare professionals by providing comprehensive research services, including statistical assistance and facilitating publications. We are immensely proud of our contributions, culminating in the conclusion of 65 publications in 2025. These publications encompass abstracts from guidelines and manuscripts published in prestigious international and national journals recognized by the Higher Education Commission (HEC).

We are engaged in numerous clinical research projects across Pakistan and other countries. These endeavors are conducted in close collaboration with healthcare professionals and medical societies, pioneering a data-driven approach to tackle healthcare challenges by establishing disease-specific registries. Our long-term mission is rooted in fostering indigenous scientific data generation and dissemination through publications. We aspire to enhance awareness of local knowledge gaps and address unmet medical informational needs within our community. Ultimately, these efforts will translate into improved patient care and advancements in critical determinants of health.

Jaffer Bin Baqar

Head of Research Services &
Pharmacovigilance
Getz Pharma

It is a privilege to address you in my new role as the Head of Research Services and Pharmacovigilance at Getz Pharma. Having previously led our public health and research functions, I have witnessed firsthand the transformative power of data-driven insights in shaping national health preventive outcomes e.g. PAK-SEHAT study. Today, my mission is to further bridge the gap between clinical observation and global scientific recognition.

This edition of The Vault 307 represents a significant milestone in that journey. It is a curated compilation of scientific achievements by healthcare professionals across Pakistan, facilitated by our dedicated team. Our goal is to ensure that no vital clinical observation goes unrecorded due to a lack of technical resources. To support this, my department provides specialized end-to-end research services, including:

- Robust Data Analysis: Turning complex clinical data into meaningful evidence.
- Expert Manuscript Editing: Ensuring that local insights meet the stringent standards of national or international, peer-reviewed journals.
- Strategic Publication Support: Navigating the path to HEC-recognized and global scientific journals.
- Scientific Communication: Assisting in the creation of impactful posters and presentations for national and international forums.

By bridging the gap between clinical practice and formal publication, we are together addressing the unique healthcare challenges of our population—from metabolic health and infectious diseases to maternal care. By facilitating these studies, we aren't just supporting individual careers—we are elevating the stature of local research on the world stage.

We invite you to explore these findings and partner with us in our mission to put Pakistan healthcare research on the global map.

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Getz Pharma is South Asia's First & Only Pharmaceutical Company to Achieve

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2025 Articles

Assessing Epilepsy Treatment Adherence and Factors Contributing to Adherence among People with Epilepsy in Paung Township

Published in
International Journal of Epilepsy, 2025

Journal Category
X

Impact Factor: 0.9

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To Read Full Text Article, Please Scan QR Code

Objective
This study evaluates medication adherence among epilepsy patients at public health facilities in Paung Township, Mon State, Myanmar, using both quantitative and qualitative methods to explore influencing factors.

Methodology
This cross-sectional study in Paung Township involved 72 epilepsy patients aged 12 years and older, receiving antiseizure medications for at least 6 months. Quantitative data were collected through questionnaires and the Morisky Medication Adherence Scale (MMAS-8), while qualitative insights were obtained from three focus group discussions involving patients and family members.

Results
The study involved 72 people with epilepsy (PWE) in Paung Township, Myanmar, examining baseline characteristics, treatment services, perceptions, and adherence. The majority were young adults, and 87.5% lived in rural areas. Phenobarbital was the primary medication, and 94.4% of patients received free medications. Most reported >50% seizure reduction and 75% attended follow-ups regularly. Overall, 59.7% demonstrated high adherence. Negative attitudes toward missing medication were prevalent among 90.3% of patients, and this was significantly associated with high adherence ($p < 0.05$). Family support (97.2%) and the convenience of accessing health facilities for medication were widely reported but did not show a significant association with the level of medication adherence. The qualitative findings affirmed satisfaction with health care services, minimal transportation challenges, reduced seizures, manageable side effects, and strong family support. Regular follow-ups significantly predicted adherence.

Conclusion
Medication adherence among epilepsy patients in Paung Township was assessed using the MMAS-8, revealing high adherence in nearly 60% of participants. Regular follow-up appointments were significantly correlated with adherence, while negative attitudes toward missed doses and side effects influenced adherence. Patients expressed satisfaction with free medication services, convenience, and reduced seizure frequency.

Keywords
Epilepsy, Seizures, Medication adherence, Morisky Medication Adherence Scale

Comparative Analysis Of Success Rates And Complications Between Lumbar Microdiscectomy And Open Discectomy For Lumbar Disc Herniation

Published in
Pakistan Journal of Medical Sciences 2025

Journal Category
W

Impact Factor: 1.7

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To Read Full Text Article, Please Scan QR Code

Objective
This study aimed to evaluate the success rates and complications associated with lumbar microdiscectomy compared to open discectomy from a tertiary care hospital perspective.

Methodology
A retrospective analysis was conducted at the Neurosurgery Department of Lady Reading Hospital over four years (January 2020 to December 2023). Inclusion criteria comprised patients of all genders and ages who underwent single-level lumbar microdiscectomy or open discectomy. Exclusion criteria encompassed patients who underwent redo surgeries, or had incomplete data.

Results
In the study, 396 patients were enrolled, with 153 undergoing open discectomy and 243 undergoing microdiscectomy. The mean age of the participants was 40.42±11.49 years. Noteworthy findings from the analysis include that the success rates were 77.8% for open discectomy and 86.8% for microdiscectomy (p=0.050), while complications, specifically discitis, occurred in 2.6% of open discectomy patients and 0.4% of microdiscectomy patients (p=0.025).

Conclusion
Microdiscectomy exhibited higher success rates and lower complication rates than open discectomy for single-level lumbar disc herniation, underscoring its potential as a preferred surgical intervention.

Keywords
Complications, Lumbar microdiscectomy, Lumbar disc herniation, Open discectomy, Success rates

Association between Hemoglobin Levels and Severity of Coronary Artery Disease among Patients Presenting with ST-Segment Elevation Myocardial Infarction

Published in
Journal of Islamabad Medical and Dental College. 2025

Journal Category
Y

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Objective
This study aimed to elucidate the association between hemoglobin levels (anemia) and the severity of coronary artery disease (CAD) among patients experiencing ST-segment elevation myocardial infarction (STEMI).

Methodology
This prospective cohort study included patients aged 20 to 80 years presenting with STEMI to Liaquat National Hospital and Medicare General and Cardiac Hospitals between September 2023 and February 2024. Anemia was categorized as per the criteria defined by the World Health Organization based on the hemoglobin levels. The severity of CAD was assessed based on the number of vessels affected and the Syntax Score system derived from coronary angiography.

Results
Of the 228 patients included in the study, 122 were anemic based on hemoglobin levels. The Syntax Score was significantly higher in the anemic group compared to the non-anemic group (27.97±7.15 vs. 24.62±7.04, $p<0.01$). One-way ANOVA showed significant differences in mean Syntax Scores across anemia severity levels, with the severely anemic group having the highest scores ($F(3, 224) = 4.310$, $p = 0.006$). Logistic regression indicated that lower hemoglobin levels were significantly associated with higher CAD severity ($\beta = -0.556$, $t = -2.284$, $p = 0.023$), and male gender also correlated with higher Syntax Scores ($\beta = 2.294$, $t = 2.165$, $p = 0.031$). The ROC curve analysis revealed an area under the curve (AUC) of 0.537, indicating that hemoglobin alone is not a strong predictor of multivessel disease in this population.

Conclusion
Lower hemoglobin levels are significantly associated with increased severity of CAD in patients with STEMI, emphasizing the need for careful anemia management in CAD patients

Keywords
Acute Coronary Syndrome, ST-Elevation, Myocardial Infarction, Anemia, Hemoglobin

A Comparative Study of Perioperative Blood Loss in Monopolar Versus Bipolar Transurethral Resection of the Prostate: Quasi Experimental Study

Published in
Pakistan Journal of Health Sciences. 2025

Journal Category
Y

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To Read Full Text Article, Please Scan QR Code

Background
Transurethral Resection of the Prostate (TURP) is frequently performed for Benign Prostatic Hyperplasia (BPH), and the choice between monopolar and bipolar diathermy generally offering better hemostasis than monopolar diathermy.

Objective
To compare perioperative blood loss in monopolar versus bipolar transurethral resection for benign prostatic hyperplasia.

Methods
Quasi experimental study was conducted at the Department of Urology and Renal Transplantation, DHQ Hospital Gujranwala, from December 11, 2018, to June 11, 2019. Patients were assigned to either Group A, which received monopolar diathermy, or Group B, which received bipolar diathermy, using convenience sampling technique. Each group comprised 40 patients. Hematocrit levels were assessed 24 hours' post-surgery; hematocrit, the proportion of blood volume occupied by red blood cells, serves as an indirect measure of blood loss. Blood loss during surgery was estimated by comparing pre-operative and post-operative hematocrit readings, and the data were analyzed using SPSS version 23

Results
Perioperative blood loss was significantly higher in patients who underwent monopolar diathermy compared to those treated with bipolar diathermy (monopolar: 325.22 ml vs. bipolar: 240.0 ml, p-value = 0.0001). Similar findings were observed when stratifying by age and prostate size, indicating that bipolar TURP consistently resulted in less perioperative blood loss.

Conclusion
A significant reduction in perioperative blood loss with bipolar TURP compared to monopolar TURP in BPH patients. Reduction is clinically relevant, as it may lead to lower morbidity and improved recovery times.

Keywords
Transurethral Resection of the Prostate, Benign Prostatic Hyperplasia, Bipolar Diathermy, Monopolar Diathermy, Perioperative Blood Loss

Comparison of Trans-Viginal Tape (TVT) and Trans-Obturator (TOT) Tape Methods for Management of Stress Urinary Incontinence among Women with Post-Menopausal Condition

Published in
Journal of the Society of Obstetricians and Gynecologists of Pakistan. 2025

Joural Category
Y

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To Read Full Text Article, Please Scan QR Code

Objective
To compare the frequency of success of TVT versus TOT for SUI in postmenopausal women.

Methodology
A randomized control trial study was conducted at department of Urology, Sharif Institute of Urology and Renal Transplant, Lahore from 11- 07-2019 to 10-01-2020. Females of postmenopausal age presenting with stress urinary were included in the study however, the patients with bleeding diathesis, untreated urinary tract infection. Diabetes and chronic kidney diseases were excluded from study. Patients were divided into two groups (A &B) after taken an informed consent. In group A, patients underwent TVT and in group B, patients underwent TOT. After 3 months, patients were evaluated for symptoms of stress urinary incontinence and stress test. Both groups were compared by using chi-square test for desired outcome with p value ≤ 0.05 as significant.

Results
Mean durations of menopause were 10.94±3.91 and 6.75±1.05 years and mean duration of symptoms were 6.42±2.94 and 7.39±1.82 years in groups A and B, respectively. Majority of patients were married i.e. 66.0% and 74.0% and sexually inactive i.e. 88.0% and 94.0%, in groups A and B, respectively. Successful treatment was observed in 70.0% patients after TVT procedure and 94.0% patients after TOT procedure (p-value= 0.002).

Conclusion
Higher success rates were observed in postmenopausal women of < 50 and > 70 years of age, underweight and normal weight women, unmarried, sexually inactive, women with less than 5 years of Duration of menopause and less than 5 years of duration of symptoms of urinary stress incontinence. Objective: To determine the impact of midlife on professional life by exploring the workplace challenges faced by women.

Keywords
Transvaginal vaginal tape, trans-obturator tape, stress urinary incontinence

Comparison of Clomiphene Citrate and Letrozole in Induction of Ovulation Among Patients Polycystic Ovarian Syndrome (PCOS) Primary Sub-fertility

Published in
Journal of the Society of Obstetricians and Gynecologists of Pakistan. 2025

Journal Category
Y

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Objective
To compare the efficacy of clomiphene and Letrozole in the induction of ovulation in patients with primary ovarian sub-fertility.

Methods
This was a randomized controlled trial study carried out at Dow University Hospital Karachi, Ojha Campus, Karachi after approval of synopsis from February 2016 to January 2017. The required sample size was 164 (82 in the Letrozole group and 82 in the CC group). The patients were divided into two groups using lottery method. Females of 18-40 years irrespective of weight, years of marriage, and duration of sub-fertility with primary ovarian sub-fertility were included in the study. SPSS version 20 was used for data analysis.

Results
Total of 164 women were enrolled in the study. 82 women were given Clomiphene Citrate and 82 were treated with Letrozole. The mean age was found to be 28.48±4.12 in the clomiphene citrate group whereas 28.45±3.01 in the Letrozole group. The results showed improved results among the group with Letrozole drug compared to Clomiphene Citrate. Efficacy was positively found with 1st cycle, 2nd cycle & 3rd cycle in 2 (2.4%), 23 (28.05%) & 32 (39.02%) respondents respectively with Clomiphene Citrate. Whereas efficacy was positive with 1st cycle, 2nd cycle & 3rd cycle in 18 (21.9%), 34 (41.4%) & 24 (29.2%) respondents respectively with Letrozole.

Conclusion
Letrozole appeared to be the effective drug of choice in ovulation induction among patients who failed to conceive, however, the clomiphene citrate was found to be most effective in women. The dosage of Letrozole is much lower mg with effective pregnancy results compared to Clomiphene Citrate clomiphene citrate.

Keywords
Clomiphene citrate, Letrozole, Primary ovarian sub-fertility.

Persistent QTc Prolongation Due to Hypocalcemia from Hypoparathyroidism in a Heart Failure Patient: A Case Report

Published in
Journal of Islamabad Medical and Dental College. 2025

Joural Category
Y

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To Read Full Text Article, Please Scan QR Code

Objective

The QT interval on an electrocardiogram reflects ventricular depolarization and repolarization, with prolonged QTc indicating a defect in myocardial repolarization. This condition increases the risk of arrhythmias, torsade's de pointes, and sudden cardiac death. We present the case of a 40-year-old female with heart failure and reduced ejection fraction who exhibited persistent QTc prolongation due to hypocalcemia resulting from hypoparathyroidism secondary to a thyroidectomy performed 15 years prior. Management included standard heart failure treatment alongside active vitamin D and calcium supplementation, leading to clinical improvement. This case underscores the importance of early identification and management of secondary causes of QTc prolongation in heart failure patients.

Keywords

Hypocalcemia, QTc prolongation, Heart failure with reduced ejection fraction, Hypoparathyroidism.

Assessment of Deranged Lipid Profiles and Correlated Dependent Factors in Patients with Ischemic Stroke at a Tertiary Care Setup in Islamabad

Published in
Pakistan Journal of Health Sciences. 2025

Journal Category
Y

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Background
The deranged lipid profile of patients is greatly associated with multiple complications hence leading towards the co morbidities and eventually been a reason of high mortalities.

Objective
To determine the cases of deranged lipid profiles among patients with confirmed diagnosis of ischemic stroke, dependent variables & co morbidities.

Methods
A Descriptive, cross-sectional study was conducted at the Department of Medicine Fauji Foundation Hospital Rawalpindi from 20 March 2024 to 19 September 2024 a sample size of 110 was calculated using a WHO sample size calculator with a confirmed diagnosis of ischemic stroke from the age range of 30 years to 80 years of age were recruited in the study. A total of 5ml of the venous sample was obtained after 8 hours of fasting, and centrifuged at 40 Celsius for 15 minutes to analyze the serum lipid profile for obtaining true levels of high-density lipoproteins HDL, and low-density lipoprotein LDL using the auto analyzer machine. The collected data were assessed by data stratification using SPSS and post-stratification chi-square test was applied and a p-value of less than 0.05 was considered significant.

Results
The total cholesterol was deranged in 57.27%, LDL cholesterol was deranged in 60.0%, deranged triglyceride levels in 67.27% and deranged HDL cholesterol in 32.73% of patients.

Conclusion
The current study concluded that the frequency of dyslipidemia is significantly high among patients with ischemic stroke. The functions of HDL are dependent on certain factors such as genetics, lifestyle changes, and environmental factors.

Keywords
Cerebrovascular, Dyslipidemia, Ischemic stroke, Lipid Profiles, Assessment

Assessing the Risk Factors and Complications Related to Metabolic Syndrome in Diabetic Patients: A Retrospective Analysis from Metabesity Management Clinics

Published in
Journal of Population Therapeutics & Clinical Pharmacology. 2025

Joural Category
X

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Objective
This study aimed to assess the risk factors and complications related to Metabolic Syndrome in Type 2 Diabetes Mellitus (T2DM) patients presented at the Metabesity Management Clinics.

Methodology
A retrospective cross-sectional study was conducted at two tertiary care centers over two years, including type 2 diabetic patients aged 18 and above. Patients with specific conditions or critical illnesses were excluded. Data, encompassing medical history, demographics, and various clinical measurements, were collected from medical records using Healthwire software.

Results
The analysis revealed hypertension (53.3%) as the predominant risk factor associated with MetS among T2DM patients. Furthermore, Diabetic Peripheral Neuropathy (40.0%) emerged as the most prevalent microvascular complication in this population. Lower extremity vascular health, assessed by DFA-TBPI (0.80 ± 0.19), demonstrated consistent results, while DFA-ABPI (1.06 ± 0.06) indicated stable blood flow. Neurological assessments revealed moderate sensory perception in both right (12.15) and left (12.97) feet, with notable variability. A significant proportion (33.2%) reported mild depression based on PHQ-9 outcomes. The categorical distribution based on the FIB-4 score indicated a high level in 1.0% of respondents, with 15.9% at an intermediate stage. Conversely, the NFS score demonstrated that 0.1% exhibited high fibrosis advancement, while 53.4% were at an intermediate level.

Conclusion
Hypertension was identified as the most prevalent risk factor and peripheral neuropathy as the most common microvascular complications associated with MetS among type 2 diabetes patients

Keywords
Type 2 Diabetes Mellitus (T2DM), Metabolic Syndrome (MetS), Risk Factors, Complications, Metabesity Management Clinics

Assessment Of Association Between Drugs Resistant Epilepsy Among Patients With Obesity: An Exploratory Study

Published in
Annals Abbasi Shaheed Hospital & Karachi Medical & Dental College. 2025

Journal Category
X

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Objective
To assess the frequency and the association between the drugs resistant epilepsy (DRE) and obesity among patients at a tertiary care hospital in Pakistan

Methodology
A descriptive cross-sectional study was conducted at the Department of Neurology, Liaquat University of Medical and Health Sciences, Hyderabad for 6 months post-approval of the project starting from March 2023, to September 2023. Data was obtained from 116 epilepsy patients after calculating the sample size, patients aged 18-60 years old patients of both genders were included, Pregnant women, children under the age of 18 years, and patients with a diagnosis of chronic liver disease and psychological disorders were excluded from the study. All the data was transferred to MS Excel and later on, assessed using the SPSS version 20.

Results
The data showed out of 116 patients the majority of patients with drug-resistant epilepsy were male i.e., 13.8%, however, 6.9% of females were seen with DRE cases the value of P was seen as 0.121. The BMI ranges were divided into 2 groups 19-30 and > 30. The more numbers of patients were among 12.1 % however the value of P =0.467. The mean ± standard deviation of age was 28.79±10.70 years. In the distribution of gender, 61 (52.6%) were male while 55 (47.4%) were female. Drug-resistant epilepsy (DRE) was observed in 24 (20.7%) patients of the study cohort. The remaining 92 (79.3%) of patients did not exhibit DRE. The median of ages was analyzed by applying statistics and seen 23.00 the 10.7 of std. deviation (p=0.225)

Conclusion
Drug-resistant epilepsy (DRE) was identified in 20.7% of patients, with no statistically significant association observed with gender, age, or BMI. Further studies with larger cohorts are recommended to explore obesity's potential role in DRE prevalence and progression.

Keywords
Drug, Epilepsy, Obesity, Resistance, pharmacological therapies

Determining the Occurrence, Predictors and Contributing Factors of Ischemic Versus Hemorrhagic Stroke Among Patients with Post Stroke Epilepsy; A Comparative Study

Published in
Pakistan Journal of Neurological Surgery. 2025

Joural Category
Y

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To Read Full Text Article, Please Scan QR Code

Objective
To assess the occurrence, and contributing factors of post-stroke epilepsy in stroke patients and to compare the frequency of ischemic versus hemorrhagic stroke in patients presenting at Nishtar Hospital, Multan.

Materials & Methods
The patients with stroke, fulfilling inclusion criteria admitted to the neurology department of Nishtar Hospital, Multan were recruited in the study. A detailed history of the current illness as well as a history especially related to seizures was questioned. CT scan brain of all the patients was done and type of type i.e., ischemic or hemorrhagic was determined. Patients were followed for 3-month intervals for the occurrence of epilepsy.

Results
Out of a total of 136 patients with stroke, ischemic stroke was found in 107 (78.7%) patients and hemorrhagic stroke in 29 (21.3%). Most patients were males 80 (58.8%) while 56 (41.2%) were females. The mean age of the patients was 55.55±10.17 years and the mean BMI was 25.26±5.54 kg/m2. The frequency of obesity, hypertension, diabetes, and smoking was 21.3%, 48.5%, 44.9%, and 44.1% respectively. Seizure was observed in 35(25.7%) patients with stroke, commonly in hemorrhagic stroke (12/17, 70.58%).

Conclusion
Old age, hypertension, and smoking significantly increase stroke risk. Epilepsy can complicate stroke with a higher incidence of hemorrhagic stroke.

Keywords
Post-stroke epilepsy, Hemorrhagic Stroke, Predictors, Ischemic Stroke.

Frequency Of Insulin Resistance Among Non-Diabetic Patients With Non-Alcoholic Fatty Liver Disease Using Homa-Ir: An Experience Of A Tertiary Care Hospital In Karachi, Pakistan

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W

Impact Factor
2.6

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Background
Non-alcoholic fatty liver disease (NAFLD) is a global problem strongly interlinked with metabolic syndrome. Insulin resistance (IR) is a key factor both in pathogenesis and in the progression to liver fibrosis. This article highlights the frequency of IR in local population.

Objective
To determine the frequency and associated factors of insulin resistance among non-diabetic patients with NAFLD using HOMA-IR. Materials and methods A prospective cross-sectional study was conducted at Liaquat National Hospital, Karachi. 362 non-diabetic patients diagnosed with NAFLD were divided into two groups: with IR and without IR. Clinical history, physical examination, laboratory tests (fasting lipid profile, fasting glucose, insulin, liver function tests) and abdominal ultrasound with fibroscan for liver steatosis assessment were performed. Controlled Attenuation Parameter (CAP) score of ≥238 dB/m was used to define hepatic steatosis and metabolic syndrome was diagnosed based on specific clinical and laboratory criteria. Data was analyzed using SPSS version 27.

Results
Total 362 patients were enrolled and 51.7% were male patients. 311 (85.9%) participants had insulin resistance. Insulin resistance had significant difference for HDL, LDL, FPG, Fasting plasma insulin, and GGT. Male patients are less likely than female patients to exhibit insulin resistance. Insulin resistance is more common in patients with metabolic syndrome than in non-metabolic patients.

Conclusion
Among non-diabetic patients with NAFLD, insulin resistance was highly prevalent and majority of patients were obese. Both genders were affected with IR.

Keywords
Fatty liver, Insulin resistance, Non-Diabetic, NAFLD, HOMA-IR, Metabolic syndrome

Acute Liver Failure Etiology, Clinical Manifestation And Outcomes In Adults: Experience Of Tertiary Care Hospital In Karachi

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World Journal of Critical Care Medicine. 2025

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W

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To Read Full Text Article, Please Scan QR Code

Background
Many causal factors influence acute liver failure (ALF), including the primary underlying cause, age, and socioeconomic conditions. ALF outcomes depend on etiology, coagulopathy, bilirubin, age, and understanding of hepatic encephalopathy (HE), and help us predict coma and death.

Aim
To evaluate the association between etiologies, clinical manifestations, and outcomes of adults admitted with ALF. METHODS This institution-based, prospective cross-sectional study was conducted in the Department of Gastroenterology and Hepatology at Jinnah Postgraduate Medical Center, Karachi, from July 2019 to December 2022. A total of 102 patients diagnosed with ALF were included using consecutive sampling and data were collected from patients who visited Jinnah Postgraduate Medical Center, Karachi, the gastroenterology and hepatology department, entered into Microsoft Excel, and analyzed using Statistical Package for the Social Sciences version 26.0. Diagnosis was based on King's College criteria: Age, encephalopathy grade, bilirubin, prothrombin time, international normalized ratio, creatinine, and etiology. We assessed the association between socioeconomic status and various outcomes using chi-square tests with a level of significance was less than 0.05.

Results
Mean age of the ALF cohort was 27.37 ± 6.60 years. Of the 102 patients, 71 (69.6%) were female, including 55 (77.5%) pregnant women with a mean gestational age of 34.56 ± 3.80 weeks. Regarding HE severity, 45 (44.1%) had grade III, and 13 (12.7%) had grade II. Among the patients admitted to the intensive care unit, 51 (72.9%) did not survive, while 14 (43.8%) recovered.

Conclusion
This study observed a high mortality rate among ALF patients in a tertiary care hospital. Hepatitis E virus infection, HE severity, and sepsis were significantly associated with higher mortality.

Keywords
Acute liver failure; Hepatitis E virus; Hepatic encephalopathy; Jaundice; Mortality

Prevalence of Atrial Fibrillation among Individuals with Obstructive Sleep Apnea and Impact of Sleep Apnea on Incidence and Outcomes of Atrial Fibrillation: Systematic Review

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Journal of Islamabad Medical Dental College. 2025

Journal Category
Y

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To Read Full Text Article, Please Scan QR Code

Objective
This systematic review aims to evaluate the prevalence of AF in individuals with OSA and examine the impact of OSA on AF occurrence and outcomes.

Methodology
A systematic literature search was conducted using PubMed, Web of Science, and Google Scholar, following PRISMA 2020 guidelines and The Cochrane Handbook. Studies were selected based on predefined inclusion and exclusion criteria, focusing on human observational studies examining the relationship between OSA and AF. The risk of bias was assessed independently by two reviewers, with a third reviewer resolving discrepancies.

Results
Out of 200 initially identified studies, 37 met the relevance criteria, and 8 were ultimately included in the final analysis. The findings revealed a significant association between OSA and AF prevalence, with AF rates ranging from 7.2% to 49% in OSA patients, depending on the study population and OSA severity. Studies also indicated that OSA might contribute to AF development through mechanisms such as hypoxia, inflammation, and autonomic dysfunction. Furthermore, OSA was linked to a higher risk of AF recurrence post-treatment and increased hospitalization rates.

Conclusion
The evidence suggests that OSA is an independent risk factor for AF, contributing to its development, recurrence, and worse clinical outcomes. Early identification and management of OSA, including continuous positive airway pressure (CPAP) therapy, may help mitigate AF-related risks. However, further large-scale prospective studies are needed to establish causal relationships and optimize treatment strategies.

Keywords
Atrial Fibrillation, Arrhythmia, Breathing, Cardiovascular, Obstructive Sleep Apnea, Sleep-disordered

Assessment of Serum Phosphate Levels in Chronic Kidney Disease Patients Across Different Stages of Kidney Disease

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Cureus Journal of Medical Science. 2025

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W

Impact factor
1.3

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To Read Full Text Article, Please Scan QR Code

Objective
This study aims to determine the serum phosphate level in patients diagnosed with chronic kidney disease (CKD) across different stages of the disease in a tertiary care hospital in Peshawar.

Materials and methods
This cross-sectional study was conducted in the Nephrology Department at Lady Reading Hospital, Peshawar, from August 2024 to January 2025. Over a six-month period, participants were recruited using a non-probability convenience sampling technique. The sample size of 296 was calculated using the WHO sample size calculator, with a 5% margin of error. The study included patients aged 18 years and older, of both sexes, diagnosed with any stage of CKD. Patients with acute kidney injury or significant disorders affecting phosphorus metabolism (e.g., primary hyperparathyroidism or malignancies) were excluded.

Results
A total of 296 patients with CKD from various etiologies were included in this study, consisting of 124 males (41.9%) and 172 females (58.1%). The age distribution was as follows: 20-39 years (17.6%), 40-49 years (26.7%), 50-59 years (29.4%), and ≥60 years (26.4%), with a mean age of 50.26 ± 12.14 years. Among the participants, 12.8% had CKD stage 2, 23% had stage 3, 33.4% had stage 4, and 30.7% had stage 5. Of the 296 patients, 77 (26%) were receiving hemodialysis, while 219 (74%) were on conservative management. The overall incidence of hyperphosphatemia was 56% (166 participants). Stage-wise, hyperphosphatemia was observed in 31.5% of CKD stage 2, 38.2% of stage 3, 72.7% of stage 4, and 61.5% of stage 5 patients.

Conclusion
The study has shown a higher burden of hyperphosphatemia among CKD patients, with an overall incidence of 56%. The prevalence of hyperphosphatemia increased with advancing CKD stages, peaking at CKD stage 4 (72.7%) and continuously remaining high in stage 5 (61.5%). These results stressed the need for early detection and effective management of hyperphosphatemia, particularly in the later stages of CKD, to lessen its associated complications. Moreover, the demographic distribution, with a mean age of 50.26 ± 12.14 years and a female predominance (58.1%), reflects the need for targeted interventions tailored to this patient population.

KEYWORDS
chronic kidney disease, ckd complications, ckd stages, hemodialysis, hyperphosphatemia

Clinical Determinants and Neuarological Manifestation Among Adult Patients with Vitamin B Deficiency

Published in
Pakistan Journal of Neurological Surgery. 2025

Journal Category
Y

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To Read Full Text Article,
Please Scan QR Code

Objective
To assess the factors and neurological manifestations in adult patients with vitamin B12 deficiency.

Methodology
A cross-sectional study was carried out at the Department of Neurology, Liaquat University of Medical and Health Sciences (LUMHS) for the period of Six months after the approval of the study from March 7, 2023, to September 6, 2023. The sample size was calculated using the WHO sample calculator, a total of 253 patients were enrolled. The data was obtained from patients fulfilling the inclusion criteria, and complete history and investigations were done on all the included patients. The data was assessed using SPSS version 23.

Results
The study included 253 patients with a mean age of 46.9±11.5 years, of which 68% were male and 32% were female. Various neurological manifestations were observed among patients with vitamin B12 deficiency. The most common symptom was nerve numbness, affecting 65.2% of patients, followed by motor weakness in 24.1%. Non-traumatic compressive myopathy was found in 20.5% of patients. Other symptoms included ataxia (18.2%), impaired position sensation (14.2%), impaired vibration sensation (11.1%), and optic atrophy (3.9%). Signs of dementia were noted in 4.7% of cases. These findings highlight the diverse range of neurological symptoms linked to vitamin B12 deficiency and their varying prevalence.

Conclusion
It is to be concluded that a wide spectrum of neurological symptoms is associated with vitamin B12 deficiency, highlighting its potential impact on neurological health. Nerve numbness stands out as the most prevalent symptom, affecting a significant majority of patients, followed by motor weakness and non-traumatic compressive myelopathy.

Keywords
Vitamin B, Deficiencies, Neurological issues, Clinical Determinants

Comparison Between the Serum Level of C-Reactive Protein and Severity of Community-Acquired Pneumonia in Infants

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Annals of Pakistan Institute of Medical Sciences. 2025

Journal Category
Y

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To Read Full Text Article, Please Scan QR Code

Objective
To compare the mean serum C-reactive protein (CRP) levels in infants diagnosed with non-severe community-acquired pneumonia (Pneumonia Severity Index I & II) versus those with severe pneumonia (Pneumonia Severity Index III–V).

Methodology
A cross-sectional study was conducted at the Department of Pediatrics, Khyber Teaching Hospital, Peshawar from Jan 2024 to June 2024. A total of 144 male and female infants diagnosed with pneumonia in the age range of 2 to 12 months were enrolled. The mean CRP level of the patients was determined by patient's laboratory test reports from the patients with pneumonia. The analysis of the data was done using the SPSS version 22. Independent sample t-test was applied to compare the mean CRP level among patients with severe and non-severe pneumonia, mean an median, frequencies and percentages were calculated for the quantitative variables.

Results
144 patients, the mean age of the patients was 7.13±2.55 months, the disease duration was 6.61±3.05 the male-to-female ratio was 1.61: 1, and 42.4 % were un vaccinated. The mean CRP level was 11.12±6.33 mg/dl, among these the non-severe pneumonia was recorded in 88 (61.1%) patients (61.1%) with a mean CRP of 7.97±4.14mg/dl, and severe pneumonia was recorded in 56 patients (38.9%) with a mean CRP of 16.07±6.009 mg/dl. The p-value of independent sample t-test unveil significant level of mean difference of CPR values in severe versus non-severe groups (P = 0.000).

Conclusion
The mean CRP level in patients with severe pneumonia is significantly high than in patients with non-severe pneumonia. The CRP could be a potential tool for measuring the severity of the pneumonia.

Keywords
Pneumonia, Severity of Pneumonia, C-reactive protein, infants

Functional Outcomes of Cemented Total Hip Replacement in Patients Over 55 Years with Femoral Neck Fracture: A Prospective Cohort Study

Published in
Annals of Pakistan Institute of Medical Sciences. 2025

Journal Category
Y

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To Read Full Text Article, Please Scan QR Code

Objective
To assess the functional outcome of cemented total hip replacement in >55 years old patients presenting with femoral neck fracture.

Methods
A prospective cohort study was conducted at department of Orthopedic Surgery, Unit- II Jinnah Hospital, Lahore from January 2019 to June 2019, involving 60 patients aged over 55 years, of either gender, presenting with femoral neck fractures from January 2019 to June 2019. Exclusion criteria included patients with a documented history or clinical evidence of chronic infections, rheumatoid arthritis, advanced osteoarthritis, or osteomyelitis, as determined through medical records, preoperative clinical evaluation, and relevant imaging or laboratory investigations. Patients underwent surgery by a single team under spinal anesthesia and were followed up for three months. Harris Hip scores were recorded, and X-rays assessed for dislocation. Data was analyzed using SPSS Version 21 to evaluate outcomes.

Results
Mean age of the patients was 69.40 ± 7.49 years. 36 (60.0%) were male and 24 (40.0%) were females with male to female ratio of 1.5:1. In my study, dislocation was seen in 04 (6.67%) patients. Mean harris hip score was 65.03 ± 5.39.

Conclusion
Study concluded that cemented total hip replacement is an effective method in achieving good Harris Hip score and less dislocation.

Keywords
Femur neck fracture, cemented total hip replacement, dislocation

Patterns of Dyslipidemia among Patients with Non-Alcoholic Fatty Liver Disease

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Pakistan Journal of Health Sciences. 2025

Journal Category
Y

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To Read Full Text Article, Please Scan QR Code

Background
Non-alcoholic fatty liver disease (NAFLD) affects a significant proportion and is frequently associated with dyslipidemia and metabolic disorders.

Objective
To explore the patterns of dyslipidemia among patients with NAFLD and their association with disease severity.

Methods
A cross-sectional study was conducted at the Department of Cardiology, Liaquat National Hospital, Karachi. All participants diagnosed with NAFLD were included, and NAFLD severity was assessed using Fibro Scan, categorizing patients into no significant fibrosis, mild fibrosis, significant fibrosis, and advanced fibrosis. Dyslipidemia patterns were evaluated based on lipid profiles.

Results
The cohort (n=300) had a mean age of 51.44 years, with a majority being female (60.3%) and over 45 years old (71.3%). NAFLD severity was distributed as follows: 33% mild fibrosis, 32% no significant fibrosis, 29.3% significant fibrosis, and 5.7% advanced fibrosis. As NAFLD severity increased, waist circumference, liver enzyme levels (AST and ALT), and lipid markers (TC, LDL-C, TG) increased, while HDL-C decreased. Advanced cases showed higher hemoglobin A1c levels and increased hepatic steatosis and CAP values. Dyslipidemia associated with metabolic syndrome (24%), low HDL-C (61.3%), and hypertriglyceridemia (2%) were observed, with combined and general hyperlipidemia affecting 3.7% and 1.3% of participants, respectively. The patterns of dyslipidemia varied with severity; normolipidemia was common in cases with no significant fibrosis, combined hyperlipidemia was seen in significant fibrosis, and hyperlipidemia was exclusive to advanced NAFLD.

Conclusion
It was concluded that the study found significant associations between NAFID severity and dyslipidemia patterns.

Keywords
Dyslipidemia, NAFID, FibroScan

Different types of anemia in patients with chronic kidney disease

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Journal Category
W

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1.7

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To Read Full Text Article, Please Scan QR Code

Objective
This study aimed to assess the prevalence of different anemia patterns in CKD patients.

Method
This cross-sectional study was carried out at the Outpatient Department of General Medicine, Lady Reading Hospital, Peshawar from 1st July to 31st December, 2023. Non-probability consecutive sampling was employed. Demographic data was collected and anemia was evaluated through Complete Blood Counts for each participant. Statistical analysis was performed using SPSS version 23.

Results
The study included a cohort of 209 participants with an average age of 40.78 ± 6.37 years and a mean BMI of 26.12 ± 4.11 kg/m^2. Among the participants, 72.2% were male and 27.8% were female. The most common CKD patterns were normocytic (41.1%), hypochromic microcytic (32.5%), and hypochromic macrocytic (26.3%). The majority of participants (78.9%) had experienced CKD for over one year. No significant association was found between the types of anemia in CKD and gender, underlying cause of CKD, age, BMI, or duration of the disease.

Conclusion
Our study highlights the prevalence of various types of anemia in chronic kidney disease (CKD) among participants, with normocytic anemia emerging as the most prevalent, followed by hypochromic and hyperchromic patterns. Additionally, longitudinal studies could provide insights into the progression and management of anemia in CKD patients over time.

Keywords
Anemia, Chronic kidney disease, Cross-Sectional studies, Hypochromic, Hyperchromic.

Prevalence And Impact Of Headache On The Quality Of Life Among Medical Students

Published in
Journal of Lifestyle Medicine Research & Reviews. 2025

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To Read Full Text Article, Please Scan QR Code

Background
Headache disorders are common among medical students, potentially affecting their academic performance, daily activities, and overall quality of life.

Aim
This study aimed to assess the prevalence and characteristics of headache disorders and their effect on the quality of life of medical students in Karachi, Pakistan. Methods. This cross-sectional study was conducted at Liaquat National Medical College (LNMC), Karachi, from April to September 2020. A sample of 242 undergraduate medical students was selected via a convenience non-probability sampling technique. The Cleveland Clinic Headache Intake Questionnaire was used for diagnosis. Data were analyzed using SPSS version 25, with logistic regression applied to identify associations.

Results
Out of 242 participants, 68% were females. Headache disorder was found in 105 (43%) participants, with a mean age of 21.9 ± 1.9 years. Tension-type headache was the most common variety, present in 43% of participants. Migraine without aura was more prevalent (33%) compared to migraine with aura (4%). Twenty percent of participants had unclassifiable headaches. The most common triggers were sleep deprivation (27%), stress (25%), oversleeping (12%), and hunger (11%). Headache-related disability was common, with over 70% of participants reporting moderate to severe stress levels, and nearly 50% being unable to cope with stress effectively. Sleep issues and frustration were also common findings.

Conclusion
Headache is common among medical students and negatively affects their quality of life and academic performance. There is a dire need to educate medical students regarding headache disorders.

Keywords
Headache, migraine, tension-type headache, medical students

A Clinical Account of Short Stature in Pakistani Children and Adolescents Presented at an Endocrine Center in Karachi

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Insights-Journal of Health and Rehabilitation. 2025

Journal Category
Y

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To Read Full Text Article,
Please Scan QR Code

Background
Short stature in children is a multifactorial condition influenced by genetic, hormonal, nutritional, and environmental factors. Differentiating between normal growth variants and pathological causes is essential for timely intervention. In resource-limited settings, such as Pakistan, understanding local patterns of short stature helps guide cost-effective diagnostic strategies and avoid unnecessary therapies. This study investigates the causes and contributing factors of short stature among pediatric patients evaluated at a tertiary endocrine care center in Karachi.

Objective
To evaluate various etiologies of short stature in children and adolescents presenting at a tertiary care endocrine center. Methods: A retrospective cohort study was conducted at the Baqai Institute of Diabetology and Endocrinology, Baqai Medical University, Karachi. Medical records from the past five years were reviewed. Children aged 2 to 20 years with complaints of short stature were included. Data collected included age, gender, weight, height, BMI, mid-parental height, birth and feeding history, developmental milestones, and history of chronic illness. Investigations included IGF-1 levels, bone age assessment, thyroid function, vitamin D levels, and anti-tissue transglutaminase antibodies. Data were recorded using a standardized proforma and analyzed using SPSS version 26.

Results
Among 120 participants (56 males, 64 females), the mean age was 13.23 ± 3.18 years. Mean weight was 38.2 ± 13.85 kg, height 136.38 ± 16.19 cm, and BMI 20.12 ± 4.63 kg/m^2. Mid-parental height averaged 160.2 ± 8.46 cm. IGF-1 levels were 279.38 ± 69.81 ng/mL and bone age were significantly lower in males than females (12.39 ± 3.25 vs. 13.58 ± 3.20 years, p = 0.047). Normal growth variation was identified in 33.3% of cases, followed by constitutional growth delay (22.5%) and idiopathic short stature (18.3%). Significant positive correlations with height SD were found for IGF-1 (p = 0.045), hemoglobin (p = 0.007), and birth weight (p = 0.002).

Conclusion
Normal growth variation was the most prevalent cause of short stature, followed by constitutional growth delay and idiopathic short stature. These findings highlight the importance of differentiating physiological growth patterns from pathological conditions to avoid overtreatment.

Keywords
Bone age, Constitutional growth delay, Growth hormone, IGF-1, Pediatric endocrinology, Short stature, Vitamin D deficiency

Association between Nonalcoholic Fatty Liver Disease Severity Assessed by Fibroscan and Atherosclerotic Cardiovascular Disease Risk Score

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Journal of Islamabad Medical Dental College. 2025

Journal Category
Y

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To Read Full Text Article, Please Scan QR Code

Objectives
The purpose of this study was to investigate the association between the 10-year atherosclerotic cardiovascular disease (ASCVD) risk score and the severity of nonalcoholic fatty liver disease (NAFLD), as determined by Fibroscan.

Methodology
Patients with NAFLD who had Fibroscan to measure liver stiffness and steatosis presenting at the cardiology department of Liaquat National Hospital in Karachi, Pakistan were included in this cross-sectional investigation. Lipid profiles, waist circumference, liver enzyme levels, and 10-year ASCVD risk scores were among the demographic, clinical, and biochemical data gathered.

Results
Of the 217 patients in the study, 62.2% had steatosis, and 99.1% were obese, indicating significant prevalence of liver disease and metabolic disorders. Most were older than 45 (75.1%) and female (62.2%). Low risk for ASCVD was 42.9%, moderate risk was 30.4%, intermediate risk was 11.5%, and high risk was 15.2%. Significant risk variables for ASCVD included advanced liver fibrosis ($p<0.05$), higher blood cholesterol ($p<0.01$), older age ($p<0.01$), and the LDL to HDL ratio ($p<0.01$). Males dominated higher ASCVD risk categories ($p<0.001$), and the high-risk group had the highest prevalence of dyslipidemia, especially with metabolic syndrome ($p<0.001$). There was a significant correlation between ASCVD risk and NAFLD severity as determined by fibroscopy ($p=0.035$).

Conclusion
In conclusion, the study demonstrates a strong association between advanced NAFLD and increased ASCVD risk. Key risk factors, including age, serum cholesterol, LDL to HDL ratio, and liver fibrosis severity, were significantly linked to higher ASCVD risk ($p<0.05$). Males and individuals with dyslipidemia, particularly those with metabolic syndrome, were more likely to be at higher risk.

Keywords
Atherosclerosis, Cardiovascular Risk, Liver Fibrosis, Metabolic Syndrome, Nonalcoholic Fatty Liver Disease (NAFLD)

Association Between Left Ventricular Stiffening and Left Atrial Dilatation in Hypertensive and Normotensive Patients

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Pakistan Heart Journal. 2025

Journal Category
X

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Objective
To evaluate the association between diastolic dysfunction and left atrial volume index (LAVI) in both hypertensive and normotensive individuals.

Methodology
This study included patients from both hypertensive and non-hypertensive groups, all of whom underwent echocardiographic evaluations. Various parameters were measured, and the correlation between diastolic dysfunction and LAVI was assessed. Statistical comparisons were made using an independent t-test, while Spearman's correlation was employed to evaluate relationships between the variables.

Results
Hypertensive patients demonstrated significantly higher body weight ($p < 0.001$) and body surface area ($p = 0.005$) compared to normotensive patients. Blood pressure was notably higher in hypertensive individuals ($p < 0.001$). Hypertension was associated with increased left atrial size ($p < 0.001$), interventricular septum thickness ($p < 0.001$), and left ventricular posterior wall thickness ($p < 0.001$). A strong correlation ($r = 0.8$) was found between LAVI and diastolic dysfunction in hypertensive patients, whereas the correlation in normotensive individuals was moderate ($r = 0.5$). These results emphasize the significant structural and functional cardiac changes associated with hypertension.

Conclusion
This study highlights a robust relationship between LAVI and various grades of diastolic dysfunction, particularly in hypertensive patients. In contrast, the correlation was weaker in normotensive individuals. The presence of diastolic dysfunction in normotensive patients further emphasizes the need for early detection, extending beyond traditional hypertensive risk groups. Additionally, the findings suggest that left ventricular stiffening and diastolic dysfunction contribute to progressive left atrial enlargement, making LAVI a potential marker for the severity of diastolic dysfunction, with substantial clinical implications.

Keywords
Diastolic Dysfunction, Echocardiography, Hypertension, Tissue Doppler, Mitral Annulus, Left Atrial Volume Index

The Impact of Postural Management Techniques on Breech Presentation: A Cross-Sectional Study of Pregnancy Outcomes

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Journal Category
Y

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Background
Breech presentation in term pregnancies, increases the risk of complications during labor and delivery. External cephalic version (ECV) is a standard intervention but carries potential risks. Postural management techniques, such as the knee-chest position and pelvic elevation, offer non-invasive alternatives, but their efficacy remains underexplored. However, this study aimed to evaluate the impact of postural management techniques on breech presentation and pregnancy outcomes.

Methodology
A descriptive cross-sectional study was conducted at PUMHS, Nawabshah, from Sept 2023 to March 2024, including 88 women with confirmed breech presentation at gestational ages ≥32 weeks. Data on pregnancy outcomes were collected using structured proformas. Statistical analyses were performed using SPSS version 20, with a significance level set at $p<0.05$.

Results
The mean participant age was 27.07±4.99 years. Among the participants, 23.9% underwent breech vaginal delivery, 42.0% achieved cephalic vaginal births, and 34.1% underwent cesarean sections. A significant association was observed between cephalic presentation and breech management (59.1% vs. 34.1%, $p=0.019$). Neonates in the breech-offered group had higher APGAR scores ≥7 (81.8% vs. 68.2%) and lower NICU admission rates (6.8% vs. 15.9%), though these differences were not statistically significant.

Conclusion
Postural management techniques were associated with increased rates of cephalic presentation and favorable neonatal outcomes. While the findings suggest the potential of these techniques as low-risk alternatives to invasive methods, further large-scale randomized controlled trials are needed to establish their efficacy and guide clinical practice.

Keywords
Breech Presentation, External Cephalic Version, Postural Management, Pregnancy Outcome, Cesarean Section

Evaluating the Diagnostic Accuracy of CANS, Anthropometric, and Proportionality Indices for Fetal Malnutrition in Pakistan

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Journal of the Society of Obstetricians and Gynecologists of Pakistan. 2025

Journal Category
Y

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Background
Fetal Malnutrition (FM), a serious neonatal condition, is characterized by inadequate accumulation of subcutaneous fat and muscle, independent of birth weight for gestational age. This study aims to assess and compare the diagnostic accuracy of various nutritional assessment methods, including the Clinical Assessment of Nutritional Status (CANS) score, anthropometric measurements, and proportionality indices in identifying FM.

Methodology
This cross-sectional study included 320 live singleton newborns at Sheikh Khalifa Bin Zayed Al Nahyan Hospital, Rawalakot, Azad Kashmir, Pakistan, from December 2022 to July 2023. The neonatal participants were comprehensively assessed in terms of the CANS score, anthropometric measurements (weight, length, and Body Mass Index_(BMI)), and proportionality indices such as the Ponderal Index (PI) and the Mid-Upper Arm Circumference to Head Circumference ratio (MUAC/HC). Diagnostic accuracy metrics (sensitivity, specificity, Positive Predictive Value [PPV], and Negative Predictive Value [NPV]) were calculated according to established FM diagnostic criteria.

Results
Among the 320 neonates considered in this study, 61.3% were male, and 25.6% were preterm. The mean birth weight was 2.61 ± 0.73 kg, with a mean CANS score of 25.06 ± 8.21. A significant association was observed between gestational age and nutritional status. Preterm neonates exhibited higher rates of FM, as measured by MUAC/HC, PI, and BMI ($p < 0.001$). Diagnostic accuracy assessments indicated that when the CANS score is considered a gold standard, it demonstrated perfect sensitivity and specificity for detecting FM, while BMI and PI showed lower but significant sensitivity and specificity. The combination of BMI and PI (among metrics excluding the CANS score) yielded the highest accuracy in FM detection, reducing diagnostic errors significantly.

Conclusion
FM prevalence was substantial in the studied population sample, particularly among preterm neonates. The CANS score remains a robust tool for FM detection and its incorporation with BMI and PI further enhances diagnostic accuracy. These findings highlight the importance of precise FM assessment and early optimization of neonatal nutritional intake to mitigate the detrimental sequalae of malnutrition.

Keywords
Fetal Malnutrition, Neonatal Nutrition, CANS Score, Maternal Nutrition, Low Birth Weight, Gestational Age

Prioritizing Ultrasound Scrotum with Venous and Arterial Doppler As Primary Modality in Cases of Oligoasthenospermia

Published in
Pakistan Journal of Urology. 2025

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To Read Full Text Article, Please Scan QR Code

Background
Oligoasthenospermia, marked by low sperm count and reduced motility, accounts for a significant portion of male infertility cases globally.

Objective
To investigate the prevalence of oligoasthenospermia and its association with varicocele among male patients in Islamabad. Study Design: A cross-sectional study Duration and place of study: This Study conducted at SARF Hospital from (March to September 2024).

Methods
60 male patients age 20–32 years with primary and secondary subfertility. The study analyzed sperm concentration, motility, and varicocele, adhering to inclusion/exclusion criteria, with informed consent, ethical approval, and data confidentiality ensured throughout the research. Data was analyzed using SPSS 23.0. Results: Results revealed that 86.7% of participants had primary subfertility, with a mean sperm concentration of 1.13 million/mL, significantly lower than the 5.917 million/mL observed in secondary subfertility cases. Varicocele was present in 85% of the sample, predominantly left-sided (73.3%), with a significant proportion classified as Grade 3 (61.7%). Correlation analysis indicated a weak, non-significant relationship (r = 0.205) between sperm concentration and varicocele presence, suggesting that while varicocele is common, its impact on sperm quality may vary.

Conclusion
The study underscores the need for comprehensive evaluations of male infertility, integrating advanced imaging techniques like Doppler ultrasound to better understand the anatomical factors influencing spermatogenesis. Enhanced diagnostic approaches could lead to tailored interventions, potentially improving reproductive outcomes for affected individuals. Addressing the identified limitations and research gaps is crucial for advancing male reproductive health and clinical practices.

Keywords
Oligoasthenospermia, Varicocele, Male Infertility, Sperm Motility, Doppler Ultrasound

Role Of Diffusion-Weighted Imaging In Diagnosing Acute Ischemic Stroke And Its Limitations In Stroke Mimics

Published in
Romanian Journal of Neurology. 2025

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Background
Diffusion-weighted imaging (DWI) is a vital imaging technique for detecting acute ischemic stroke (AIS) by identifying areas of restricted diffusion. This study aims to evaluate the diagnostic accuracy of DWI in AIS detection and to explore its limitations in differentiating stroke mimics.

Methods
This prospective cross-sectional study was conducted at the Radiology Department of Ziauddin Hospital, Karachi, Pakistan, from July to December 2023. Patients referred for brain magnetic resonance imaging (MRI) with a clinical diagnosis of AIS, presenting within 72 hours of symptom onset, underwent an MRI stroke protocol including T1-weighted imaging (T1WI), T2-weighted imaging (T2WI), fluid-attenuated inversion recovery (FLAIR), followed by DWI and apparent diffusion coefficient (ADC) mapping. Final diagnosis was confirmed based on the discharge diagnosis from treating neurologists.

Results
Of 106 patients with suspected AIS, 85 had DWI-confirmed acute ischemic stroke. Five patients demonstrated DWI lesions but were later diagnosed with non-stroke conditions. Sixteen patients (15%) had no DWI abnormalities and were diagnosed with transient ischemic attack (TIA). DWI detected more lesions (95%) than T1WI (32%), T2WI (70%), or FLAIR (82%). DWI showed high sensitivity (96.4%), specificity (76.2%), positive predictive value (94.2%), negative predictive value (84.2%), and overall diagnostic accuracy of 92.4%. The false positive rate was 4.7%.

Conclusion
DWI is a highly accurate modality for early detection of AIS but should not be used in isolation. Stroke mimics such as seizures or tumors may also exhibit restricted diffusion. Comprehensive MRI evaluation combining conventional sequences with DWI is essential for accurate diagnosis.

Keywords
Acute ischemic stroke, diffusion-weighted imaging, magnetic resonance imaging

Knowledge Regarding the Models, Principles, and Theories of Medical Ethics among Doctors of a Developing Country

Published in
Annals of Abbasi Shaheed Hospital and Karachi Medical and Dental College. 2025

Journal Category
X

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Objective
To determine the knowledge regarding models, principles and theories of medical ethics among practicing doctors of a developing country.

Methods
A descriptive cross-sectional study was conducted across one public and one private tertiary care hospital in Karachi. The study involved 200 practicing doctors, including those from academic, administrative, postgraduate training, and medical officer domains. Participants were enrolled using convenient sampling techniques, and data were collected through a structured questionnaire comprising demographic details and questions assessing knowledge of ethical models, principles, and theories. Informed consent was obtained before participation, ensuring confidentiality. Statistical analysis was performed using SPSS version 20, with chi-square tests applied to examine associations between knowledge levels and professional roles. A p-value < 0.05 was considered statistically significant.

Results
Among 200 participating doctors, only 17.5% reported knowledge of ethical principles, 11% understood ethical theories, and 13.5% were aware of physician–patient relationship models. Knowledge varied significantly across professional groups ($p = 0.010$), with administrative doctors reporting slightly higher awareness. Most respondents (63.5%) lacked knowledge, while 22% were uncertain. The paternalistic model was the most preferred physician–patient interaction style (46.5%), followed by the informative (28%), deliberative (14%), and interpretive (11.5%) models. These results highlight limited awareness of medical ethics and a strong inclination toward physician-led care, emphasizing the urgent need for targeted ethics education and training interventions.

Conclusion
This study highlights a significant deficiency in medical ethics knowledge among doctors in Karachi, with a strong preference for the paternalistic model of care. These findings reflect cultural norms and inadequate ethics education, potentially limiting patient autonomy. Integrating structured bioethics training into medical curricula and professional development is essential to enhance ethical decision-making and align clinical practice with global standards. Strengthening ethics education will promote patient-centered care and improve the quality of healthcare delivery in Pakistan

Keywords
knowledge, ethics, doctors, beneficence, autonomy

Bio-Chemical and Clinical Predictors of Multivessel Coronary Artery Disease in Patients With STEMI

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Annals of Abbasi Shaheed Hospital and Karachi Medical and Dental College. 2025

Journal Category
X

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Objective
This study explores multi-vessel coronary artery disease (MVCAD) predictors in patients with ST-elevation myocardial infarction (STEMI), aiming to enhance understanding and alleviate the burden in this demographic.

Methods
A cross-sectional study was conducted from January to June 2023, including 228 consecutive STEMI patients diagnosed per the 2015 AHA guidelines. Using purposive non-probability sampling, consenting participants aged 20–80 years with their first STEMI and no prior cardiac interventions were included, while those with cardiomyopathy, renal failure, or previous cardiac procedures were excluded. Patients underwent coronary angiography and were categorized into single-vessel disease (SVD), two-vessel disease (2VD), or three-vessel disease (3VD), with 2VD and 3VD collectively classified as MVD. Data analysis using SPSS 27 included descriptive statistics, Independent T-tests, Chi-square/Fisher's Exact tests, logistic regression, and ROC analysis to identify and validate MVD predictors. The ethical approval and informed consent were obtained before study commencement.

Results
The mean age of the enrolled participants was 63.06 ± 10.28 years. A higher prevalence of MVCAD was observed in males (65.6%). However, age, BMI, troponin I levels, LVEF categories, and various comorbidities were not significantly associated with CAD. The logistic regression analysis identified the male gender as significantly associated with increased disease severity, a trend consistent with the adjusted model. Pro BNP levels between 450 and 1000 units were notably linked to lower disease severity. The ROC curve demonstrated the model's robust ability to predict MVCAD, with an AUC of 0.759, indicating improved performance with the combined model integrating conventional risk factors and biomarkers (AUC=0.751). These findings underscore the importance of gender and pro-BNP levels in understanding and predicting MVCAD.

Conclusion
This study identifies gender and pro-BNP levels as significant predictors of CAD prevalence and severity in patients with STEMI. Discrepancies with existing literature emphasize the complex nature of CAD risk factors.

Keywords
ST-Elevation Myocardial Infarction, Coronary Artery Disease, Multivessel Coronary Artery Disease, Predictors.

Prevalence Of Anxiety And Depression In Sleep-Deprived Workers Of Software Houses And Call Centers

Published in
Journal of Lifestyle Medicine Research & Reviews. 2025

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Background
Sleep deprivation among employees in software houses and call centers can significantly impact mental health, leading to increased rates of anxiety and depression.

Objective
This study aimed to assess the prevalence of anxiety and depression among sleep-deprived employees in software houses and call centers.

Method
A cross-sectional study was conducted from March 2024 to August 2024, involving 375 employees aged 18-45 years who had worked in 53 software houses and call centers in Karachi for at least two months. A stratified random sampling technique was used. Data were collected using a structured questionnaire and the Depression Anxiety Stress Scale (DASS-42). Statistical analysis was performed using SPSS version 25, employing Chi-square tests and multiple logistic regression models. A p-value < 0.05 was considered statistically significant.

Result
Of the 375 participants, 205 (54.7%) were from software houses and 170 (45.3%) from call centers. The average age was 24.29 ± 4.96 years. The prevalence rates were 63.3% for stress, 48.8% for anxiety, and 52.2% for depression. Poor sleep quality was significantly associated with stress (odds ratio=2.79, 95% CI: 1.31-4.29, p < 0.01), anxiety (OR=2.17, 95% CI: 1.21-3.75, p < 0.01), and depression (OR=2.17, 95% CI: 1.21-3.75, p < 0.01). High workloads, lack of relaxation opportunities, and long shift durations also negatively impacted mental health. Long travel distances and lower salaries were significant predictors of stress, anxiety, and depression in multivariate analysis.

Conclusion
This study demonstrates that sleep deprivation and challenging working conditions significantly impact the mental health of employees in software houses and call centers. Addressing these issues through improved working conditions, regular breaks, and flexible hours is essential for enhancing employee well-being, productivity, and quality of life. Government-level interventions are also crucial to ensure a safe and healthy work environment.

Keywords
Prevalence, anxiety, depression, sleep-deprived, software houses, call centers

Epidemiology And Assessment Of Seasonal Variation Among Patients With Stroke At A Tertiary Care Hospital, Karachi, Pakistan; A Cross-Sectional Study

Published in
Pakistan Journal of Medical & Cardiological Review. 2025

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Background and Objective
Although seasonal changes in stroke are widely studied in many industrialized nations, little is known about them in Pakistan. The study's objective was to investigate seasonal variations in stroke and its subtypes among patients who were seen at a Karachi tertiary care facility.

Methodology
A cross-sectional study was conducted at a tertiary care hospital (Agha Khan hospital for 1 year, from August 2007- July 2008, among newly diagnosed stroke patients with a history, and CT or MRI. A total of 235 patients, who presented with stroke during the year, via a convenient sample were taken for this study. Data was collected on a Performa, later analyzed using SPSS version 20.

Results
The mean age of the patients, who ranged in age from 18 to 95, was 60.9 (SD 12.89). There were 146 (62.1%) men. 82 (34.9%) of the 235 cases showed up in the winter, 69 (29.5%) in the spring, 44 (18.7%) in the summer, and 40 (17%) in the fall. Of the 177 (75.3%) ischemic stroke cases, 57 (24.3%) occurred in the winter, 52 (22.1%) in the spring, and 34 (14.5%) in the fall. In winter, there were 25 hemorrhagic strokes (10.6%), in spring, 17 (7.2%), 10 (4.3%), and 6 (2.6%).

Conclusion
In the winter and spring, there were more stroke admissions. The number of stroke admissions was higher in the winter and spring seasons as compared to summer and autumn. No significant difference was found in the types of strokes due to seasonal variation.

Keywords
Stroke, seasonal variation, hemorrhagic

Evaluation Of The Use Of Antihypertensive Therapy In Patients With Type 2 Diabetes Mellitus

Published in
Journal of Theoretical and Clinical Medicine. 2025

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Objective
To assess the use of antihypertensive therapy in patients with type 2 diabetes mellitus.

Materials and methods
Type 2 diabetes mellitus was diagnosed in 711 patients over the age of 30, 54% of them were women and 46% were men.

Result
Blood pressure data were collected from 711 patients with type 2 diabetes mellitus who participated in the study. Of these, 127(18%) had no history of hypertension. 573(81%) patients had a history of hypertension. Of these, 64 (11%) currently achieved target blood pressure values. The number of patients who did not achieve target blood pressure values was 497(87%). Currently, data on blood pressure are not available for 12 patients (2%).

Conclusion
Hypertension was highly prevalent among type 2 diabetes patients, with most failing to achieve target blood pressure control.

Keywords
Type 2 diabetes mellitus, arterial hypertension, antihypertensive

To Read Full Text Article,
Please Scan QR Code

Features of cardiovascular remodeling and modern approaches to therapy optimization in patients with hypertension associated with type 2 diabetes

Published in
Central Asian Endocrinological Journal

Journal Category
Y

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Relevance:
The combination of arterial hypertension (AH) and type 2 diabetes (T2D) significantly increases the risk of cardiovascular complications, especially in ecologically challenging regions like Khorezm, Uzbekistan.

Purpose:
To study the mechanisms of cardiovascular remodeling, identify clinical-functional markers, and assess the efficacy of pathogenetically justified therapy.

Materials and Methods:
A prospective study included 42 patients aged 41-70. ECG, Holter monitoring, echocardiography, ABPM, and laboratory methods were applied. Treatment included empagliflozin (Diampa), perindopril (Prestarium), and Allapinin.

Results:
Therapy achieved BP control in 78.6% of patients, reduced left ventricular hypertrophy, improved LV ejection fraction, decreased rhythm disturbances, and improved renal function.

Conclusion:
Combined therapy effectively reduces cardiovascular remodeling severity and complication risks in patients with comorbid AH and T2D.

Keywords:
Arterial hypertension, type 2 diabetes, cardiovascular remodeling, Diampa, Prestarium, Khorezm

Assessment Of The Risk Of Cardiovascular Diseases By The Level Of Glycemia In Patients With Type 2 Diabetes Mellitus

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Central Asian Endocrinological Journal. 2025

Journal Category
Y

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Relevance:
Type 2 diabetes mellitus is relevant because it is widespread and leads to early disability and death. Along with chronic hyperglycemia, impaired fat metabolism causes irreversible changes in a number of organs and the vascular system. This leads to the early development of diseases of the cardiovascular system, which dramatically reduces the patient's quality of life.

Purpose:
Assessment of the risk of cardiovascular diseases by the level of glycemia in patients with type 2 diabetes.

Material and Methods:
Analysis of anamnestic heart rate indicators by glycemic indices in patients with type 2 diabetes mellitus. Conclusion. Glycemic control and prescribing cardioprotective sugar lowering drugs to prevent the development of coronary heart disease.

Results:
Type 2 diabetes is relevant because it is widespread and leads to early disability and death. Along with chronic hyperglycemia, impaired fat metabolism causes irreversible changes in a number of organs and the vascular system. This leads to the early development of diseases of the cardiovascular system, which dramatically reduces the patient's quality of life. Purpose. Assessment of the risk of cardiovascular diseases by the level of glycemia in patients with type 2 diabetes.

Conclusion:
Glycemic control and prescribing cardioprotective sugar-lowering drugs to prevent the development of coronary heart disease.

Keywords:
Diabetes mellitus, coronary heart disease, myocardial infarction.

Exploring The Determinants Of Drug Abuse: A Cross-Sectional Study On Demographic, Socioeconomic, And Psychological Factors

Published in
Journal of Lifestyle Medicine Research & Reviews. 2025

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To Read Full Text Article, Please Scan QR Code

Background
Drug abuse poses a serious threat to youth productivity, affecting both physical health and cognitive abilities. This study aimed to investigate the major contributing factors and underlying determinants of drug abuse among patients receiving treatment at rehabilitation centers in Pakistan.

Methodology
A cross-sectional study was conducted at Fountain House and Ehsas Clinic in Lahore from February 2021 to May 2024, involving 384 patients aged 16–64 years, selected through consecutive non-probability sampling. Individuals with severe mental illness were excluded. Data were collected using a pre-tested questionnaire through structured interviews covering demographics, drug use patterns, and health behaviors. Data were analyzed in SPSS v26.0 with descriptive statistics, Chi-square tests for associations, and binary logistic regression to identify significant predictors of drug abuse. A p-value < 0.05 was considered statistically significant.

Results
A total of 73.43% reported mental disturbance, 53.39% sought joy, and 41.89% had a family history of addiction. Long-term complications included aggression (20.05%), euphoria (17.19%), and sleep disorders (10.16%). Logistic regression analysis showed significant associations between drug abuse and low income (<20,000 PKR, OR=7.683), addiction duration of 5-9 years (OR=15.623), and teenage curiosity (OR=19.393), all with p-value 0.05.

Conclusion
This study highlights critical socioeconomic and psychological contributors to drug abuse in Pakistan. Addressing these factors is essential for reducing addiction rates and improving national productivity and well-being.

Keywords
Drug abuse, determinants, Pakistan, substance use, rehabilitation centers

Effectiveness of Functional Endoscopic Sinus Surgery (FESS) in Improving Nasal Symptoms in Patients having Chronic Rhinosinusitis with Nasal Polyps (CRSWNP)

Published in
Journal of Islamabad Medical & Dental College. 2025

Journal Category
Y

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To Read Full Text Article,
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Objective
To evaluate the effectiveness of FESS in ameliorating preoperative nasal symptoms attributable to CRS when compared with the postoperative period, particularly within a 30-day timeframe.

Methodology
A prospective observational study was conducted at the Department of Otorhinolaryngology, Dow University of Health Sciences/Civil Hospital Karachi, from January 1st, 2022, to June 30th, 2022. A cohort of 149 eligible patients participated in the study, completing the SNOT-22 questionnaire 48 hours preoperatively and 30 days postoperatively. Efficacy was assessed through improvements in postoperative nasal symptoms, quantified using SNOT-22 scores.

Results
Of the 149 patients enrolled, 121 were male and 28 were female. Significant associations were observed between preoperative and postoperative SNOT-22 scores (p-value 0.036), with notable correlations found regarding unemployment, positive family history of allergy, and patients aged 15-35 years, all demonstrating significant reduction in nasal symptoms postoperatively.

Conclusion
FESS emerged as highly efficacious in managing CRSwNP symptoms, with notable enhancements in postoperative nasal symptoms and overall quality of life. Furthermore, positive outcomes were particularly pronounced among patients with a family history of nasal allergy, individuals within the younger age group, and those unemployed.

Keywords
Chronic rhinosinusitis, Functional endoscopic sinus surgery, Nasal polyps, Nasal symptoms, Rhinosinusitis.

Different Barriers, Different Needs: A Qualitative Study on How Educational Level Shapes Barriers to Type 2 Diabetes Self-Management in Urban Pakistan

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To Read Full Text Article, Please Scan QR Code

Objective
This study aimed to explore how individuals with different educational levels in urban Pakistan experience barriers to type 2 diabetes mellitus (T2DM) self-care across key self-care dimensions.

Methods
A qualitative phenomenological study was conducted at the Diabetes Clinic of the Pakistan Institute of Medical Sciences, Islamabad. Forty-three adults diagnosed with T2DM were recruited and stratified by educational level (≥ high school, n = 17; < high school, n = 26). Semi-structured interviews were conducted, and transcripts were thematically analyzed to examine how educational level shapes barriers to T2DM self-care within Pakistan's sociocultural context. Coding was performed iteratively until thematic saturation was reached, ensuring comprehensive representation of participant perspectives.

Results
Participants with higher education reported barriers such as time constraints due to demanding workloads and restrictive sociocultural expectations that limit engagement in public physical activity (e.g., walking) and structured meal planning. Many also reported receiving insufficient dietary guidance from healthcare providers tailored to their schedules and lifestyles. Predominant misconceptions among participants with lower education included equating household chores with adequate exercise and failing to recognize hypoglycemic symptoms. They also demonstrated limited understanding of dietary principles, such as believing that fruit juice is beneficial for individuals with T2DM. Notably, participants across both educational strata found it difficult to adhere to dietary restrictions in social settings, particularly during weddings and communal meals, where refusing food is culturally discouraged.

Conclusions
Barriers to T2DM self-care in urban Pakistan differ markedly by educational level. Improving T2DM self-care requires education-sensitive, community-based interventions tailored to the local sociocultural context. Higher educational attainment alone does not ensure adequate self-care, as cultural norms exert a strong influence that education alone cannot overcome. For individuals with lower education, self-care programs should prioritize tailored foundational dietary education to address fundamental knowledge gaps. For those with higher education, interventions should emphasize practical implementation strategies, including structured guidance on integrating self-care practices into demanding work routines and community-based initiatives that promote physical activity and challenge restrictive cultural norms. Such context-specific, stratified approaches may enhance T2DM self-care, improve glycemic control, and lead to better health outcomes.

KEYWORDS
Cultural competency, diabetes education, educational level, self-care barriers, type 2 diabetes mellitus.

Comparison of clinical and neurophysiological parameters between Acute Inflammatory Demyelinating Neuropathy (AIDP) and Chronic Inflammatory Demyelinating Neuropathy (CIDP); A Retrospective Study

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Background and objective
Acute inflammatory demyelinating neuropathy (AIDP) and chronic inflammatory demyelinating neuropathy (CIDP) are two commonly occurring types of acquired demyelinating neuropathies that are mainly differentiated based on duration of illness. The objective of this study is to compare the decreased mNCV between AIDP and CIDP, to compare EP parameters of AIDP and CIDP, and to come up with the best possible predictors.

Methodology
A retrospective study was conducted at the Clinical Neurophysiology Laboratory of AKUH. We included patients with primary Electrophysiological study of all AIDP and CIDP (fulfilling Asbury or AAN criteria, respectively). Sample size was calculated as the total of 22 in both disease groups to assess the difference; both genders and adults >14 years were included. Patients with repeat or follow-up Electrophysiological studies, records with compromised studies, or preexisting Diabetes were excluded. Data was analyzed using SPSS, chi-square, Fisher's exact test, logistic regression statistics was applied.

Results
Results of the study showed that CIDP had a relatively higher (about 60% higher) number of nerves with decreased mNCV as compared to AIDP. The relative risk of AIDP was reduced by more than 90% as compared to CIDP, when the Sural nerve sensory latency is prolonged with decreased velocity of the Ulnar and Peroneal nerves.

Conclusion
AIDP and CIDP can be differentiated based on mNCVs. Reduced mNCV and prolonged sural sensory latency predict CIDP. Long nerves, motor orsensory, are much badly affected in CIDP as compared to AIDP.

Keywords
AIDP, CIDP, Neurophysiological, Electrophysiological

Hypokalaemia Induced by Renal Tubular Acidosis in a Patient with Sjogren's Syndrome: A Case Report

Published in
Journal of College of Physicians and Surgeons Pakistan. 2025

Journal Category
W

Impact Factor: 0.7

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Objective

In this case study, a 38-year woman was diagnosed with distal renal tubular acidosis (RTA) secondary to Sjogren's Syndrome (SS) after presenting with recurrent episodes of sudden-onset quadriparesis, hypokalaemia (serum potassium: 1.07 mmol/L), and metabolic acidosis ($HCO3^-$: 15.9 mmol/L). Positive anti-SSA/Ro antibodies (55.96 U/mL), an elevated erythrocyte sedimentation rate (ESR: 65 mm/1st hour), and autoimmune serology results confirmed the diagnosis even in the absence of characteristic sicca symptoms. Distal RTA, a recognised SS complication, was confirmed by the patient's alkaline urine (pH 7.0) and high spot urine potassium-to-creatinine ratio (43 mEq/g). Potassium supplements, sodium bicarbonate for acidosis, and immunosuppression with steroids, hydroxychloroquine, and azathioprine were all part of the treatment. In addition to highlighting the significance of autoimmune examination in patients with unexplained hypokalaemia and RTA, this case also shows the diagnostic difficulties of SS in the absence of classic glandular signs. To avoid complications and improve the outcomes, it is essential to identify and treat SS-related renal and electrolyte abnormalities as soon as possible.

Methodology

A prospective observational study was conducted at the Department of Otorhinolaryngology, Dow University of Health Sciences/Civil Hospital Karachi, from January 1st, 2022, to June 30th, 2022. A cohort of 149 eligible patients participated in the study, completing the SNOT-22 questionnaire 48 hours preoperatively and 30 days postoperatively. Efficacy was assessed through improvements in postoperative nasal symptoms, quantified using SNOT-22 scores.

Keywords

Sjogren's Syndrome, Renal tubular acidosis, Hypokalaemia, Autoimmune disease, Anti-SSA/Ro antibodies

Chronic Suppurative Otitis Media: Prevalence And Antibiotic Resistance Pattern Of Bacterial Isolates

Published in
Rawal Medical Journal. 2025

Journal Category
Y

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Objective
To assess the prevalence, bacterial spectrum, and antibiotic resistance patterns of pathogens causing chronic suppurative otitis media (CSOM) in pediatric patients at a teaching hospital in Larkana.

Methodology
This descriptive cross-sectional study was conducted at CMC Teaching Hospital, enrolling 98 children (aged 5-15 years). Patients on recent antibiotic therapy were excluded. Aural swabs were cultured on Blood and MacConkey agar and identified by standard techniques. Antimicrobial susceptibility was determined using the Kirby-Bauer disc diffusion method. Data analysis was performed using SPSS 20.

Results
Bacterial growth occurred in 80% of samples, with Gram-negative (46.9%) and Gram-positive (33.7%) organisms. S. aureus (21.4%), E. coli (18.4%), Klebsiella spp. (17.3%), and P. aeruginosa (16.3%) were the most prevalent. Alarmingly high resistance to first-line agents was observed: S. aureus exhibited 42.86% penicillin resistance and 28.6% gentamicin resistance but 100% sensitivity to linezolid. E. coli showed 39-61% resistance to ampicillin and Amoxicillin-clavulanate, while carbapenems (imipenem/meropenem) and ceftazidime-avibactam demonstrated 94.44- 100% sensitivity. Klebsiella spp. displayed 52.9% ampicillin resistance but 100% sensitivity to Ertapenem. P. aeruginosa exhibited 75-81% resistance to Ceftazidime and Gentamicin, while carbapenems and colistin achieved 100% efficacy. S. pneumoniae isolates showed 33.33% Penicillin resistance but full sensitivity to cefradamycin and vancomycin.

Conclusion
These findings underscore widespread resistance to empiric therapies like β-lactams and aminoglycosides, contrasting with retained susceptibility to carbapenems, linezolid, and newer β-lactamase inhibitors.

Keywords
Chronic suppurative otitis media, children, antibacterial susceptibility

Prevalence of Post-Partum Depression among Health Care Professionals and Its Risk Factors

Published in
Biological and Clinical Sciences Research Journal. 2025

Journal Category
Y

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Background
Postpartum depression (PPD) is a prevalent nonpsychotic mood disorder that manifests during the postpartum period, significantly affecting maternal well-being, infant development, and family dynamics. Healthcare professionals, owing to their dual burden of occupational stress and maternal responsibilities, are particularly vulnerable to depressive symptoms.

Objective
To determine the prevalence of postpartum depression and identify the associated risk factors among healthcare professionals. Methods: A cross-sectional study was conducted on 149 women who were employed as healthcare workers and had experienced pregnancy at least once in their lives. Participants' scores on the Edinburgh Postnatal Depression Scale were used to screen for PPD. Women were classified as having depressive symptoms if they had an EPDS score of 12 or higher. Information regarding the sociodemographic characteristics, job satisfaction, prenatal mood disturbances, prenatal sleep quality, emotional support from co-workers, prior diagnosis of psychiatric illness, and financial concerns during pregnancy, and perceived family and peer support were considered for bivariate analysis.

Results
Out of 149 women, 53% had an EPDS score of 12 or higher, indicating depression. 54.4% of women expressed job satisfaction, while 62% reported overall good health. Prenatal variables associated significantly with EPDS score included mood disturbances, sleep quality, emotional support from co-workers, a prior diagnosis of psychiatric illness, and financial concerns. Postpartum physical difficulties and slow recovery were linked to an increased risk of developing PPD. A higher EPDS score was also linked to caesarean sections and job satisfaction.

Conclusion
Prevalence of PPD is slightly higher in women working in healthcare, with implications for both mother and child health. This emphasizes the importance of screening and closely monitoring mothers at high risk of PPD, as well as providing appropriate treatment plans.

Keywords
Prevalence, healthcare professional, risk factors, post-partum depression

Etiological Factors in Patients with Lower Gastrointestinal Bleeding at a Tertiary Care Hospital of Islamabad Pakistan

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Journal Category
Y

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Background
Lower gastrointestinal bleeding (LGIB) is a significant contributor o morbidity and mortality worldwide. Its etiology varies based on age, comorbid conditions, and individual risk factors.

Objectives
To identify the etiological factors associated with LGIB in patients treated at a tertiary care hospital in Islamabad, Pakistan

Methods
A retrospective analytical study was conducted on 250 patients diagnosed with LGIB at the Gastroenterology Department of Federal Government Polyclinic Hospital, Islamabad. The data included patients seen in the Outpatient Department and the Emergency Department. Data were collected from hospital records, including sociodemographic details, clinical presentations, Colonoscopy and endoscopic findings. Statistical analysis was performed using SPSS version 26.0, employing descriptive statistics and chi-square tests to evaluate associations between etiological factors and bleeding severity.

Results
Patients with LGIB universally presented with PR bleeding (250; 100%) and a high rate of anemia (170; 68%). Constipation (132; 52.8%) and abdominal pain (82; 32.8%) were common, while weight loss (59; 23.6%), diarrhea (27; 10.8%), and melena (24; 9.6%) were less frequent. Older patients (>50 years) showed higher rates of rectal polyps (22; 27.5%), rectal masses (18; 22.5%), and colonic masses (14; 17.5%). Admitted patients had more rectal masses (16; 20.0%) and colonic masses (12; 15.0%) than outpatients, highlighting the severity of disease in hospitalized cases.

Conclusions
The study revealed hemorrhoids as the most frequent cause of lower gastrointestinal bleeding, followed by rectal ulcers, colitis, and rectal masses. Diverticulosis was notably uncommon in this population.

Keywords
Lower Gastrointestinal Bleeding, Colonoscopy, Hemorrhoids, Anemia, Etiological Factors

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2025 Posters

Impact Of Oral Anti-Diabetic Medication On Liver Fat In Subjects With Type 2 Diabetes Mellitus And Non-Alcoholic Fatty Liver Disease:

IMPACT OF ORAL ANTI-DIABETIC MEDICATION ON LIVER FAT IN SUBJECTS WITH TYPE 2 DIABETES MELLITUS AND NON-ALCOHOLIC FATTY LIVER DISEASE: A RANDOMIZED CONTROLLED TRIAL

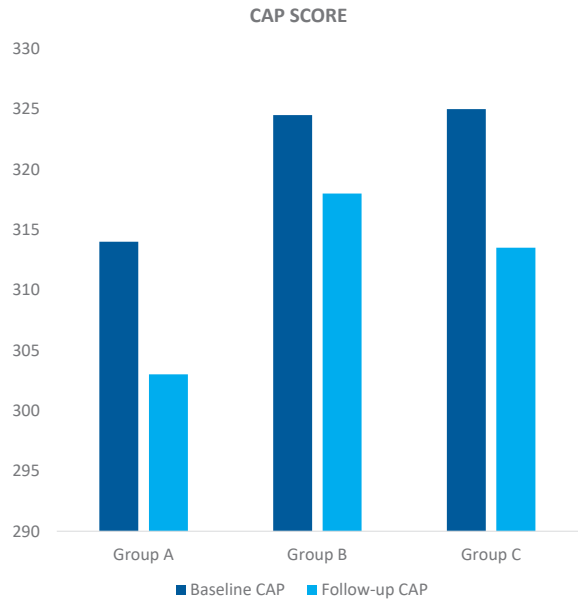
Azra Rizwan, Najmul Islam, Qamar Masood, Saeed Hamid, Muhammad Nabeed Tahir, Jahanzeb Kamal Khan, Ali Nasir, Muhammad Hammad; Pakistan

BACKGROUND & AIMS

The rise in Type 2 Diabetes Mellitus (T2DM) is associated with an increasing prevalence of non-alcoholic fatty liver disease (NAFLD), which can progress to non-alcoholic steatohepatitis (NASH). This study explores the reduction of liver fat by combining pioglitazone (Zolid®) with empagliflozin (Diampa®) compared to each drug used independently.

METHODS

Trial was conducted in participants having history of T2DM and documented hepatosteatosis, with an enrollment goal of 150, over a period of 13 month. Participants were randomly assigned to one of the 3 groups: A. Pioglitazone, B. Empagliflozin, C. Combination of both.



RESULTS

Of the 103 registered participants, preliminary data from 69 showed that 23 out of 31 in Group A completed their follow-up, with median Controlled Attenuated Parameter (CAP) scores decreasing from 314 (SD: 50) to 303 (SD: 56). In Group B, 22 out of 34 completed follow-up, with CAP scores dropping from 324.5 (SD: 51) to 318 (SD: 66). For Group C, 24 out of 38 completed follow-up, and CAP scores decreased from 325 (SD: 42) to 313.5 (SD: 41). Table 1 illustrates changes in steatosis grades from baseline to final visits.

CONCLUSIONS

Preliminary results showed that most significant reductions, were observed in group B at the lowest steatosis grade (S0) and in groups A and C at the highest steatosis grade (S3). Larger sample size is needed to assess the full impact of combination therapy on liver fat.

Authors would like to acknowledge the Medical Affairs Department of Getz Pharma for their technical support and assistance in the publication process

Evaluating The Efficacy And Safety Of Ertugliflozin And Sitagliptin Combination Therapy (Treviar2®) In Patients With Type 2 Diabetes Mellitus:

EVALUATING THE EFFICACY AND SAFETY OF ERTUGLIFLOZIN AND SITAGLIPTIN COMBINATION THERAPY (TREVIAR2®) IN PATIENTS WITH TYPE 2 DIABETES MELLITUS: CEASE DIABETES STUDY

Muhammad Nabeed Tahir, Asima Khan, Muhammad Adnan Kanpurwala, Riasat Ali Khan, V.M.Lohano Lohano, Shakeel Ahmed Ahmed, Shahid Akhter, Najum Feroz Mahmudi, Majid Khan , Tahir Rasool Rasool, Ahmed Shahzad, Shehzad Tahir, Farasat Ali Ali, Muhammad Irfan Shaukat Shaukat, Maqsood Mehmood Mehmood, Tahir Chaudhry Chaudhry; Pakistan

BACKGROUND & AIMS

This study aimed to evaluate the effectiveness and safety of the combination therapy of Ertugliflozin and Sitagliptin (Trevia-R2®) in improving glycemic control, reducing blood pressure, and promoting weight loss in Pakistani patients with Type 2 Diabetes Mellitus (T2DM).

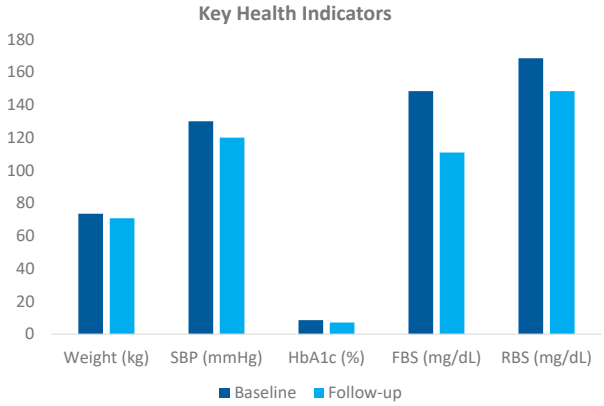
METHODS

An open-label, prospective, observational, single-arm, multi-center, post-marketing study was conducted, enrolling 326 patients treated with Ertugliflozin + Sitagliptin at doses of 5mg+100mg or 15mg+100mg over 24 weeks across 20 sites in Pakistan. Primary endpoints included changes in Glycated Hemoglobin (HbA1c), fasting blood sugar (FBS), random blood sugar (RBS), blood pressure, and body weight.

Safety and tolerability were monitored through adverse event reporting, with follow-up assessments at 4-6 weeks, 12 weeks, and 24 weeks.

RESULTS

Significant within-group improvements were observed in weight, systolic blood pressure (SBP), diastolic blood pressure (DBP), HbA1c, FBS, and RBS from baseline to the last follow-up ($p < 0.05$). In the 15 mg+100 mg group, weight decreased from 73.5 to 70.8 kg, SBP from 130 to 120 mmHg, HbA1c from 8.55% to 7.1%, FBS from 148.5 to 111 mg/dL, and RBS from 168.5 to 148 mg/dL. Between-group analysis showed significant differences in SBP ($p < 0.001$) and FBS ($p = 0.034$).



CONCLUSIONS

The Ertugliflozin + Sitagliptin combination therapy demonstrated efficacy in improving glycemic control, lowering blood pressure, and promoting weight loss in Pakistani T2DM patients, indicating its potential as a viable treatment option

Authors would like to acknowledge the Medical Affairs Department of Getz Pharma for their technical support and assistance in the publication process.

Real World Safety And Efficacy Of Empagliflozin With (Diampa M®) Or Without Metformin (Diampa®) In Type Ii Diabetes Mellitus: A Multinational, Multi Centric Post Marketing Surveillance Study

REAL-WORLD SAFETY AND EFFICACY OF EMPAGLIFLOZIN WITH (DIAMPA-M®) OR WITHOUT METFORMIN (DIAMPA®) IN TYPE II DIABETES MELLITUS: A MULTINATIONAL, MULTI-CENTRIC POST-MARKETING SURVEILLANCE STUDY

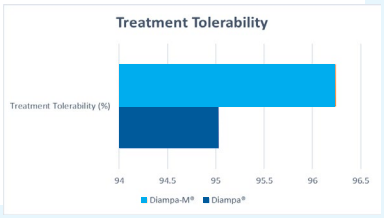
Umar Wahab[1] , Mohammad Wali Naseri[2] , Hasibullah Mohammadi[2] , Charles Antonypillai[3] , Manilka Sumanatilleke[3] , Saira Sokwalla[4] , Catherine Gathu[4] , Shehzad Tahir[1] , Hassan Mahmood[1] , Mujtaba Hasan[1] , Jahanzeb Kamal Khan[1] , Muhammad Nabeed Tahir[1] ; [1]Pakistan, [2]Afghanistan, [3]Sri Lanka, [4]Kenya

BACKGROUND & AIMS

Empagliflozin, an SGLT2 inhibitor, is effective in managing Type II Diabetes Mellitus (T2DM), but real-world data on its use, alone or with metformin, is limited. This study evaluates the safety and tolerability of empagliflozin with or without metformin in T2DM patients

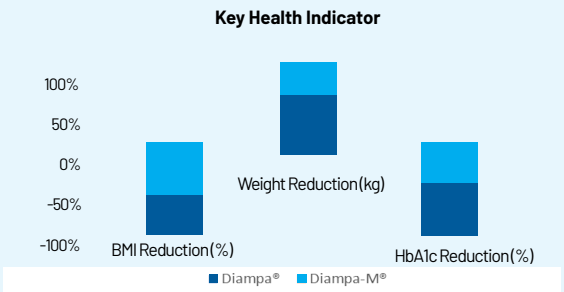
METHODS

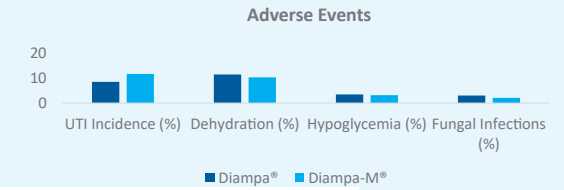
An open-label, prospective, multi- post-marketing surveillance study involving 2,028 patients across 49 sites in four countries: Pakistan, Sri Lanka, Afghanistan, and Kenya. Eligible participants were aged 18 to 65, diagnosed with T2DM, had an HbA1c level between 7 to 10%, and an eGFR >60 mL/min/1.73 m². All subjects were previously uncontrolled on other oral hypoglycemic agents for at least 3 months and were naive to empagliflozin at the time of enrollment. Adverse events, treatment adherence, change in HbA1c levels, weight reduction, and BMI were recorded for a study period of six months.



RESULTS

Diampa-M® was associated with higher incidences of UTI (11.70% vs 8.51%) and decreased dehydration (10.34% vs 11.49%) compared to Diampa®. However, Diampa-M® had lower rates of hypoglycemia (3.15% vs 3.45%) and fungal infections (2.07% vs 2.99%) compared to Diampa®. Both treatments showed good tolerability, with Diampa-M® slightly ahead (96.24% vs 95.03%) compared to Diampa®. Diampa® demonstrated a more significant reduction in BMI (0.55% vs 0.35%) and a greater decrease in weight (1.86 ± 0.20 kg vs 1.43 ± 0.22 kg) compared to Diampa-M®. Conversely, Diampa-M® was more effective in reducing HbA1c levels, (-1.32% vs -1.08%) compared to Diampa®





CONCLUSIONS

Diampa® and Diampa-M® both are safe, effective and well-tolerated for management of Type II Diabetes Mellitus.

Authors would like to acknowledge the Medical Affairs Department of Getz Pharma for their technical support and assistance in the publication process.

Effectiveness And Safety Profile Of Plasmapheresis Among Children With Guillain-Barré Syndrome Admitted To The Pediatric Intensive Care Unit (Picu).

EFFECTIVENESS AND SAFETY PROFILE OF PLASMAPHERESIS AMONG CHILDREN WITH GUILLAIN-BARRÉ SYNDROME ADMITTED TO THE PEDIATRIC INTENSIVE CARE UNIT (PICU).

Ghazala Jamal, Sanagar, Ali, Bakhtawar Chandio, Murtaza Gowa.
(National Institute of Child Health, Karachi Pakistan)

BACKGROUND

Guillain-Barré Syndrome (GBS) is an acute polyneuropathy characterized by rapid-onset muscle weakness and areflexia. There is limited data on the efficacy and safety of plasmapheresis in pediatric populations in PICU settings, particularly in developing countries such as Pakistan.

OBJECTIVE

To assess the effectiveness and safety profile of plasmapheresis in children diagnosed with Guillain-Barré Syndrome admitted to the Pediatric Intensive Care Unit (PICU) at National Institute of Child Health, Karachi, Pakistan.

MATERIALS AND METHOD

- This retrospective descriptive study was performed at the Pediatric Intensive care Unit, National Institute of Child Health, Karachi on the registered children aged 1.5 to 15 years during three-year period from July 2021 to June 2024. A total of 37 diagnosed cases of GBS requiring plasmapheresis.
- We measured efficacy and safety via post-plasmapheresis outcomes which included clinical improvement post-treatment, types and frequency of adverse effects, mortality rate, need for mechanical ventilation and need for tracheostomy

RESULTS

- Gender distribution: 20 males (54.1%) and 17 females (45.9%)
- Age range: 1.5 to 13 years
- Mean age: 8.932 years (SD = 2.6304)
- 22 patients (59.5%) experienced no side effects from plasmapheresis.
- Fever was observed in 9 patients (24.3%).
- Hypotension occurred in 4 patients (10.8%).
- Anaphylaxis was reported in 2 patients (5.4%).
- 33 patients (89.2%) showed improvement after plasmapheresis treatment.
- The mortality rate was 10.8%, with 4 patients expiring during the course of treatment.
- 22 patients (59.5%) did not require mechanical ventilation.
- 5 patients (40.5%) needed mechanical ventilation during their treatment.
- Tracheostomy was necessary for 3 patients (8.1%).

Results are shown in Figure 1 - 4

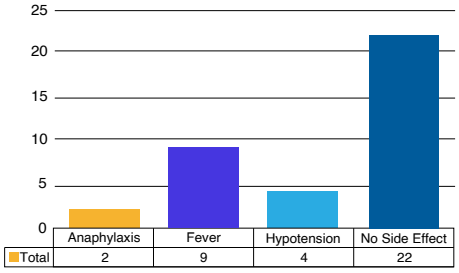


Figure 1.

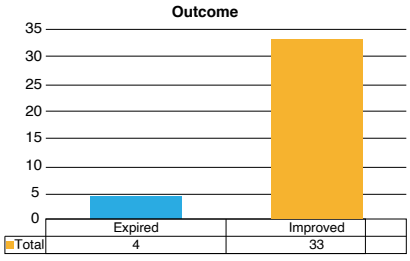


Figure 2.

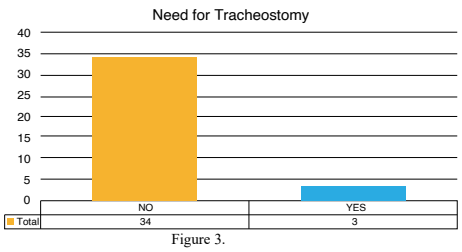


Figure 3.

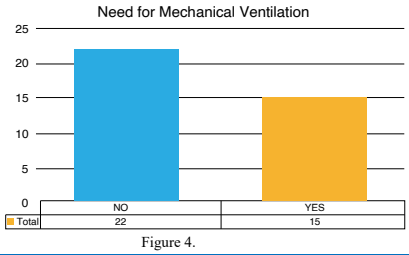


Figure 4.

CONCLUSION

Plasmapheresis is an effective treatment for pediatric GBS, showing significant improvement in a majority of patients with a relatively low incidence of severe side effects. The findings support the safety and efficacy of plasmapheresis in managing GBS in children within a tertiary care setting in Karachi, Pakistan. We recommend future prospective studies to gather more data on the effectiveness and safety of plasmapheresis in pediatric GBS patients.

Risk Factors & Complications of Metabolic Syndrome in Diabetic Patients: Retrospective Analysis from Metabesity Clinics

POSTER NO: BA2025-0956

Risk Factors& Complications of Metabolic Syndrome in Diabetic Patients: Retrospective Analysis from Metabesity Clinics

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Background:

Type 2 Diabetes Mellitus (T2DM) is frequently associated with metabolic syndrome (MetS) and microvascular complications. This study focuses on T2DM patients atMetabesity Management Clinics, highlighting the importance of comprehensive management to address these interconnected health issues.

Objective:

This study aimed to assess the data on Type 2 Diabetes Mellitus (T2DM) presented at the Metabesity Management Clinics.

Methods:

A retrospective cross-sectional study was conducted at two tertiary care centers over two years, including type 2 diabetic patients aged 18 and above. Patients with specific conditions or critical illnesses were excluded. Data, encompassing medical history, demographics, and various clinical measurements, were collected from medical records using Healthwire software.

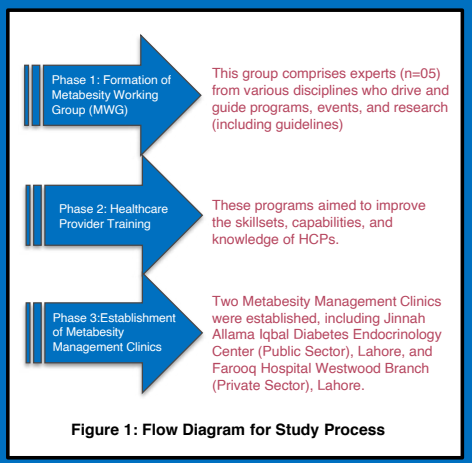

Figure 1: Flow Diagram for Study Process

Conclusion:

Our study found out that hypertension was the most common risk factor and peripheral neuropathy as the most prevalent complication amongst patients with type 2 diabetes. It also concluded that addressing mental health and assessing liver disease risk is important in holistic management of diabetic patients with metabolic syndrome.

Results:

Analysis revealed hypertension (53.3%) as the predominant risk factor associated with MetS among T2DM patients. Furthermore, Diabetic Peripheral Neuropathy (40.0%) emerged as the most prevalent microvascular complication in this population. Lower extremity vascular health, assessed by DFATBPI (0.80± 0.19), demonstrated consistent results, while DFA-ABPI (1.06± 0.06) indicated stable blood flow. Neurological assessments revealed moderate sensory perception in both right (12.15) and left (12.97) feet, with notable variability.

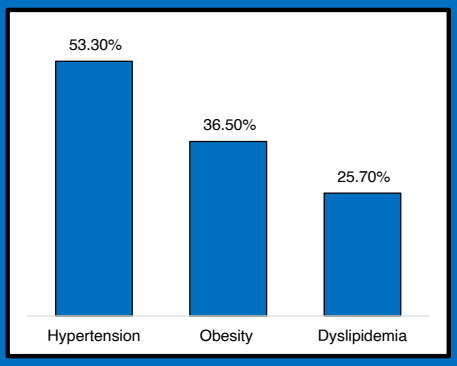

Figure 2 : Risk factors related to MetS among diabetic patients

The risk factors and complications related to Metabolic Syndrome among T2DM patients are presented in table (53.3%) was identified as the most prevalent risk factor, and Diabetic Peripheral Neuropathy (40.0%) was the most prevalent complication.

Table 1: Risk factors and complications related to MetS among diabetic patients.

Complications	N(%)
Cardiovascular Disease/Arterial Disease	142(7.8)
Non-Alcoholic Fatty Liver Disease	146(8.0)
Diabetic Peripheral Neuropathy	732(40.0)
Nephropathy	10(0.5)
Retinopathy	45(2.5)
Peptic Ulcer Disease/Gastroesophageal Reflux Disease	70(3.8)
Chronic Kidney Disease	62(3.4)

Acknowledgment:

The authors would like to acknowledge the Medical Affairs department of Getz Pharma for their technical support and assistance in the publication process.

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Evaluating the Efficacy and Safety of Ertugliflozin and Sitagliptin Combination Therapy (Trevia-R2®) in Patients with Type 2 Diabetes Mellitus: CEASE Diabetes Study

POSTER NO: BA2025-0853

Evaluating the Efficacy and Safety of Ertugliflozin and Sitagliptin Combination Therapy (Trevia-R2®) in Patients with Type 2 Diabetes Mellitus: CEASE Diabetes Study

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Background:

Ertugliflozin, an SGLT2 inhibitor, and Sitagliptin, a DPP-4 inhibitor, are oral antidiabetic agents that offer complementary mechanisms of action. However, data on the efficacy and safety of this combination in the Pakistani population are limited. This study aims to evaluate the effectiveness and tolerability of the Ertugliflozin + Sitagliptin combination in Pakistani patients with T2DM in a real-world, multi-center setting.

Objective:

The aim of the study was to assess the efficacy and safety of the Ertugliflozin and Sitagliptin combination in Pakistani T2DM patients.

Methodology:

This open-label, prospective, observational, single-arm, multi-center, post-marketing study evaluated the efficacy and safety of Ertugliflozin + Sitagliptin (Trevia-R2®) at doses of 5mg+100mg or 15mg+100mg over 24 weeks. 326 patients were treated and subsequently followed up across 20 sites in Pakistan. Primary endpoints included changes in Glycated Hemoglobin (HbA1c), fasting blood sugar (FBS), random blood sugar (RBS), blood pressure, and body weight. Safety and tolerability were assessed through adverse event monitoring. Additionally, loss to follow-up and treatment discontinuation were documented. Follow-up assessments were conducted at specific time points, including the 1st follow-up (4 to 6 weeks after therapy initiation), the 2nd follow-up (12 weeks after therapy initiation), and the 3rd follow-up (24 weeks after therapy initiation).

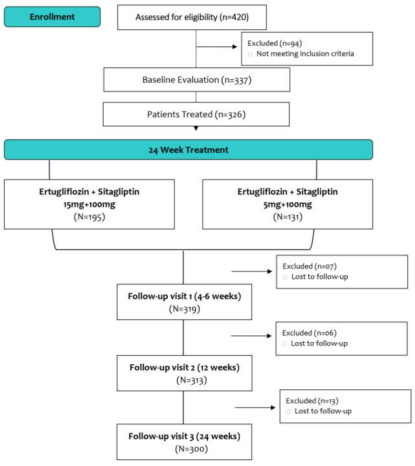

Figure 1: Study Flow.

Conclusion:

The combination therapy of Ertugliflozin + Sitagliptin (Trevia-R2®) exhibited efficacy in improving glycemic control, lowering blood pressure, and inducing weight loss among Pakistani T2DM patients over a 24-week. Moreover, the treatment demonstrated favorable tolerability, suggesting its potential as a viable option for managing T2DM in this population.

Results:

Efficacy Parameters:

Table 1 shows significant improvements in efficacy parameters from baseline to the last follow-up. HbA1c% decreased from a median of 8.9% to 7.5%, and weight reduced from 74 kg to 73 kg, with both changes being statistically significant ($p < 0.01$). Systolic blood pressure dropped from 130 mmHg to 120 mmHg, while diastolic blood pressure remained at 80 mmHg but with a reduced IQR, indicating a more consistent measurement. Fasting blood sugar decreased from 156 mg/dL to 116 mg/dL, and random blood sugar fell from 173 mg/dL to 160 mg/dL, all with p-values less than 0.01.

Table 1 : Change in HbA1c%, FBS, RBS, blood pressure, and weight to the last follow-up.

Variables	Baseline	Last Follow-Up	P-value
HbA1c	8.9(1.5)	7.5(1.1)	<0.01*
Weight	74(17)	73(16)	<0.01*
SBP	130(20)	120(10)	<0.01*
DBP	80(10)	80(5)	<0.01*
FBS	156(58)	116(20)	<0.01*
RBS	173(54)	160(40)	<0.01*

Safety Profile

Table 2 outlines the safety profile of the study participants throughout the study. At the first follow-up visit (N=319), dehydration was the most frequently reported adverse event (n=10, 3.1%), followed by hypoglycemia, urinary tract infections, and hypotension. One serious adverse event was recorded during this visit, and adjustments in study treatment dose or frequency were required for 37 participants (11.3%). Upon the second follow-up visit (N=313), urinary tract infections were reported in 6 participants (1.8%), while the incidence of dehydration decreased to 4 cases (1.2%). Three SAEs occurred during this period leading to discontinuation; dose or frequency adjustments were necessary for 24 participants (7.4%). At the last follow-up visit (N=300), dehydration was observed in 6 participants (20%). Four SAEs were reported, and adjustments were necessary for 15 participants (5.0%).

Table 2 : Safety Profile of study participants during study follow-up.

Variables	1st Follow-Up Visit (N=319)	2nd Follow-Up Visit (N=313)	Last Follow-Up Visit (N=300)
Hypoglycemia	8(2.5)	3(0.9)	6(2.0)
Dehydration	10(3.1)	4(1.2)	6(2.0)
Hypotension	3(0.9)	2(0.6)	-
Urinary tract infections	4(1.2)	6(1.8)	8(2.6)
Other	2(0.6)	3(0.9)	2(0.6)
Serious adverse event (SAE)	1(0.3)	3(0.9)	4(1.3)
Adjustment in study treatment dose or frequency	37(11.3)	24(7.4)	15(5.0)
AEs leading to discontinuation	1(0.3)	3(0.9)	4(1.3)

Acknowledgment: The authors would like to acknowledge the Medical Affairs department of Getz Pharma for their technical support and assistance in the publication process. The authors would also like to acknowledge Maliha Saghir, Muhammad Ahmad & Muhammad Wasim for their valuable contribution in Data collection.

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Impact of Oral Anti-Diabetic Medication on Glycemic Control and Liver Fat in Subjects with Type 2 Diabetes Mellitus and Non-Alcoholic Fatty Liver Disease: A Randomized Controlled Trial

POSTER NO: BA2025-1486

Impact of Oral Anti-Diabetic Medication on Glycemic Control and Liver Fat in Subjects with Type 2 Diabetes Mellitus and Non-Alcoholic Fatty Liver Disease: A Randomized Controlled Trial

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Background:

The prevalence of type 2 diabetes mellitus (T2DM) is rising globally, with over 450 million people affected. A major complication of T2DM is non-alcoholic fatty liver disease (NAFLD), which results in excessive fat accumulation in the liver. If left untreated, NAFLD can progress to more severe liver conditions such as non-alcoholic steatohepatitis (NASH), fibrosis, cirrhosis, and hepatocellular carcinoma.The underlying causes of NAFLD in T2DM include insulin resistance, oxidative stress, and chronic inflammation. Insulin resistance leads to increased fat accumulation in the liver, exacerbating metabolic dysfunction. Given the close link between NAFLD and T2DM, evaluating the effects of anti-diabetic medications on liver fat content is crucial for optimizing treatment strategies.Pioglitazone, a thiazolidinedione, improves hepatic steatosis by enhancing insulin sensitivity and reducing inflammation. Empagliflozin, an SGLT2 inhibitor, aids in glycemic control and weight loss while reducing liver fat accumulation. However, limited research exists on the combined effects of these medications in patients with both T2DM and NAFLD. This study investigates the comparative efficacy of pioglitazone, empagliflozin, and their combination in improving liver fat content and glycemic control using FibroScan-controlled attenuation parameter (CAP) scores.

Methodology:

A randomized controlled trial was conducted in participants having history of T2DM and documented hepatosteatosis, with an enrollment goal of 150, over a period of 13 month. Participants, aged 18-65 years, with HbA1c between 7-10%, were randomly assigned in a 1:1:1 ratio to one of three treatment groups: A. Pioglitazone (Zolid®), B. Empagliflozin (Diampa®), C. Combination of Pioglitazone and Empagliflozin (Zolid® and Diampa®). Data was analyzed using SPSS Version 24...

Objective:

This study explores the comparative impact of combining pioglitazone with empagliflozin versus the effects of each drug used independently. The goal was to evaluate their relative efficacy in reducing liver fat content using fibroscan.

Table 1: Steatosis grade changes in different treatment groups

		Steatosis Grade	Group A Pioglitazone n(%)	Group B Empagliflozin n(%)	Group C Pioglitazone & Empagliflozin n(%)	p-value
Liver Fat Quantification	Baseline	S0 (150-248dB/m)	0 (0%)	0	0	0.04
		S1 (247-280dB/m)	5 (21.7%)	3 (13.6%)	0	
		S2 (281-299dB/m)	3 (13.0%)	2 (9.15)	5 (20.8%)	
		S3 (Higher than 299dB/m)	15 (65.2%)	17 (77.3%)	19 (79.2%)	
	Last visit	S0 (150-248dB/m)	1	4 (18.2%)	0	0.13
		S1 (247-280dB/m)	5 (21.7%)	1 (4.5%)	4 (16.75)	
		S2 (281-299dB/m)	5 (21.7%)	2 (9.1%)	4 (16.7%)	
		S3 (Higher than 299dB/m)	12 (52.2%)	15 (68.2%)	16 (66.7%)	

Results:

Preliminary data from 108 participants indicated that for group b, 21 out of 35 participants completed their final follow-up visit. At baseline, 1 participant had a controlled attenuated parameter (CAP) score between 248-260 dB/m, 2 participants scored between 260-280 dB/m, and 18 participants scored above 280 dB/m. At the final visit, CAP scores for 1 participant were between 248-260 dB/m, 4 participants scored between 260-280 dB/m, and 16 participants scored above 280 dB/m. whereas in group a, 23 out of 34 participants completed their final follow-up visit. At baseline, 5 participants had CAP scores between 260-280 dB/m, and 18 participants scored above 280 dB/m. At the final visit, CAP scores for 1 participant were between 150-248 dB/m, 1 participant scored between 248-260 dB/m, 4 participants scored between 260-280 dB/m, and 17 participants scored above 280 dB/m. However, 24 out of 39 participants completed their final follow-up visit in group c. At baseline, all 24 participants had CAP scores above 280 dB/m. At the final visit, CAP scores for 4 participants were between 260-280 dB/m, and 20 participants scored above 280 dB/m.

Conclusion:

Preliminary results showed that the combination therapy (Zolid® and Diampa®) significantly reduced liver fat content more than the individual treatments; further investigations are required to understand the combination therapy consequences on liver fat.

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Safety & Efficacy of Empagliflozin (Diampa ®) & Empagliflozin /Metformin (Diampa M ®) in T2DM: A Multinational Study

POSTER NO: BA2025-0961

Safety & Efficacy of Empagliflozin (Diampa®) & Empagliflozin/Metformin (Diampa-M®) In T2DM: A Multinational Study

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Background:

Sodium-glucose cotransporter 2 (SGLT2) inhibitors offer significant cardiovascular and renal benefits for patients with type 2 diabetes mellitus (T2DM) and related conditions, reducing overall mortality, cardiovascular risks, and hospitalization rates. These drugs aid in weight loss, lower blood pressure, and improve kidney function, though they slightly increase the risk of genital infections. Empagliflozin, a well-tolerated SGLT2 inhibitor, has demonstrated a favorable safety profile in large-scale clinical trials, with minimal drug interactions and comparable adverse event rates to placebo. Research in Pakistan confirms its effectiveness in improving glycemic control, weight management, and renal parameters without significantly increasing the risk of diabetic ketoacidosis or major complications. However, post-marketing studies highlight concerns such as diabetic ketoacidosis, UTIs, bone fractures, and amputations, necessitating further research to assess long-term safety in Pakistani patients.

Objective:

To evaluate the safety and tolerability of empagliflozin with or without metformin in patients with Type II Diabetes Mellitus

Methodology:

The study was an open-label, prospective, observational, multi-center post-marketing surveillance conducted in three hospital settings to evaluate the safety and effectiveness of empagliflozin in patients with type 2 diabetes mellitus (T2DM). Approved by the Institutional Review Board, the study included 2028 participants aged 18-65 years with HbA1c levels between 7.0% and 10%, uncontrolled on oral antidiabetic agents. Exclusion criteria included recurrent infections, severe hypoglycemia, renal or hepatic dysfunction, and recent cardiovascular events. Participants were assessed at baseline and follow-up visits (1, 3, and 6 months) for clinical and laboratory parameters, with adverse events recorded. Data were analyzed using SPSS 22.0, applying the Wilcoxon signed-rank test for non-normally distributed variables. The results showed a significant reduction in adverse events over time, with hypoglycemia, nausea, and dehydration being the most common. Serious adverse events declined across follow-ups, and treatment discontinuation was minimal.

Table 1: Frequency of Adverse Events during Study Follow-Up

Variables	1st follow-up Visit at 1 month	2nd follow-up Visit at 3 months	3rd follow-up Visit at 6 months
Hypoglycemia	16 (7.4%)	-	-
Dehydration	10 (4.7%)	1 (0.5%)	1 (0.5%)
Hypotension	5 (2.3%)	-	1 (0.5%)
Urinary Tract Infections	11 (5.1%)	9 (4.2%)	5 (2.3%)
Fungal Infections	4 (1.9%)	2 (0.9%)	2 (0.9%)
Nausea	16 (7.4%)	1 (0.5%)	2 (0.9%)
Vomiting	9 (4.2%)	1 (0.5%)	1 (0.5%)
Diarrhea	5 (2.3%)	1 (0.5%)	
Abdominal Discomfort	7 (3.3%)	2 (0.9%)	3 (1.4%)
Flatulence	17 (7.9%)	3 (1.4%)	2 (0.9%)
Asthenia	4 (1.9%)	-	-
Indigestion	3 (1.4%)	-	-

Results:

Data demonstrated results for 1444 patients who had completed study till June 30, 2024. 54.4% (786) participants were female and 45.6% (658) were male with a mean age of 49.9 ± 8.81 years, achieving enrollment rate of 76%. Diampa-M® was associated with higher incidences of urinary tract infections (11.70% vs 8.51%) and lower rates of dehydration (10.34% vs 11.49%) compared to Diampa®. However, Diampa-M® had lower rates of hypoglycemia (3.15% vs 3.45%) and fungal infections (2.07% vs 2.99%) compared to Diampa®. Both treatments showed good tolerability, with Diampa-M® slightly ahead (96.24% vs 95.03%) compared to Diampa®. Diampa® demonstrated a more significant reduction in BMI (0.55% vs 0.35%) and a greater decrease in weight (1.86 ± 0.20 kg vs 1.43 ± 0.22 kg) compared to Diampa-M®. Conversely, Diampa-M® was more effective in reducing HbA1c levels, (-1.32% vs -1.08%) compared to Diampa®.

Table 2: Changes in Clinical and Laboratory Parameters from Baseline to 6-Month Follow-Up Visit.

Variables	Baseline Visit	3rd follow-up Visit at 6 months	p-value
Weight	75(17)	74(17)	0.000*
SBP	120(30)	120(20)	0.003*
DBP	80(8)	80(10)	0.022*
HbA1c	8.75(1.8)	7.90(1.3)	0.000*
FBS	149.0(49)	132.0(54)	0.000*
BUN	12.6(4.5)	13.75(4.2)	0.073
Serum Creatinine	0.70(0.3)	0.60(0.3)	0.003*
eGFR	109.0(26.5)	112.40(20.8)	0.000*

Conclusion:

Empagliflozin treatment with or without Metformin shows promising safety combined with efficacy results for patients diagnosed with T2DM according to this research. The study data shows that it effectively enhances blood pressure levels and reduces weight while improving glycemic control. Additional research must analyze both long-term medical results and the specific effects of using empagliflozin independently or combined with additional treatment options among various patient groups.

Acknowledgment:

The authors would like to acknowledge the Medical Affairs department of Getz Pharma for their technical support and assistance in the publication process.

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Effects Of Migraine Headaches On Productivity Of The Patients According To The Migraine Disability Assessment Score (Midas)

EFFECTS OF MIGRAINE HEADACHES ON PRODUCTIVITY OF THE PATIENTS ACCORDING TO THE MIGRAINE DISABILITY ASSESSMENT SCORE (MIDAS)

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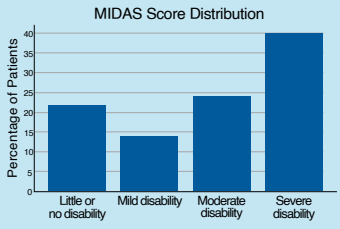
INTRODUCTION

Migraine is the third most common cause of disability under the age of 50. There are various scoring systems for assessing this disability, one of which is MIDAS, the Migraine Disability Assessment Score.

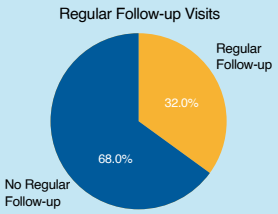
OBJECTIVES

The objective of our study was to determine the extent of disability among migraine patients, patterns of prophylaxis, and their healthcare-seeking behaviors.

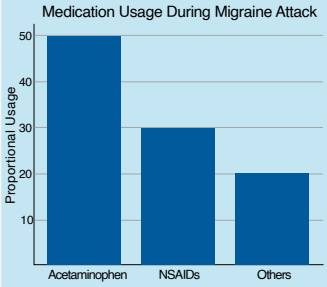


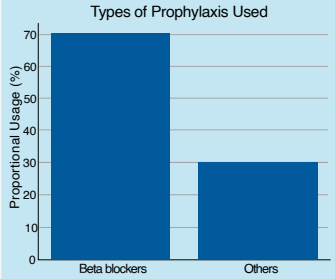
MATERIALS & METHODS

This study was conducted on 100 migraine patients at the Neurology department outpatient clinics, Jinnah Postgraduate Medical Centre, from November 2024 to February 2025. The questionnaire inquired about the demographic information, management of migraine, and the effect of this condition on their sleep, and the last part had an assessment to assess their functional disability.



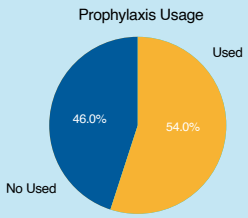
RESULTS





CONCLUSION

Our study concluded that the majority of migraine patients were found to have severe disability, which affected their daily work and social activities. Despite an increase in disability rate due to migraine, people do not seek regular medical care for this type of headache in Pakistan.



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Burden And Predictors Of Diabetic Nephropathy In Newly Diagnosed Type 2 Diabetes Mellitus Patients

AACE 2025 Orlando

Burden and predictors of Diabetic Nephropathy in newly diagnosed Type 2 Diabetes Mellitus Patients

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INTRODUCTION

Diabetic nephropathy (DN) is a common and serious complication of Type 2 Diabetes Mellitus, driven by chronic hyperglycemia along with risk factors like hypertension, dyslipidemia, and obesity. It progressively damages the kidneys, eventually leading to end-stage renal disease. The burden of DN is rising globally, with a particularly rapid increase observed in newly diagnosed patients from developing countries.

AIM

This study aims to measure the prevalence of DN and identify predictors associated with its development in newly diagnosed T2DM patients

METHOD

This cross-sectional study was performed for three months at Endocrinology Department CDA Hospital Islamabad to measure burden and investigate early predictors of Diabetic Nephropathy in newly diagnosed T2DM patients. 248 newly diagnosed, treatment-naive T2DM patients were recruited using consecutive non-probability sampling technique. Multiple variables were measured, including the demographic, medical and surgical histories, physical exam, and lab results. Statistical analysis was done using SPSS version 22.0, and descriptive analysis coupled with logistic regression analysis was used to establish predictors of DN.

RESULTS

- **Age:** No significant difference between groups (p = 0.816).
- **Weight, Height, BMI, Waist Circumference:** No significant differences (p > 0.1 for all).
- **Sex (Male %):** Higher in Yes DN group (71.4% vs 59.7%), but **not statistically significant** (p = 0.129).
- **Resting SBP and DBP:** No significant difference (p = 0.218 and 0.927 respectively).
- **Occupation: Significant difference** between groups (**p = 0.006**).
- **House Ownership: Higher ownership** in Yes DN group (**93.9%** vs **82.6%,p=0.048**).
- **Household Income:** Significant difference (**p = 0.010**

Table 1: Symptoms and Family History

Symptom/History	No DN (%)	Yes DN (%)	p-value
Osmotic Symptoms	83.6%	89.8%	0.277
Recurrent Boils	12.4%	36.7%	0.002
Lethargy	75.1%	89.8%	0.026
Confusion	11.4%	26.5%	0.007
Fatigue	77.6%	83.7%	0.352
Smoking (%)	16.9%	28.6%	0.063
Physical Activity (%)	77.1%	87.8%	0.100
Family History of Diabetes (%)	77.1%	73.5%	0.590

- **Recurrent Boils**: Higher in Yes DN (36.7%) compared to No DN (12.4%), **p = 0.002**
- **Lethargy**: Higher in Yes DN (89.8%) vs No DN (75.1%), **p = 0.026**
- **Confusion**: Higher in Yes DN (26.5%) vs No DN (11.4%), **p = 0.007**

Table 2: Laboratory Parameters

Parameter	Median (IQR)	p-value
Total Cholesterol (mg/dl)	211 (191)	0.568
Triglycerides (mg/dl)	197 (221)	0.101
HDL-C (mg/dl)	35 (12)	0.005
LDL-C (mg/dl)	133 (66)	0.010
Fasting Blood Sugar (mg/dl)	165 (71)	0.612
Random Blood Sugar (mg/dl)	291 (110)	0.667
HbA1c (%)	10.6 (4.4)	0.651
Urea (mg/dl)	39 (21)	0.199
Creatinine (mg/dl)	0.78 (0.2)	0.046
ALT (IU/ml)	32 (29.5)	0.826

- **HDL-C:** Significant (p = 0.005); Median = 35 mg/dl (IQR 12).
- **LDL-C:** Significant (p = 0.010); Median = 133 mg/dl (IQR 66).
- **Creatinine:** Significant (p = 0.046); Median = 0.78 mg/dl (IQR 0.2).

CONCLUSIONS

DN was prevalent in 19.9% of the newly diagnosed T2DM patients. A significant association of traditional clinical markers such as HDL-C, LDL-C, and creatinine with the occurrence of DN. These findings emphasize the need for targeted, context-specific interventions to reduce DN risk, particularly in socially vulnerable populations..

ACKNOWLEDGEMENTS

The authors would like to acknowledge the Medical Affairs department of Getz Pharma for their technical support.

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Rising Incidence Of Stemi In Younger Adults: Time To Redefine Premature Cad Or A New High-Risk Group Emerging?

Rising incidence of STEMI in younger adults: time to redefine premature CAD or a new high-risk group emerging?

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BACKGROUND: The rising incidence of acute STEMI in younger males (<55 years) and females (<65 years) challenges the current definition of premature coronary artery disease (CAD). This trend raises concerns about overlooked risk factors, changing lifestyles, and potential genetic influences.

PURPOSE: To analyze the rising incidence of STEMI in younger adults and determine whether this group represents a new high-risk population or if the definition of premature CAD needs to be redefined for better prevention and management.

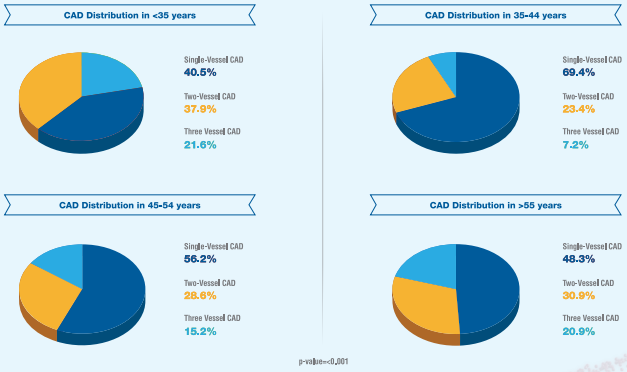
METHODS: A cross-sectional study was conducted at a tertiary care cardiology center over one year. Patients were enrolled using non-probability consecutive sampling after approval from institutional ethical review board and informed consent. Baseline characteristics and risk factors were recorded. Primary PCI was performed as per hospital protocol, and angiographic findings were documented. Males were categorized into four age groups: <35, 35–45, 45–55, and >55 years, while females were grouped as <45, 45–55, 55–65, and >65 years. Data were analyzed using SPSS version 26.0, with categorical variables presented as frequencies and percentages. Chi-square tests were applied to assess associations between age groups and angiographic findings, with a significance level set at p<0.05.

RESULTS: A total of 5,286 STEMI patients were analyzed, with a mean age of 52.53 ± 10.90 years. Males constituted the majority (4,143/5286; 78.4%). Among males, Group 1 (<35 years) had the highest proportion of cases (1,638/4,143; 39.5%), whereas in females, Group 2 (45–55 years) was most affected (402/1,143; 35.2%). Diabetes prevalence was significantly higher in females (47.5%) compared to males (29.2%) (p < 0.001), peaking in Group 2 females (54.5%) and Group 4 males (>55 years) (32.8%). Hypertension was more common in females (60.3%) than males (29.4%) (p < 0.001), with the highest rates in Group 2 females (64.7%) and Group 4 males (33.1%). Smoking was significantly higher in males (48.4%) than females (14.8%) (p = 0.006), while obesity was prevalent in both genders (males: 51.8%, females: 50.5%) (p = 0.001). Angiographic analysis showed that single-vessel CAD was predominant in Group 2 males (69.4%) and Group 2 females (50.5%), whereas three-vessel CAD was most frequent in Group 1 males (21.6%) and Group 4 females (28.4%) (p < 0.001).

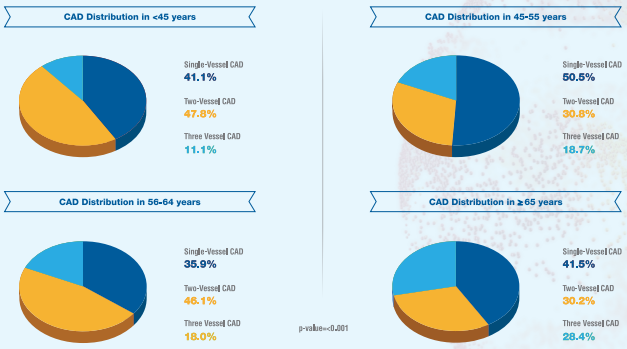
Conclusion: The rising incidence of STEMI in younger males (<55 years) and females (<65 years) signals an urgent need to reassess the definition of premature CAD. Our findings highlight a stark gender disparity in risk factor profiles. The predominance of single-vessel disease in younger patients suggests early yet aggressive atherosclerotic involvement, whereas multi-vessel CAD in older females underscores the cumulative impact of lifelong cardiovascular risk exposure. Is this an evolving epidemic of young-onset CAD or a previously overlooked population with high-risk atherosclerosis?

*Declaration of interest: None

Age-wise CAD Distribution in Male STEMI Patients



Age-wise CAD Distribution in Female STEMI Patients



Comparative Efficacy and Safety of Silodosin (Silorap®) versus Tamsulosin (Tamsolin®) for Medical Expulsive Therapy of Distal Ureteral Stones

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Comparative Efficacy and Safety of Silodosin (Silorap®) versus Tamsulosin (Tamsolin®) for Medical Expulsive Therapy of Distal Ureteral Stones

AUTHORS

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AFFILIATIONS

KC[1], SH[2], DUHS[3], SIMS[4], IKD[5], LUMHS[6], AH[7], BINUQ[8], AMC[9], AFIC[10], LNH[11], CHQ[12], PCH[13], SH[14], NWH[15], MIKD[16], IHN[17]

INTRODUCTION

Kidney stones, particularly distal ureteric stones, are a prevalent urological condition with rising global incidence, prompting evaluation of cost-effective treatments like α-blocker-based medical expulsive therapy

OBJECTIVE

The study objective was to compare the efficacy and safety of Silodosin (Silorap®) versus Tamsulosin (Tamsolin®) in facilitating the passage of acutely obstructing distal ureteral stones.

METHODOLOGY

This multicenter, randomized, comparative study enrolled 336 adult patients with a single distal ureteric calculus (5–10 mm) across sixteen tertiary care centers in Pakistan. Participants were randomized to receive Silodosin (Silorap®) or Tamsulosin (Tamsolin®) and followed for 30 days. Primary outcome was stone expulsion rate at four weeks; secondary outcomes included time to expulsion, analgesic use, emergency visits, and safety outcomes. Time-to-event analysis was conducted using Kaplan–Meier survival curves.

RESULTS

Baseline demographics, clinical, and laboratory parameters were comparable between groups. The overall stone expulsion rate was significantly higher in the group B (Silorap®) (112/166; 67.47%) compared to group A (Tamsolin®) (92/170; 54.12%; $p = 0.012$). The mean expulsion time was 13.68 ± 8.97 days in group B (Silorap®) and 14.33 ± 9.65 days in group A (Tamsolin®), while the median expulsion time was similar in both groups (12.00 days; $p = 0.701$). Kaplan–Meier analysis confirmed comparable time to stone passage (log-rank $p = 0.728$). Pain scores decreased significantly over time in both groups. Both treatments were well tolerated. Headache and postural hypotension were most common, while retrograde ejaculation occurred predominantly in the group B (Silorap®). Serious adverse events, including palpitation and syncope, were rare and manageable, and no significant differences were observed in vital signs between groups.

CONCLUSION

Silodosin (Silorap®) and Tamsulosin (Tamsolin®) are both effective and well tolerated for MET in distal ureteral stones. Group B (Silorap®) demonstrated a significantly higher stone expulsion rate compared to group A (Tamsolin®), although the time to expulsion was similar in both groups. Both agents demonstrated favorable safety profiles, supporting their continued use in clinical practice.

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Age- and Gender-Specific Distribution of Lipid Profiles in the Pakistani Population Free of Established Atherosclerotic Disease: Insights from the PAK-SEHAT Study

Age - and Gender - Specific Distribution of Lipid Profiles in the Pakistani Population Free of Established Atherosclerotic Disease: Insights from the PAK - SEHAT Study

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Background

- Dyslipidemia is a key risk factor for cardiovascular disease (CVD), with South Asians exhibiting a distinct lipid profile characterized by low HDL cholesterol (HDL-C), elevated triglycerides (TG), and increased LDL cholesterol (LDL-C).
- However, nationally representative data on lipid distributions across age and gender in the Pakistani population remain limited.

Objective

- This study aims to evaluate the prevalence and distribution of lipid parameters in a Pakistani cohort and identify demographic variations that may inform targeted lipid-lowering interventions.

Methods

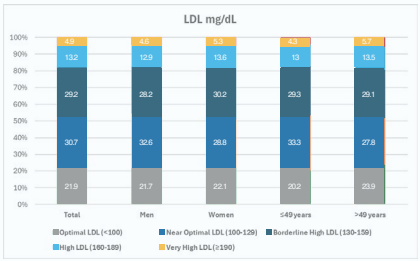
- The PAKistan Study of prEmature coronary atHerosclerosis in young AdulTs (PAK-SEHAT) is a prospective study of 2000 young Pakistani men (age 35-60) and women (35-65) with no known clinical ASCVD (ratio of 1:1) recruited from all four provinces of Pakistan using a multistage cluster sampling at province level
- Fasting lipid profiles, including LDL-C, TG, and HDL-C, were measured using standardized laboratory assays.
- Lipid parameters analyzed included LDL-C, HDL-C, total cholesterol, triglycerides (TG), and non-HDL cholesterol, reported as mean (SD), median [IQR], and range.
- Participants were stratified by age group (≤49 vs >49 years) and sex for all descriptive and comparative analyses.
- Logistic regression models were used to assess associations between demographic and clinical risk factors (e.g., diabetes, obesity) and adverse lipid profiles, adjusted for age and sex.

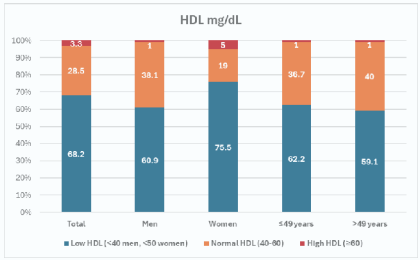
Funding

This study is funded by Getz Pharma Private Ltd

Tables & Figures

Figure: Prevalence and Distribution of Lipid Parameters, stratified by Gender and Age





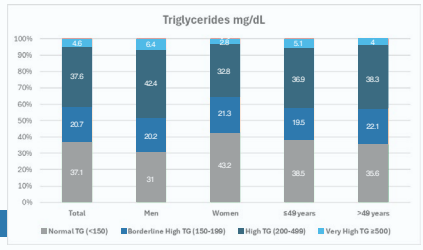


Table: Distribution of Lipid Parameters in the Population

Lipid Parameter	Total (N=2004) Mean (SD)	Median [IQR]	Min–Max	Men (N=996) Mean (SD)	Median [IQR]	Min–Max	Women (N=1008) Mean (SD)	Median [IQR]	Min–Max
Total Chol (mg/dL)	190.1 (40.7)	188 [51.3]	78–375	189.1 (40.3)	188 [51]	91–375	191.1 (41.0)	189 [51]	78–371
LDL-C (mg/dL)	127.5 (36.9)	127 [48]	10–306	127.0 (35.6)	127 [46]	23–253	128.0 (38.2)	129 [50]	10–306
HDL-C (mg/dL)	40.6 (9.2)	40 [12]	15–84	37.9 (7.9)	37 [10]	15–73	43.2 (9.5)	42 [13]	19–84
Triglycerides (mg/dL)	217.9 (151.9)	179 [138]	11–1788	238.1 (161.3)	195 [149]	11–1755	197.9 (139.2)	166 [123]	15–1788
Non-HDL-C (mg/dL)	149.6 (40.1)	147 [50]	33–340	151.2 (39.9)	149 [49]	43–340	147.9 (40.2)	145 [51]	33–332

Results

- This nationally representative study included 2004 participants (mean age: 48.9 years), of whom 50% were women.
- The prevalence of dyslipidemia was 47.4% for high LDL-C (≥130 mg/dL), 62.9% for high TG (≥150 mg/dL), and 68.2% for low HDL-C (<40 mg/dL in men, <50 mg/dL in women) (Figure).
- The mean (SD) lipid levels were: LDL-C 127.5 (36.9) mg/dL, TG 217.9 (151.9) mg/dL, HDL-C 40.6 (9.2) mg/dL, and non-HDL-C 149.6 (40.1) mg/dL (Table).
- LDL-C distribution showed 21.9% of the population had optimal levels (<100 mg/dL), while 4.9% had very high LDL-C (≥190 mg/dL).
- LDL-C levels increased with age. Low HDL-C was more prevalent in women (75.5%) compared to men (60.9%).
- Triglyceride abnormalities were highly prevalent, with 20.7% borderline high (150–199 mg/dL), 37.6% high (200–499 mg/dL), and 4.6% very high (≥500 mg/dL).
- In adjusted analyses, diabetes was associated with increased odds of high TG ≥200mg/dL (OR 1.4 [1.1-1.9]). Obesity (≥35 kg/m²) was strongly associated with high TG (OR 2.0 [1.4-2.9]) and low HDL-C (OR 2.4 [1.6-3.5]); and age >49 was associated with high TG (OR 1.9 [1.6-2.4]) and low HDL-C (OR 1.6 [1.3-2.1])

Conclusion

- These findings highlight the urgent need for targeted dyslipidemia managemen strategies to mitigate the growing burden of atherogenic lipid profiles in this high-risk South Asian population.

Distribution of Lipoprotein (a) in Young Pakistani Population Free of Established ASCVD: Insights from the PAK-SEHAT Study

Distribution of Lipoprotein(a) in Young Pakistani Population Free of Established ASCVD: Insights from the PAK-SEHAT Study

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ASPC 2025 Congress on CVD Prevention, August 1-3, 2025 • Boston, MA

Background

- Lipoprotein(a) [Lp(a)] is an independent and genetically determined cardiovascular risk factor, with elevated levels associated with an increased risk of atherosclerotic cardiovascular disease (ASCVD) and calcific aortic valve disease.
- South Asians have been shown to exhibit higher Lp(a) levels compared to other ethnic groups, yet limited nationally representative data exist on these populations.

Objective

- This study aims to assess the prevalence and distribution of Lp(a) across age and gender in the ongoing prospective PAKistan Study of prEmature coronary atHerosclerosis in young AdulTs (PAK-SEHAT), with risk stratification based on established Lp(a) cutoffs.

Methods

- The PAKistan Study of prEmature coronary atHerosclerosis in young AdulTs (PAK-SEHAT) is a prospective study of 2000 young Pakistani men (age 35-60) and women (35-65) with no known clinical ASCVD (ratio of 1:1) recruited from all four provinces of Pakistan using a multistage cluster sampling at province level
- Lp(a) mass levels were measured by immunoturbidometric assays using Alinity c Lp(a) Reagent kit and expressed as mg/dL.
- Lp(a) concentrations were categorized into low risk (<30 mg/dL), intermediate risk (30–49 mg/dL), high risk (50–125 mg/dL), and very high risk (>125 mg/dL) and assessed across the total population as well as stratified by gender.
- Sex-specific percentiles of Lp(a) were calculated (5th, 10th, 25th, 50th, 75th, 90th, and 95th) to describe the distribution of Lp(a) across the population and highlight sex-related differences.
- Spearman rank correlation was used to assess the relationship between Lp(a) levels and total cholesterol, LDL-C, HDL-C, and hs-CRP.

Funding

This study is funded by Getz Pharma Private Ltd

Tables & Figures

Table 1: Baseline Characteristics of the Study Population

Characteristic	Total	<30 mg/dL	30–49 mg/dL	50–125 mg/dL	>125 mg/dL	P-value
Age, mean (SD)	49 (8.1)	48.7 (8.1)	49.1 (7.8)	49.9 (8.2)	51.3 (9.2)	0.077
Age group, %						
35–44 years	33.7	34.3	33.0	32.2	25.9	0.188
45–54 years	37.6	38.4	38.0	33.7	29.6	
55–65 years	28.7	27.3	29.0	34.1	44.4	
Female, %	50.3	48.9	48.6	58.1	63.0	0.020
Diabetes, %	21.8	23.1	16.7	21.1	14.8	0.087
Hypertension, %	32.9	33.1	26.3	37.8	36.4	0.239
Family history of premature CVD, %	32.2	30.8	35.5	35.6	40.7	0.171
Smoking or tobacco use, %	10.9	11.4	11.2	7.8	11.1	0.379
Physical inactivity, %	25.9	26.3	26.8	22.9	25.0	0.817
Under weight (<18.5), %	0.8	0.9	1.1	0.0	3.7	0.337
Normal weight (18.5 –24.9), %	21.6	21.5	24.8	19.2	18.5	
Overweight (25 –29.9), %	39.8	39.7	38.0	42.5	37.0	
Moderate Obesity (30 –34.9), %	27.0	26.6	27.0	28.9	29.6	
Severe Obesity (35.0 –39.9), %	9.9	10.7	7.7	7.9	7.4	
Very Severe Obesity (≥40.0), %	1.0	0.7	1.5	1.5	3.7	

Figure: Prevalence of Lp(a) Risk Profiles, stratified by Gender

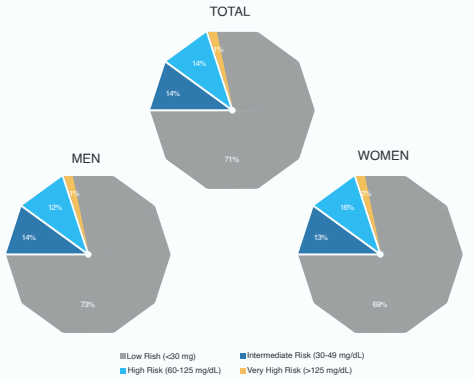

Table 2: Distribution of Lp(a) in the Population

Statistic	Total	Men	Women
Mean (SD)	27 (29.2)	24.8 (27.6)	29.1 (30.5)
Median [IQR]	16.6 [26.7]	15 [25.6]	17.6 [28.1]
Minimum	0.0	0.0	0.0
Maximum	226.0	226.0	199.0

Table 3: Lp(a) Percentiles Across Population, stratified by Gender

	Percentiles						
Gender	5th	10th	25th	50th	75th	90th	95th
Total	3.1	3.9	7.9	16.6	34.5	67.4	86.6
Men	3.1	3.6	7.2	15.0	32.8	59.3	82.2
Women	3.1	4.6	8.7	17.6	36.8	75.1	90.1

Results

- This nationally representative study included 2000 participants (mean age: 48.9 years), of whom 50% were women (Table 1).
- Women had a higher prevalence of high (15.8%) and very high (1.7%) Lp(a) levels compared to men (11.5% and 1.0%, respectively) (Figure).
- Women had significantly higher mean (SD) [29.1 (30.5) vs. 24.8 (27.6); P<0.0001] and median [IQR] 17.6 [28.1] vs. 15.0 [25.6]; P<0.0001] Lp(a) levels compared to men (Table 2).
- Across the population, Lp(a) levels increased steeply above the 75th percentile, with the 95th percentile reaching 90.1 mg/dL in women and 82.2 mg/dL in men (Table 3).
- Women consistently had higher Lp(a) levels than men across all percentiles.
- Overall, 15% of participants had Lp(a) levels >50 mg/dL (men: 12%, women: 18%).
- Spearman correlation showed weak associations between Lp(a) and total cholesterol (r=0.105), LDL-C (r=0.132), HDL-C (r=0.090), and hs-CRP (r=0.027).

Conclusion

- This is the first large nationally representative study assessing the prevalence and distribution of Lp(a) in the Pakistani population.
- A substantial proportion of individuals were in the high-risk category, with approximately 15% having Lp(a) >50 mg/dl.
- Future studies should assess the impact of elevated Lp(a) on ASCVD outcomes and the role of emerging therapeutic interventions in this population.

Prevalence and Burden of Coronary Artery Calcium in the Pakistani Population Free of Established Atherosclerotic Cardiovascular Disease: Insights from the PAK-SEHAT Study

Prevalence and Burden of Coronary Artery Calcium in the Pakistani Population Free of Established Atherosclerotic Cardiovascular Disease: Insights from the PAK-SEHAT Study

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Background

- Coronary artery calcification (CAC) is a key marker of subclinical atherosclerosis and an independent predictor of cardiovascular events.
- South Asians, particularly Pakistanis, are disproportionately affected by early-onset cardiovascular disease, yet data on CAC prevalence and its determinants in this population remain limited.

Objective

- This study aims to assess the prevalence and predictors of CAC in the ongoing prospective PAKistan Study of prEmature coronary atHerosclerosis in young AdulTs (PAK-SEHAT), which is recruiting individuals from seven centers across all four provinces of Pakistan.

Methods

- Men and women aged 35–65 years with no known cardiovascular disease were included.
- CAC was assessed using non-contrast cardiac CT with Agatston scoring.
- The distribution of CAC scores was categorized as 0 (no CAC), 1–99 (mild-moderate), ≥100 (moderate-severe), and ≥300 (severe).
- The overall prevalence and burden and across subgroups stratified by gender, age, and increasing burden of traditional cardiovascular risk factors (CVRF) were analyzed.
- Age- and sex-specific percentiles of CAC scores were calculated (5th, 10th, 25th, 50th, 75th, 90th, and 95th) to describe the distribution of CAC burden across the population and highlight age-related differences in CAC progression between men and women.

Funding

This study is funded by Getz Pharma Private Ltd

Figures

Table: Baseline Characteristics of the Study Population

Characteristic	Overall (N = 2004)	Men (N = 996)	Women (N = 1008)	P-value
Age, mean (SD)	48.9 (8.1)	47.6 (7.2)	50.3 (8.6)	<0.001
Age group, %				
35–44 years	33.8	37.0	30.6	<0.001
45–54 years	37.3	41.1	33.6	
≥55 years	28.9	21.9	35.8	
Traditional Cardiovascular Risk Factors, %				
Smoking/Tobacco Use	10.8	19.2	2.6	<0.001
Hypertension	32.9	34.2	31.7	0.377
Diabetes	21.9	21.0	22.7	0.348
LDL ≥130 mg/dL	47.4	45.7	49.1	0.136
HDL <40 mg/dL	68.2	60.8	75.4	<0.001
Family History of Premature CAD	32.4	31.9	32.9	<0.001
Number of Risk Factors, %				
0–1 RF	29.6	27.9	31.3	<0.001
2 RFs	32.8	32.2	33.4	
≥3 RFs	37.5	39.9	35.2	

Figure 1: Prevalence of Coronary Artery Calcium Across Age groups, stratified by Gender

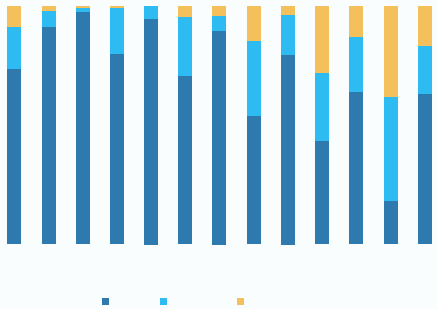

Table 2: Coronary Artery Calcium Percentiles Across Age groups, stratified by Gender

FEMALE	Percentiles						
Age	5th	10th	25th	50th	75th	90th	95th
35-39 years	0	0	0	0	0	0	0
40-44 years	0	0	0	0	0	0	2
45-49 years	0	0	0	0	0	2	83
50-54 years	0	0	0	0	0	39	80
55-59 years	0	0	0	0	18	134	265
60-65 years	0	0	0	0	26	162	312

MALE	Percentiles						
Age	5th	10th	25th	50th	75th	90th	95th
35-39 years	0	0	0	0	0	0	20
40-44 years	0	0	0	0	0	19	31
45-49 years	0	0	0	0	4	48	79
50-54 years	0	0	0	0	32	157	368
55-59 years	0	0	0	10	130	266	539
60-65 years	0	0	2	22	235	822	

Results

- This nationally representative study included 1976 participants aged 35–65 years, 50% were women (Table).
- The overall prevalence of CAC was 26%, with 8.4% CAC ≥100.
- Men had a significantly higher prevalence and burden of CAC compared to women, increased steadily with age (Figure 1).
- CAC percentiles increased with age especially among men (Table 2)
- While participants with increasing CVRFs were less likely to have CAC = 0, 68.7% individuals with ≥3 CVRFs had no CAC.
- 11.5% individuals with 0-1 CVRFs had CAC >0, 6.3% had CAC ≥100.
- Individuals with ≥3 CVRFs had over twice the odds of having any CAC (age-adjusted OR: 2.1, 95% CI [1.6, 2.8]) and 40% higher odds of having CAC ≥100 (age-adjusted OR: 1.4, 95% CI [0.9, 2.1]

Conclusion

- This is the first large nationally representative study assessing the prevalence and burden of CAC in the Pakistani population free of baseline cardiovascular disease.
- These findings provide critical insights into the extent of subclinical atherosclerosis in this high-risk group and will help inform local stakeholders on the future integration of CAC-guided risk stratification into clinical practice to optimize early intervention efforts tailored to the unique risk profile of South Asian populations.

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2025 Abstracts

Association Between Left Ventricular Stiffening and Left Atrial Dilatation in Hypertensive and Normotensive Patients

Accepted in
American Society of Echocardiography Conference, 2026

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Objectives
To evaluate the association between diastolic dysfunction and left atrial volume index (LAVI) in both hypertensive and normotensive individuals.

Methodology
This study included patients from both hypertensive and non-hypertensive groups, all of whom underwent echocardiographic evaluations. Various parameters were measured, and the correlation between diastolic dysfunction and LAVI was assessed. Statistical comparisons were made using an independent t-test, while Spearman's correlation was employed to evaluate relationships between the variables.

Results
Hypertensive patients demonstrated significantly higher body weight ($p = 0.000$) and body surface area ($p = 0.005$) compared to normotensive patients. Blood pressure was notably higher in hypertensive individuals ($p = 0.000$). Hypertension was associated with increased left atrial size ($p < 0.0000001$), interventricular septum thickness ($p < 0.0000001$), and left ventricular posterior wall thickness ($p < 0.0000001$). A strong correlation ($r = 0.8$) was found between LAVI and diastolic dysfunction in hypertensive patients, whereas the correlation in normotensive individuals was moderate ($r = 0.5$). These results emphasize the significant structural and functional cardiac changes associated with hypertension.

Conclusion
This study highlights a robust relationship between LAVI and various grades of diastolic dysfunction, particularly in hypertensive patients. In contrast, the correlation was weaker in normotensive individuals. The presence of diastolic dysfunction in normotensive patients further emphasizes the need for early detection, extending beyond traditional hypertensive risk groups. Additionally, the findings suggest that left ventricular stiffening and diastolic dysfunction contribute to progressive left atrial enlargement, making LAVI a potential marker for the severity of diastolic dysfunction, with substantial clinical implications.

Efficacy of Probiotics in Management of Hepatic Encephalopathy due to Liver Cirrhosis

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2nd Edition of International Conference on Gastroenterology, UK 2026

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Background
Hepatic encephalopathy (HE) is a serious neuropsychiatric complication of liver cirrhosis, traditionally managed with lactulose and rifaximin. Emerging evidence suggests probiotics may offer therapeutic benefit, though findings remain inconclusive.

Objectives
To evaluate the efficacy of probiotics combined with standard treatment versus standard treatment alone in improving HE grades among cirrhotic patients.

Methods
This randomized controlled trial was conducted at Bahawal Victoria Hospital, Bahawalpur, over 12 months. Seventy-six patients aged 18–60 years with hepatic encephalopathy were enrolled and randomized into two groups: Group A received probiotics plus standard treatment (lactulose and rifaximin), while Group B received standard treatment alone. Probiotic therapy consisted of a twice-daily formulation containing Lactobacillus acidophilus, Lactobacillus rhamnosus, Bifidobacterium lactis, and Bifidobacterium bifidum (10 billion CFUs). Efficacy was assessed 10 days post-treatment based on improvement in HE grades.

Results
The mean age of participants was 44.43 ± 8.59 years; 68.4% were male. HCV was the leading cause of cirrhosis (44.7%). Improvement in HE grade was observed in 76.3% of patients in Group A compared to 47.4% in Group B ($p = 0.009$). Stratified analysis showed consistent efficacy across age groups and HE grades, with notably higher response rates in males receiving probiotics (85.7%).

Conclusion
Probiotics, when added to standard therapy, significantly enhance clinical improvement in hepatic encephalopathy due to liver cirrhosis. These findings support the adjunctive use of probiotics in HE management protocols.

Exploring The Determinants Of Drug Abuse: A Cross-Sectional Study On Demographic, Socioeconomic, And Psychological Factors

Accepted in
2nd American Society of Addiction Medicine Conference, USA. 2026

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Background
Drug abuse poses a serious threat to youth productivity, affecting both physical health and cognitive abilities. This study aimed to investigate the major contributing factors and underlying determinants of drug abuse among patients receiving treatment at rehabilitation centers in Pakistan.

Material and Methods
A cross-sectional study was conducted at Fountain House and Ehsas Clinic in Lahore from February 2021 to May 2024, involving 384 patients aged 16-64 years, selected through consecutive non-probability sampling. Individuals with severe mental illness were excluded. Data were collected using a pre-tested questionnaire through structured interviews covering demographics, drug use patterns, and health behaviors. Data were analyzed in SPSS v26.0 with descriptive statistics, Chi-square tests for associations, and binary logistic regression to identify significant predictors of drug abuse. A p-value < 0.05 was considered statistically significant.

Findings
A total of 73.43% reported mental disturbance, 53.39% sought joy, and 41.89% had a family history of addiction. Long-term complications included aggression (20.05%), euphoria (17.19%), and sleep disorders (10.16%). Logistic regression analysis showed significant associations between drug abuse and low income (< 20,000 PKR, OR=7.683), addition duration of 5-9 years (OR=15.623), and teenage curiosity (OR=19.393), all with p-values <0.05.

Conclusion
This study highlights critical socioeconomic and psychological contributors to drug abuse in Pakistan. Addressing these factors is essential for reducing addiction rates and improving national productivity and well-being.

Microbial Spectrum and Antimicrobial Resistance in Neonatal Sepsis: A Retrospective Study

Accepted in
10th Edition of World Congress on Infectious Diseases. 2026

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Background
Neonatal sepsis causes significant morbidity and mortality, especially in LMICs, complicated by multidrug-resistant Gram-negative bacteria and non-albicans Candida. This study assessed prevalence, pathogens, and antimicrobial susceptibility.

Methods
This retrospective study was conducted at the NICU of Holy Family Hospital, Rawalpindi, from January to December 2021. All neonates (≤28 days) with clinical suspicion of sepsis based on signs such as temperature instability, poor feeding, respiratory distress, lethargy, jaundice, seizures, or abnormal labs were eligible. Only culture-proven cases from blood or CSF were included; contaminants, non-sterile samples, or incomplete records were excluded. Blood (1-2 mL) was collected per patient prior to antibiotics when possible and processed using the automated BACTEC™ system. Organisms were identified via conventional biochemistry or VITEK® 2, with ESBLs detected by CLSI phenotypic confirmatory tests, carbapenemases by mCIM or VITEK®, and colistin by automated MIC. Standard ATCC strains ensured quality control. Data were analyzed with SPSS 26; categorical comparisons used Chi-square ($p < 0.05$).

Results
A total of 72 neonates with sepsis were included, comprising 18 (25%) with early-onset sepsis (EOS) and 54 (75%) with late-onset sepsis (LOS). Male neonates accounted for 12 (66.7%) in EOS and 36 (66.6%) in LOS ($p = 0.98$). Outborn neonates were 10 (55.6%) in EOS and 29 (53.7%) in LOS ($p = 0.92$). Prematurity (<37 weeks) occurred in 9 (50%) EOS and 32 (59.2%) LOS neonates ($p = 0.47$). Gram-negative bacilli were predominant (55, 76.4%), especially Klebsiella pneumoniae (26, 36.1%). Gram-positive cocci numbered 12 (16.7%), and Candida spp. 5 (6.9%). Colistin, meropenem, imipenem, and amikacin were highly effective against Gram-negative isolates, while vancomycin, linezolid, and teicoplanin were active against Gram-positive isolates

Conclusion
Gram-negative bacteria predominate in neonatal sepsis with high resistance to first-line antibiotics. Empirical therapy should follow local antibiograms, supported by antimicrobial stewardship, infection control, and ongoing surveillance.

Optimizing Icu Antibiotic Use: Prospective Audit And Its Impact On Resistance And Outcomes

Accepted in
Global Summit on Healthcare and Management Conference, Italy. 2026

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Background
Antimicrobial resistance (AMR) poses a major global threat, particularly in low- and middle-income countries like Pakistan. Implementing antimicrobial stewardship (AMS) strategies, especially prospective audit and feedback (PAF), is essential to optimize antimicrobial use in intensive care settings.

Methods
A quasi-experimental study was conducted across two tertiary care hospitals in Pakistan, including critically ill ICU patients receiving empirical broad-spectrum antibiotics (carbapenems or piperacillin-tazobactam). The study comprised three sequential phases: baseline (no audit), Model 1 (retrospective audit with pharmacist-mediated feedback), and Model 2 (real-time audit involving infectious diseases physicians during ICU rounds). Primary outcomes included the appropriateness of antimicrobial selection and emergence of resistance; secondary outcomes were mortality, ICU length of stay, and total hospital length of stay.

Findings
A total of 612 critically ill ICU patients were included, with equal distribution across both stewardship models. The appropriateness of empiric antimicrobial therapy improved significantly across study phases, 64% at baseline, 74% in Model 1, and 79% in Model 2, p = 0.038. Concurrently, the proportion of patients developing new multidrug-resistant organisms declined from 40% to 28% and 20% (p = 0.021). Median ICU and hospital stays were shorter in both intervention models, although mortality rates remained statistically comparable (32%, 29%, and 31%). Multivariate logistic regression demonstrated that both stewardship models independently increased antimicrobial appropriateness (adjusted OR 1.6, 95% CI: 1.1–2.3) and reduced resistance risk (adjusted OR 0.42, 95% CI: 0.26–0.69), highlighting the sustained impact of pharmacist and ID-led AMS interventions.

Conclusion
PAF interventions substantially improved antimicrobial prescribing and curtailed resistance trends without affecting mortality. Pharmacist-led audits and real-time ID collaboration demonstrated measurable benefits, highlighting the critical role of pharmacists in sustaining AMS efforts in resource-limited ICUs

Prevalence and Psychosocial Factors of Anxiety and Depression in Breast Cancer Patients

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3rd Global Conference on Psychology, UK. 2026

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Background
Breast cancer is the most common cancer among women and remains a major cause of mortality worldwide. Beyond its biological impact, the disease carries profound psychosocial consequences, often resulting in anxiety and depression.

Aims
To determine the prevalence of anxiety and depression in breast cancer patients and to examine their association with psychosocial factors, including social support, family functioning, and coping skills, alongside relevant clinical correlates.

Methods
A cross-sectional study was conducted among 300 female breast cancer patients attending the Surgical Outpatient Department of Pakistan Institute of Medical Sciences, Islamabad from January to August 2024. Psychological morbidity was assessed using the Hospital Anxiety and Depression Scale (HADS). Psychosocial correlates were evaluated through the Multidimensional Scale of Perceived Social Support, Family Relationship and Functioning Questionnaire, and Problem-Solving Questionnaire. Data were analyzed using SPSS version 28. Descriptive statistics, ANOVA, Chi-square tests, and logistic regression identified prevalence, group differences, and independent predictors of anxiety and depression. P-value of less than 0.05 was considered statistically significant.

Results
Prevalence of anxiety disorder was 16.0%, anxiety symptoms 19.0%, depressive disorder 9.0%, and depressive symptoms 16.7%. Patients without psychological morbidity reported higher social support, better family functioning, and stronger problem-solving skills (all $p < 0.01$). Poor family relationships, maladaptive problem-solving, pain, and fatigue emerged as significant independent predictors of both anxiety and depression.

Conclusion
A substantial proportion of breast cancer patients experience anxiety and depression. Psychosocial difficulties and physical symptom burden significantly contribute to psychiatric morbidity. Integrating psychosocial assessment, family-centered support, coping interventions, and adequate symptom management into oncology care is crucial to improve mental health and overall outcomes.

Distribution of Traditional Cardiovascular Risk Factors across Age Groups and Gender in the Pakistani Population free of established Atherosclerotic Cardiovascular Disease: Insights from the Pak-Sehat Study

Accepted in
ASPC 2025

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Background
Cardiovascular disease (CVD) is the leading cause of morbidity and mortality worldwide, with South Asians, including Pakistanis, disproportionately affected by an earlier onset and more severe forms of disease. Traditional cardiovascular risk factors (CVRFs), play a significant role in CVD initiation progression, yet limited nationally representative data exist on their distribution across different age groups and genders in Pakistan. This study aims to evaluate the prevalence and distribution of traditional CVRFs in a diverse Pakistani cohort to better understand demographic disparities and inform targeted prevention strategies.

Methods
The PAKistan Study of prEmature coronary atHerosclerosis in Young Adults (PAK-SEHAT) is an ongoing prospective study recruiting participants from 08 centers across all four provinces of Pakistan. This analysis includes 2,004 individuals aged 35-60 years. Data on CVRF's were collected using standardized clinical assessments, laboratory measurements, and validated questionnaires. Prevalence rates were stratified across median age and gender.

Results
Among 2,004 participants (50% male, 50% female, median age: 49), the overall prevalence of major CVRFs was 32.9% for hypertension, 21.9% for diabetes, 57.8% for dyslipidemia, 10.8% for smoking, 32.4% for FH premature CHD and 37.6% for obesity. Hypertension and diabetes were significantly more prevalent in older age groups, with 41.3% of individuals aged >50 years having hypertension compared to younger individuals (p <0.001). Dyslipidemia (High LDL and low HDL) showed an increasing trend with age, while obesity was more prevalent in younger age groups, particularly among women. Smoking was predominantly observed in men (19.2%) compared to women (2.6%).

Conclusion
This is the first large nationally representative study assessing the distribution of traditional CVRF's in Pakistan, highlighting significant variations across age and gender. These findings emphasize the urgent need for age- and gender-specific preventive strategies tailored to the unique risk profile of the Pakistani population to mitigate the growing burden of CVD.

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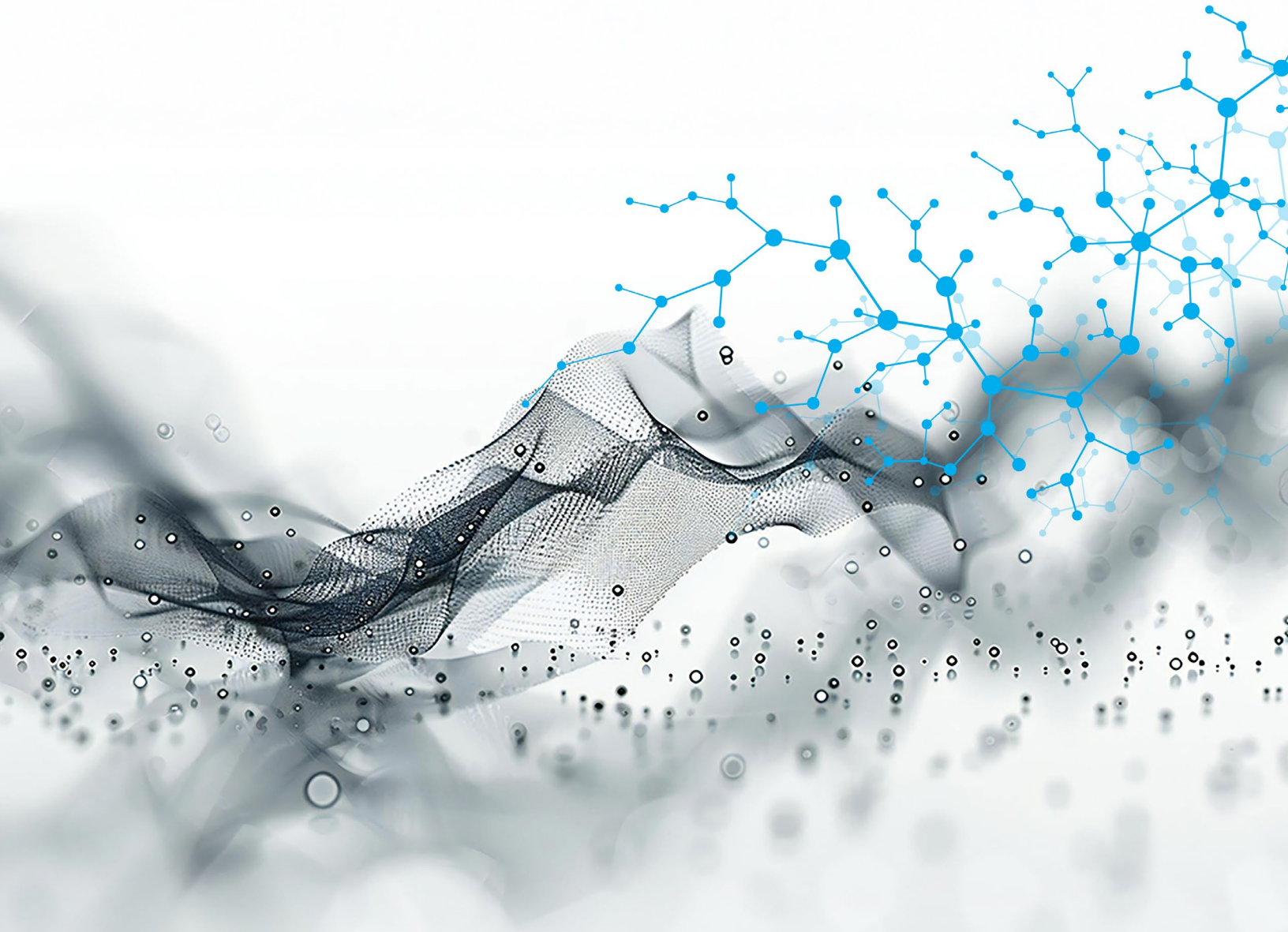

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