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# 1000

SCIENTIFIC PUBLICATIONS

*Abstracts from medical publications  
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# THE VAULT™

PARTNERING FOR RESEARCH

*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 is dedicated to 100 publications assisted by Getz Pharma since 1995.*

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**MEDICAL AFFAIRS TEAM**

Dr. Jahanzeb Kamal  
Anum Sohail Siddiqui  
Anum Touheed  
Dr. Syed Hussain Baqar Abidi  
Dr. Muhammad Nauman Shaikh  
Dr. Syed Munis Ul Hasan  
Dr. Syed Mohammad Ali  
Dr. Burha Kabbir  
Dr. Mahaveer Maheshwari

**DESIGN AND LAYOUT**

Aisha Munim Khan  
Amber Iftikhar Ahmed



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Today we have proudly surpassed facilitating the publication of 100 articles and research conducted by Pakistani doctors and researchers, published around the world. By collaborating with healthcare workers across Pakistan, we have successfully laid the groundwork for a network that supports research and sharing of knowledge within this community.

I am proud of our Medical Affairs department for compiling this list of scientific 100 publications that Getz Pharma has facilitated since its inception. We stay committed to the task of assisting and facilitating further research and development in this field.

**KHALID MAHMOOD**

CEO & MD  
Getz Pharma



Getz Pharma is an international research driven pharmaceutical company. In line with our principles of integrating highest quality research in process of formulation development, manufacturing, testing and marketing of a wide range of quality, affordable medicines, we are compelling the lead in scientific data generation and conversations all across Pakistan. The Medical Affairs department at Getz Pharma is committed to make the innovative science behind the glass visible, encouraging open interaction between researchers, clinicians and medical community.

Expanding collaborations in research services and publications will enable us to create the greatest and swiftest impact on patients suffering from various diseases. With this aim in mind, our department engages and facilitates healthcare professionals by offering services in research, statistical support and publications. We are proud to have offered support, with the conclusion of 100 publications over the years. The booklet contains abstracts from manuscripts / posters published in renowned international and HEC recognized journals, in the recent five years.

We are currently engaged in numerous clinical research projects all across Pakistan in collaboration with healthcare professions and medical societies, across the country in pioneering a data driven approach to healthcare problems by setting up disease specific registries. This has not only enabled us to improve our epidemiological understanding of diseases with positive clinical implications but also highlighted our research from Pakistan on a number of international forums.

Our long-term mission is to foster indigenous scientific data generation, dissemination through publication, enhance knowledge of local informational gaps and fill native unmet medical informational needs. This all will translate into improve patient care and progress on important determinants of public health.

### **DR. JAHANZEB KAMAL**

Director Medical Affairs  
Getz Pharma



We at Getz Pharma are on a never-ending quest for breakthroughs that will change the lives of patients. Our goal is to come up with new ways to make the world a healthier place. Our unique resources allow us to do more for people. Our vision is to foster collaborative culture and create an ecosystem for research, for which we offer clinical research services to healthcare professionals all across Pakistan. Our services include; synopsis and manuscript review, data analysis till manuscript writing and its publication. In line with our mission to empower the healthcare professionals, we have carefully constructed a module for clinical research called "SIGMA" aimed at training our healthcare professionals. We conduct clinical research workshops all across Pakistan, offering trainings on 'Research Methodology', 'Statistical Analysis', 'Using advanced tools for literature research' and 'Paper writing and Publication'.

We are achieving new milestones every day, and setting up bolder targets for ourselves. Together we aim to transform the healthcare sector through abundant dissemination of knowledge and incorporation of innovative solutions.

### **ANUM SIDDIQUI**

Associate Manager Clinical Research Services & Pharmacovigilance  
Getz Pharma

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*\*LEED (Leadership in Energy and Environmental Design) certification is a globally recognized symbol of sustainability achievement and leadership.*





# PUBLICATIONS 2021



## Pre-hospital Delay and its Reasons in Patients with Acute Myocardial Infarction Presenting to a Primary Percutaneous Coronary Intervention-Capable Center

### PUBLICATION

Cureus Journal of Medical Science. 2021

### AUTHORS

Syed F. Mujtaba<sup>1</sup>  
Hina Sohail<sup>1</sup>  
Jaghat Ram<sup>2</sup>  
Muhammad Waqas<sup>3</sup>  
Muhammad Hassan<sup>2</sup>  
Jawaid A. Sial<sup>4</sup>  
Khalid Naseeb<sup>4</sup>  
Tahir Saghir<sup>4</sup>  
Musa Karim<sup>5</sup>

### AUTHOR INSTITUTES

1. National Institute of Cardiovascular Diseases, Karachi, Pakistan
2. Cardiology, National Institute of Cardiovascular Diseases, Larkana, Pakistan
3. National Institute of Cardiovascular Diseases, Karachi, Pakistan
4. National Institute of Cardiovascular Diseases, Karachi, Pakistan
5. National Institute of Cardiovascular Diseases, Karachi, Pakistan

### OBJECTIVES

This study aimed to assess the duration of pre-hospital delay among ST-Segment Elevation Myocardial Infarction (STEMI) patients and its contributing factors.

### METHODOLOGY

A cross-sectional study was conducted at Rural Satellite Center in Larkana, Pakistan from May to September 2020. A total of 240 STEMI patients who underwent primary percutaneous coronary intervention (P-PCI) were included. The patients' demographic characteristics, index event characteristics, mode of transportation, misinterpretations, misdiagnoses, and financial problems were recorded. Data were analyzed using SPSS version 22.0 (IBM Corp., Armonk, NY, USA).

### RESULTS

The observed pre-hospital time was 120 minutes; 229 (median; interquartile range [IQR]). It was found that 33.3% of patients arrived within one hour of the symptom onset, while 20.4% of patients delayed hospital arrival for more than six hours. The delay rate was highest among patients aged 41 to 65 years. Moreover, delayed admissions were more common among females as compared to males ( $p=0.008$ ). Among the causes of delay in hospital arrival were misinterpretation, misdiagnosis, and transportation and financial issues. Of these, misdiagnosis significantly influenced the delay rate, i.e., more than 50% of the misdiagnosed patients arrived hospital after six hours of symptom onset ( $p<0.05$ ).

### CONCLUSION

The P-PCI rural satellite center had a positive impact as the observed pre-hospital delay rate was considerably less as compared to that reported in the existing literature. Moreover, the confounding factors were misdiagnosis and misinterpretations. We need to develop the concept of immediate appropriate help-seeking among patients.

### KEYWORDS

*St-elevation myocardial infarction, pre-hospital delay, primary percutaneous coronary intervention.*



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## Incidence of Stroke in Hypertensive Patients Presenting at Tertiary Care Hospital

### PUBLICATION

Indian Journal of Natural Sciences. 2021

### AUTHORS

Abdul Ahad\*  
Aleem Ur Rashid  
Saima Qadir  
Amir Zeb Swati  
Haroon Ur Rashid  
Amin Ul Haq

### AUTHOR INSTITUTES

Saidu Medical College,  
Saidu teaching Hospital,  
Swat, Pakistan

### ABSTRACT

Stroke is a frequent medical problem occurring in patients with hypertension and other risk factors. The current study aimed to measure the frequency of hypertension as an imperative risk factor in stroke patients. Patients who clinically presented with features of a stroke at Saidu teaching hospital, swat from 1<sup>st</sup> September 2019 to 27<sup>th</sup> February 2020, were included in this study. A total of 150 cases of hemorrhagic stroke and Ischemic stroke cases were included. Subjects with a history of trauma, brain tumors, or severe other diseases were excluded from the study. The study was conducted following the declaration of Helsinki, and informed consent was obtained from each participant. Hypertension was found to be the most common risk factor in the current study. 25.3% showed a history of 4 years of hypertension, while 19% showed a history of 7 years of hypertension. 68% of patients were male, while 32% of patients were female with Peak stroke-prone age was between 45-55 years. Hypertension is the leading risk factor for stroke. It is, therefore, essential to detect and manage hypertension from its onset.

### KEYWORDS

*Stroke, hypertension.*



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## New Drugs and New Concerns: Gaining Insight through Pharmacovigilance of Direct Acting Anti-Viral's in Chronic HCV Patients

### PUBLICATION

Pakistan Journal of Medical Sciences. 2021

**IMPACT FACTOR:** 1.088

**JOURNAL CATEGORY:** X

### AUTHORS

Zahid Yasin Hashmi<sup>1</sup>  
Muhammad Qasim Zia<sup>2</sup>  
Akram Bajwa<sup>3</sup>  
Maqsood Ahmed<sup>4</sup>  
Naveed Anwer<sup>5</sup>  
Mahwish Raza<sup>6</sup>  
Jaffer Bin Baqar<sup>7</sup>

### AUTHOR INSTITUTES

1. Liver Center Faisalabad, Pakistan
2. Allama Iqbal Memorial Teaching Hospital, Sialkot, Pakistan
3. Liaquat University of Medical & Health Sciences, Hyderabad, Pakistan
4. Allied Hospital Faisalabad, Pakistan
5. Medical Institute Peshawar, Pakistan
6. Shaheed Zulfikar Ali Bhutto Institute of Science & Technology, Karachi, Pakistan
7. University of Karachi, Karachi, Pakistan.

### OBJECTIVES

The study aimed to assess the safety profile of Direct Acting Anti-Viral's (DAAs) among patients with chronic Hepatitis C Virus (HCV).

### METHODOLOGY

This multicenter, analytical cross-sectional study was conducted in six gastroenterology and Hepatology centers including Liver Center Faisalabad, Allama Iqbal Medical Institute and Liver Center DHQ Hospital Sialkot, Isra Hospital Hyderabad, Allied Hospital Faisalabad and Rehman Medical Institute Peshawar, between May 2018 and May 2019. The data regarding patient demographics, treatment plan and the frequency of Adverse Events (AEs), and their severity was collected using a pre-designed questionnaire and analyzed through SPSS version 20.0.

### RESULTS

A total of 511 HCV patients were enrolled, with an overall male majority. Around 66.3% patients experienced a total of 419 AEs, out of which 61 events were suspected from DAAs while remaining 317 events were associated with Ribavirin. Pyrexia (24.6%) and fatigue (14.8%) were the most commonly reported AEs among patients receiving DAAs. Factors such as Ribavirin-based treatments and the presence of Cirrhosis were more likely to promote AEs occurrence OR [95%CI] i.e. 5.2 (2.3 - 9.1) and 1.9 (1.1 - 3.1) respectively (p < 0.05).

### CONCLUSION

It is concluded from the study results that DAAs have displayed promising outcomes due to the minimal and minor AEs reported.

### KEYWORDS

*Adverse Events, Chronic Hepatitis, Direct-Acting Antivirals.*



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## Predictors of Unsuccessful Interim Treatment Outcomes and Time to Culture Conversion of Re-treatment Multidrug Resistant Tuberculosis Patients in Pakistan

### PUBLICATION

Indian Journal of Natural Sciences. 2021

### AUTHORS

Zafar Iqbal<sup>1</sup>  
Rabab Batool<sup>2</sup>  
Mazhar Ali Khan<sup>3</sup>  
Shaikh Zafar Ali<sup>4</sup>  
Mohammad Asif<sup>5</sup>

### AUTHOR INSTITUTES

1. Department of Pulmonology, Lady Reading Hospital, Peshawar, Pakistan
2. Agha Khan University Hospital Karachi, Pakistan
3. Programmatic Management of Drug Resistant TB Unit, Lady Reading Hospital, Peshawar, Pakistan
4. King Fahad Hospital, Saudi Arabia
5. National TB control Program, Myanmar

### ABSTRACT

To estimate the six months interim outcomes (IO), culture conversion (CC) time and factors associated with poor IOs and CC failure among Multidrug-Resistant TB (MDR-TB) patients who had previously been treated with second-line drugs (SLDs). A Prospective case series study was conducted at seven Programmatic Management of drug-resistant TB (PMDT) Units of Punjab, Pakistan. All bacteriologically confirmed MDR-TB patients (n=252) presenting at the PMDT units for disease re-treatment between March-2016 to January-2017 were included in the study. Data were statistically analyzed using SPSS version 20.0. Univariate and multiple logistic regressions were used to determine the risk factors responsible for poor IO. The factors associated with CC failure were assessed using the Cox proportional hazards model. The confidence level was taken at 95%, and a p-value < 0.05 was considered statistically significant. A total of 252 re-treatment MDR-TB cases were included. Of them, 40.1% experienced poor IO. Among the significant risk factors associated with poor interim outcomes were a higher number of drugs on the regimen (OR= 1.27, 95% CI: 1.03-1.58) and high sputum smear grading (OR=4.56, 95% CI: 3.30-18.71). Around 70.3% of patients experienced CC within the initial six months of treatment. The significant predictors of unsuccessful CC were older age (OR=0.98, 95% CI: 0.97-0.99), more number of SLDs patient was resistant to (OR=0.78, 95% CI: 0.62-0.98), the higher number of SLDs patient was previously exposed to (OR=0.90, 95% CI: 0.83-0.99), higher number of drugs on the regimen (OR=0.877, 95% CI: 0.80-0.95), treatment with Capreomycin (OR=0.58, 95% CI: 0.42-0.81), resistance to Fluoroquinolones (OR=1.53, 95% CI: 1.15-2.05) and higher baseline sputum smear grading (OR=0.56, 95% CI: 0.40-0.77). The success rate of interim treatment outcomes was quite low and concerning. The identified risk factors included time to CC, number of SLDs the patient is exposed previously and higher number of drugs in the regimen.

### KEYWORDS

*Multidrug Resistant Tuberculosis, Second Line Drugs, Culture Conversion, Interim Outcomes, Pakistan.*



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## The Frequency of Dyslipidemia in Stroke Patients at the Community Teaching Hospital of Swat, Pakistan

### PUBLICATION

Indian Journal of Natural Sciences. 2021

### AUTHORS

Abdul Ahad\*  
Aleem Ur Rashid  
Saima Qadir  
Amir Zeb Swati  
Haroon Ur Rashid  
Amin Ul Haq

### AUTHOR INSTITUTES

Saidu Medical College,  
Saidu teaching Hospital,  
Swat, Pakistan

### ABSTRACT

Stroke is one of the most common presentations to the Neurology wards and Emergency departments. The present study aimed to determine the frequency among patients with hemorrhagic stroke visiting Saidu teaching hospital. A Cross-sectional study was conducted for six months from 1st September 2019 to 27<sup>th</sup> February 2020 at Swat, Pakistan. 157 Subjects with hemorrhagic stroke and ischemic stroke were included in this study. 54.8% of our study population were males, and the mean age was  $54.4 \pm 7.1$  years. 63.1% of subjects were with ischemic stroke and 36.9% with hemorrhagic stroke. The frequency of ischemic stroke was prominent in comparison with hemorrhagic stroke. Dyslipidemias were observed in 49 cases (31.2%) out of 157 cases.

### KEYWORDS

*Ischemic stroke, Hemorrhagic stroke, Dyslipidemia.*



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## The Psychological Impact of COVID-19 Lockdown on Medical Student's Education

### PUBLICATION

International Journal of Endorsing Health Science Research. 2021

### JOURNAL CATEGORY: Y

### AUTHORS

Subata Siddiqui<sup>1</sup>  
Atif Hafeez Siddiqui<sup>2</sup>  
Sumaiya Jafri<sup>3</sup>  
Amjad Siraj Memon<sup>4</sup>

### AUTHOR INSTITUTE

Dow University of Health Sciences, Karachi-Pakistan

### BACKGROUND

The COVID-19 lockdown has severely affected all aspects of life, including medical students. The present study was designed to gain perspective on how the COVID-19 lockdown has affected Karachi's medical student's study patterns and mental health.

### METHODOLOGY

Undergraduate students from twelve medical colleges participated in this cross-sectional survey. A self-administered online survey form was sent to 1000 medical students via WhatsApp and other social media platforms. A total of 670 responses were received. Questions regarding the psychological impact of lockdown and wellbeing concerns about the future during lockdown were part of this survey. The Hamilton Anxiety Rating Scale was used to determine the level of anxiety in students.

### RESULTS

According to our survey, 270 (40.8%) medical students who participated in the survey have been severely affected, where 392 students (60.1%) either did not study daily or spent less than 2 hours studying on average. This situation has also taken a severe toll on their mental health as 314 (47.4%) students proved to have anxiety, a feeling of irritation and uneasiness most of the time during the day. Many students, 439 (66.3%), also faced difficulty concentrating while doing menial tasks or studying.

### CONCLUSION

Most students faced a severe loss of study and showed anxiety and depression symptoms during the lockdown period.

### KEYWORDS

*COVID-19, Lockdown, Medical Education, Psychological Impact, Online Teaching.*



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## Ergonomic Injuries in Endoscopists and their Risk Factors

### PUBLICATION

Clinical Endoscopy. 2021

**IMPACT FACTOR: 1.469**

### AUTHORS

Lubna Kamani<sup>1</sup>  
Hamid Kalwar<sup>2</sup>

### AUTHOR INSTITUTES

1. Department of Gastroenterology, Liaquat National Hospital, Karachi, Pakistan  
2. Murshid Hospital, Karachi, Pakistan

### BACKGROUND

Prolonged repetitive strain caused by the continuous performance of complex endoscopic procedures enhances the risk of ergonomic injuries among health-care providers (HCPs), specifically endoscopists. This study aimed to assess the risk factors of ergonomic injuries among endoscopists and non-endoscopists.

### METHODOLOGY

This cross-sectional study was conducted at the Gastroenterology Department of Liaquat National Hospital, Karachi, Pakistan. A total of 92 HCPs were enrolled, of whom 61 were involved in endoscopic procedures and 31 were non-endoscopists. Data were collected through a self-administered questionnaire during national gastroenterology conferences and analyzed using SPSS version 22 (IBM Corp. Chicago, IL, USA).

### RESULTS

Of the total study population, 95.08% of endoscopists were observed to have ergonomic injuries, whereas only 54.83% of non-endoscopists had ergonomic injuries ( $p < 0.00$ ). The most common injury associated with musculoskeletal (MSK) pain sites was back (41%), leg (23%), and hand (19.7%) pain among endoscopists. Of 28 endoscopists performing  $\geq 20$  procedures/week, 26 had MSK injury. However, 95.08% of endoscopists had developed MSK injury irrespective of working hours ( $>5$  or  $<5$  hr/wk).

### CONCLUSION

Endoscopists are at high risk of developing ergonomic injuries, representing the negative potential of the endoscopy-associated workload. To overcome these issues, an appropriate strategic framework needs to be designed to avoid occupational compromises.

### KEYWORDS

*Endoscopy; Ergonomics; Health-care providers; Musculoskeletal injury; Occupational performance.*



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## Management of Diabetic Ketoacidosis: Role of Rapid Acting Insulin Analogs in Comparison to Regular Intravenous Insulin

### PUBLICATION

International Journal of Endorsing Health Science Research. 2021

**JOURNAL CATEGORY: Y**

### AUTHORS

Ibrar Ahmed<sup>1</sup>  
Sobia Sabir Ali<sup>1</sup>  
Zafar Ali<sup>2</sup>  
Mohammad Nawaz<sup>1</sup>  
Tahir Ghaffar<sup>1</sup>

### AUTHOR INSTITUTE

1. Department of Endocrinology, Lady Reading Hospital, Peshawar-Pakistan  
2. Department of Medicine, Lady Reading Hospital, Peshawar-Pakistan

### BACKGROUND

Diabetic ketoacidosis (DKA) is an acute metabolic healthcare crisis in patients with diabetes mellitus. The current study aimed to compare the effectiveness of rapid-acting insulin analog administered subcutaneously with regular insulin infused intravenously among the DKA patients.

### METHODOLOGY

In this prospective open labelled study, 100 consecutive DKA patients were randomly assigned to two groups. Group 1 patients were admitted to the intensive care unit (ICU) and treated with intravenous regular insulin infusion. Group 2 patients were managed in the emergency medical ward with subcutaneous rapid-acting insulin. Response to the therapy was assessed by the follow-up investigations of the biochemical parameters, including blood glucose concentration, serum ketones, pH, serum electrolytes including bicarbonates, sodium and potassium concentration until the resolution of DKA. Furthermore, the overall duration of therapy (blood glucose level  $< 250$  mg/dl), time and amount of insulin administered until the resolution of DKA, were also assessed.

### RESULTS

The baseline clinical and biochemical parameters were similar between the two treatment groups except for blood glucose and sodium concentration. The mean random blood sugar (RBS), acid-base parameters and concentration of ketone bodies were significantly improved from admission until the resolution of DKA. There was no significant difference in the duration of therapy ( $p = 0.07$ ). While the time and amount of insulin therapy required until resolution of DKA were significantly reduced among the patients treated subcutaneously with rapid-acting insulin, i.e.  $16.36 \pm 6.92$  hrs and  $59.28 \pm 30.05$  units ( $p < 0.05$ ).

### CONCLUSION

The patients with less complicated DKA can be managed with rapid-acting insulin analog in the medical wards obviating the need for admission to the ICU. With relatively better outcomes, it is an effective alternative to regular intravenous insulin infusion for DKA resolution.

### KEYWORDS

*Diabetic Ketoacidosis, Insulin Analog, Regular Insulin, Efficacy.*



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# Clinical Variants, Characteristics, and Outcomes among COVID-19 Patients: A Case Series Analysis at a Tertiary Care Hospital in Karachi, Pakistan

## PUBLICATION

Cureus Journal of Medical Science. 2021

## AUTHORS

Tasnim Ahsan<sup>1</sup>  
Bharta Rani<sup>2</sup>  
Roomana Siddiqui<sup>3</sup>  
Glenis D'Souza<sup>3</sup>  
Razzaq Memon<sup>3</sup>  
Irfan Lutfi<sup>4</sup>  
Omer I. Hasan<sup>3</sup>  
Rushma Javed<sup>3</sup>  
Farhan Khan<sup>3</sup>  
Muhammad Hassan<sup>3</sup>

## AUTHOR INSTITUTES

1. Internal Medicine: Diabetes & Endocrinology, Jinnah Postgraduate Medical Centre, Karachi, Pakistan
2. Internal Medicine, Diabetes and Endocrinology, Jinnah Postgraduate Medical Centre, Medicell Institute of Diabetes Endocrinology & Metabolism (MIDEM), Karachi, Pakistan
3. Internal Medicine, OMI Institute, Karachi, Pakistan
4. Interventional Radiology, Shaheed Mohtarma Benazir Bhutto Medical College, Dow University of Health Sciences, Karachi, Pakistan

## INTRODUCTION

Coronavirus disease 2019 (COVID-19) has become a global threat to public health. The current study investigates alterations in the biological estimates concerning the severity, recovery, mortality, and assessment of treatment-based outcomes.

## METHODS

A case series of 165 COVID-19 patients admitted to OMI Institute (a tertiary care hospital) was conducted between May and August 2020. The data regarding demographic characteristics, comorbid conditions, radiographic abnormalities, biological estimations, symptoms, treatment, disease progression, complications, and outcomes were recorded using a structured questionnaire. Laboratory estimations included complete blood count (CBC), renal and electrolyte profile, liver function tests (LFTs), hematological indices, and inflammatory markers. Chest X-ray, electrocardiogram (ECG), and a high-resolution computed tomography (HRCT) scan were also performed, and data were extracted from the medical records. Analysis was done using the Statistical Package for the Social Sciences (SPSS) version 22.0.

## RESULTS

Out of the 165 COVID-19 patients, 79.4% recovered and were successfully discharged, while 20.6% of inpatient died. The patients' mean age was  $56.03 \pm 15.96$  years, with a male majority (55.1%). The most common comorbid conditions were diabetes and hypertension; fever and dry cough were among the most frequently reported symptoms. The chest imaging findings among the severe/critical COVID-19 patients showed extensive bilateral patchy opacities. The median laboratory investigations, including neutrophil-to-lymphocyte ratio (NLR) (14.83), C-reactive protein (CRP) (7.4 mg/dl), lactate dehydrogenase (LDH) (786 IU/L), ferritin (1401.15 mcg/ml), and mean oxygen saturation (88.25%), were significantly altered among cases with increased disease severity and those who expired ( $p < 0.05$ ). The proportion of acute respiratory distress syndrome (ARDS) and sepsis development was significantly high among severe/critical COVID-19 patients ( $p < 0.05$ ). Treatment with tocilizumab, remdesivir, doxycycline, ivermectin, enoxaparin sodium, and steroids was deemed to be potentially effective treatment options in terms of reducing COVID-19 severity and chances of recovery. Furthermore, age (OR 1.05;  $p = 0.047$ ), presence

of comorbidity (OR 8.471;  $p = 0.004$ ), high NLR, LDH (final outcome) (OR 1.361 and 1.018;  $p < 0.05$ ), and CRP levels (midpoint) (OR 1.631;  $p = 0.05$ ) were identified as the strong predictors of death among COVID-19 patients.

## CONCLUSION

The study identified several alterations in the clinical profile of the COVID-19 patients concerning severity during the hospital stay, affecting prognosis. Clinically, tocilizumab, remdesivir, doxycycline, ivermectin, enoxaparin sodium, and steroids were identified as potential therapeutic options for COVID-19 due to their ability to alter disease-associated severity and recovery rate.

## KEYWORDS

*Disease mortality, severity, clinical markers, predictors, Pakistan, covid-19.*



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## National Registry of Interstitial Lung Disease from Pakistan

### PUBLICATION

Cureus Journal of Medical Science. 2021

### AUTHORS

Ali Bin Sarwar Zubairi<sup>1</sup>  
Mosavir Ansarie<sup>2</sup>  
Talha Mahmud<sup>3</sup>  
Saadia Ashraf<sup>4</sup>  
Nisar Ahmed Rao<sup>5</sup>  
Arshad Javaid<sup>6</sup>  
Zubair Shaheen<sup>7</sup>  
Shereen Khan<sup>8</sup>  
Afzaalullah Khan<sup>9</sup>

### AUTHOR INSTITUTES

1. InternalMedicine, Aga Khan University Hospital, Karachi, Pakistan  
2. Pulmonology, Doctors Plaza, Karachi, Pakistan  
3. Pulmonology, Sheikh Zayed Hospital, Lahore, Pakistan  
4. Pulmonology, Khyber Teaching Hospital, Peshawar, Pakistan  
5. Pulmonology, Dow University of Health Sciences, Karachi, Pakistan  
6. Pulmonology, Lady Reading Hospital, Peshawar, Pakistan  
7. Pulmonology, Nishtar Medical College Hospital, Multan, Pakistan  
8. Pulmonary & Critical Care, Bolan University of Medical & Health Sciences, Quetta, Pakistan  
9. Pulmonology, Gulab Devi Chest Hospital, Lahore, Pakistan

### INTRODUCTION

Interstitial lung disease (ILD) is a heterogeneous group of over 200 parenchymal lung diseases with a myriad of etiologies. Interstitial lung disease registries from around the world show varying prevalence and incidence of these diseases. The aim of this study was to determine the epidemiology and characteristics of ILD in Pakistan.

### METHODS

This web-based registry, which is the first multicenter registry of ILD from Pakistan, recruited patients from 10 centers of five major cities between January 2016 and March 2019.

### RESULTS

A total of 744 patients were enrolled in the registry. The five most frequent ILDs were idiopathic pulmonary fibrosis (IPF) 34.4%, hypersensitivity pneumonitis (HP) - 17.7%, idiopathic nonspecific interstitial pneumonitis (INSIP) - 16.8%, connective tissue disease-associated ILD (CTD-ILD) - 16.3%, and sarcoidosis -9.1%.

### CONCLUSION

Idiopathic pulmonary fibrosis is the most prevalent ILD in Pakistan, followed by HP and INSIP. An ongoing prospective registry with longitudinal follow-up will help us further elaborate on the clinical characteristics, treatment, and survival outcome of patients with ILD.

### KEYWORDS

*Interstitial lung disease, lung fibrosis, pulmonary fibrosis, rare lung diseases.*



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## Prevalence of Anosmia & Ageusia in Confirmed COVID-19 Patients at Teaching Hospitals of District Bannu and Swat, Pakistan

### PUBLICATION

International Journal of Endorsing Health Science Research. 2021

### JOURNAL CATEGORY: Y

### AUTHORS

Mohammad Iqbal<sup>1</sup>  
Sahibzada Fawad Khan<sup>2</sup>  
Sohail Khan<sup>3</sup>  
Wasim Ahmad<sup>4</sup>

### AUTHOR INSTITUTES

1. Department of ENT, Bannu Medical College, Bannu-Pakistan  
2. Department of ENT, Nowshehra Medical College, Nowshehra-Pakistan  
3. Department of ENT, Saidu Teaching Hospital, Swat-Pakistan  
4. Department of MLT, School of Health Sciences, Peshawar-Pakistan

### BACKGROUND

Recent evidence suggests olfactory and gustatory sensory deficits among Coronavirus Disease 2019 (COVID-19) patients. It is important to assess the occurrence of anosmia and ageusia among infected individuals as it may be the potential symptom and assist in controlling the viral load. The objective of the present study was to determine the prevalence of ageusia and anosmia among COVID-19 patients admitted to the teaching hospitals of District Bannu and Swat-Pakistan.

### METHODOLOGY

This retrospective cohort study was conducted between April to November 2020. A total of 100 confirmed COVID-19 cases, tested through polymerase chain reaction (PCR), were included in the study. Data including gender, age, smoking status, recent travelling history, nasal and paranasal disorder (NPND) history and COVID-19 severity were obtained from the patients' records. The symptomatology, including frequency of anosmia and ageusia was recorded.

### RESULTS

Out of 100 patients, 43.75% of patients had anosmia and 31.25% had ageusia, while 68% of patients were presented without olfactory and gustatory dysfunction. Most of the enrolled patients had no recent travel history (91.46%) and none of them were asymptomatic. Moreover, 88% of patients with a previous history of NPND did not have olfactory and gustatory dysfunction. Various characteristics features, including recent travel history, smoking, gender and disease severity, were significantly associated with anosmia and ageusia.

### CONCLUSION

The COVID-19 patients were exclusively suffering from ageusia and anosmia. It can be concluded that amongst asymptomatic-to-mild disease severity patients, the existence of smell and taste might be an important differential demonstration for the apprehension and analysis of COVID-19.

### KEYWORDS

*COVID-19, Anosmia, Ageusia, Olfactory Dysfunction, Gustatory Dysfunction.*



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## Asymptomatic Urinary Tract Infections and Associated Risk Factors in Pakistani Muslim Type 2 Diabetic Patients

### PUBLICATION

BMC infectious disease. 2021

**IMPACT FACTOR: 3.01**

### AUTHORS

Azizul Hasan Aamir<sup>1,2\*</sup>  
Umar Yousuf Raja<sup>3</sup>  
Ali Asghar<sup>4</sup>  
Saeed Ahmed Mahar<sup>5</sup>  
Tahir Ghaffar<sup>1</sup>  
Ibrar Ahmed<sup>6</sup>  
Faisal Masood Qureshi<sup>7</sup>  
Jamal Zafar<sup>8</sup>  
Mohammad Imtiaz Hasan<sup>9</sup>  
Amna Riaz<sup>10</sup>  
Syed Abbas Raza<sup>11</sup>  
Irshad Ahmed Khosa<sup>12</sup>  
Jahanzeb Khan<sup>13</sup>  
Mahwish Raza<sup>14</sup>  
Jaffer Bin Baqar<sup>15</sup>

### AUTHOR INSTITUTES

1. Khyber Girls Medical College, Hayatabad Medical complex, Peshawar, Pakistan
2. Post Graduate Medical Institute, Peshawar, Pakistan
3. Shifa International Hospital, Islamabad, Pakistan
4. Fatimiyah Hospital, Karachi, Pakistan
5. National Institute of Cardiovascular Diseases, Karachi, Pakistan
6. Lady Reading Hospital, Peshawar, Pakistan
7. Al-Khaliq Hospital, Multan, Pakistan
8. Hanif Medical Center, Rawalpindi, Pakistan
9. Diabetes Institute of Pakistan, Lahore, Pakistan
10. Jinnah Hospital, Lahore, Pakistan
11. National Defence Center, Lahore, Pakistan
12. Balochistan Medical Center, Quetta, Pakistan
13. Dow University of Health Sciences, Karachi, Pakistan
14. Shaheed Zulfikar Ali Bhutto Institute of Science & Technology, Karachi, Pakistan
15. University of Karachi, Karachi, Pakistan

### BACKGROUND

One of the leading long-term complications of type 2 diabetes mellitus (T2DM) includes renal dysfunction and urinary tract infections (UTI) which are considered to be prevalent in uncontrolled diabetes. Moreover, physiological factors like age, gender, duration of diabetes, other diabetic complications like neuropathy, autonomic neuropathy and glycosuria are also considered as predisposing factors for increased prevalence of UTI in diabetes which can be symptomatic or asymptomatic.

### METHODS

This was a cross-sectional, multi-centre study including diabetic patients from 12 clinical sites spread across major cities of Pakistan. The inclusion criteria were adult Pakistani population of age between 18 to 75 years both genders and suffering from T2DM irrespective of duration. A detailed clinical history of the past 3 months was recorded and, biochemical investigations of blood samples were conducted. Urine culture analysis performed identified the type of pathogen present and was done only for asymptomatic patients.

### RESULTS

A total of 745 type 2 diabetic patients were initially screened, out of 545 patients considered for final analysis 501 (91.92%) were negative and the rest 44 (8.08%) had positive urine culture. Female gender had a significantly higher proportion of positive urine culture (77.27%, p-value < 0.001). Body mass index and mean age had insignificant distribution among the two groups of positive and negative urine culture, with age 40–59 years having higher proportion (70.45%) in the positive group. Escherichia coli was detected in most of the positive samples (52.3%). All bacterial samples were found resistant to Ciprofloxacin.

### CONCLUSION

Diabetic Pakistani Muslim female patients are identified to be at high risk of suffering from asymptomatic UTI and age more than 40 years is an important risk factor. Escherichia coli was the most common causative organism among people living in this geographical area.

### KEYWORDS

*Type II diabetes mellitus, Urinary tract infections, Asymptomatic, Pakistani Muslim population.*



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## Fungal Infection Exacerbate Nasal Polyposis: A Study Conducted at KGN Teaching Hospital Bannu-KPK

### PUBLICATION

International Journal of Endorsing Health Science Research. 2021

**JOURNAL CATEGORY: Y**

### AUTHORS

Mohammad Iqbal<sup>1</sup>  
Sahibzada Fawad Khan<sup>2</sup>  
Sohail Khan<sup>3</sup>  
Wasim Ahmad<sup>4</sup>

### AUTHOR INSTITUTES

1. Department of ENT, Bannu Medical College, Bannu-Pakistan
2. Department of ENT, Nowshehra Medical College, Nowshehra-Pakistan
3. Department of ENT, Saidu Teaching Hospital, Swat-Pakistan
4. Department of Allied Health Sciences, School of Health Sciences, Peshawar, KPK-Pakistan

### BACKGROUND

Nasal polyps were believed to be small tumours of nasal or sinus mucosa. With progressing research, they are associated with enlargement or swelling of nasal or sinus mucosa, allergy, asthma, any infection, sensitivity to aspirin, and/or cystic fibrosis unclear etiology. The present study aims to evaluate the prevalence of fungal infections that can result in the onset of nasal polyposis in the residents of district Bannu, Pakistan.

### METHODOLOGY

A cross-sectional study was conducted at the ENT Department of Khalifa Gul Nawaz (KGN) teaching hospital in Bannu from March 2018 to February 2020, including 180 polyposis patients with the presence or absence of any fungal infestation. The subjects possessing mass other than nasal polyp based on clinical diagnosis were excluded from the study. The fungal infestation was observed with nasal endoscopy, and the patients were hospitalized for functional endoscopic sinus surgery (FESS). The staging of the nasal polyposis was based on the CT scan findings. The condition was classified into three grades, i.e., grade I, II and III. The data was statistically analysed on SPSS version 20.0.

### RESULTS

Out of 180 patients diagnosed clinically for nasal polyposis, 97(53.88%) were males. The fungal infestation was positive in 73(41%) specimens. Around 52.72% of patients were found with bilateral involvement. Of which, 31.57% were diagnosed with an allergic event. The fungus Aspergillus was observed in 40.55% of specimens. The one-year follow-up displayed an overall recurrence rate of 40%, i.e., 38(52.05%) patients from the fungal group and 34(47.22%) from the non-fungal group.

### CONCLUSION

It is concluded from the study outcomes that the incidence of nasal polyposis with or without fungal infection is associated with the environment and the discrete host response. Moreover, individuals living with lower socioeconomic conditions in crowded and humid areas tend to suffer more.

### KEYWORDS

*Polyposis, Fungal infection, Computerized Topography, Functional Endoscopic Sinus Surgery.*



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## Determining the Risk of Spontaneous Bacterial Peritonitis Due to Increase use of Proton Pump Inhibitors among Cirrhotic Patients with Ascites

### PUBLICATION

Pakistan Journal of Medical Sciences. 2021

**IMPACT FACTOR:** 1.088

**JOURNAL CATEGORY:** X

### AUTHORS

Bashir Ahmed Shaikh<sup>1</sup>  
Zahid Ali Shaikh<sup>2</sup>  
Aftab Hussain Shah<sup>3</sup>  
Aneel Kumar<sup>4</sup>

### AUTHOR INSTITUTES

1. Chandka Medical College Hospital  
2. Shaheed Mohtarma Benazir Bhutto Medical University, Larkana, Pakistan

### OBJECTIVES

The current study aimed to determine the Spontaneous Bacterial Peritonitis (SBP) risk due to increased use of Proton Pump Inhibitors (PPIs) among cirrhotic patients with ascites.

### METHODOLOGY

This retrospective case-control study was conducted at Chandka Medical College & Hospital, Larkana from March 2013 to February 2014, involving 215 cirrhotic patients with ascites. Paracentesis was performed to distinguish cirrhotic patients with SBP and Polymorphonuclear Neutrophil (PMN) count  $\geq 250$  neutrophils/mm<sup>3</sup> (cases) and non-SBP with PMN count  $< 250$  neutrophils/mm<sup>3</sup> (controls). The demographic details, history of PPIs use before admission and duration of Chronic Liver Disease (CLD) were inquired and statistical analysis was carried through SPSS Version 23.0.

### RESULTS

Increased pre-hospital PPI intake was observed among cirrhotic patients with SBP (69.8%) as compared to those without SBP (48.8%;  $p = 0.014$ ). The mean duration of PPI use was  $19.16 \pm 4.772$  days, and it was more significant among older cirrhotic patients ( $p < 0.05$ ). Increased duration of CLD was observed among PPI users, i.e.  $20.47 \pm 6.305$  months vs.  $18.95 \pm 5.527$  months among non-PPI users ( $p < 0.05$ ).

### CONCLUSION

Our results show that cirrhotic patients with ascites consuming PPIs are more likely to develop SBP as compared to non-PPI users.

### KEYWORDS

*Cirrhosis, Proton Pump Inhibitor, Spontaneous Bacterial Peritonitis.*



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## Single Stage Management of Chronic Posterolateral Knee Dislocation in a Middle-Aged Man - A Case Report

### PUBLICATION

International Journal of Endorsing Health Science Research. 2021

**JOURNAL CATEGORY:** Y

### AUTHORS

Adnan Qamar<sup>1</sup>  
Haider Ali<sup>2</sup>  
Muhammad Abdul Shakoor<sup>3</sup>  
Usman Amjad<sup>4</sup>  
Syed Wasif Ali Shah<sup>5</sup>

### AUTHOR INSTITUTES

Department of Orthopedic Surgery, Sheikh Zayed hospital, Lahore, Pakistan

### BACKGROUND

Posterolateral knee dislocation rarely occur and might not reduce due to buttonholing of the Femoral condyle into the anteromedial knee joint capsule. These are complex injuries without any clear guidelines in terms of management.

### CASE PRESENTATION

40-year-old male presented with posterolateral knee dislocation due to a road traffic accident. Patient was having posterior cruciate ligament (PCL) injury along with posterolateral corner instability supported by clinical examination and confirmed with radiologic investigations.

### MANAGEMENT AND RESULTS

Patient was managed with single-stage arthroscopic reconstruction of PCL followed by open posterolateral corner ligaments reconstruction. Postoperatively patient had positive functional outcomes with satisfactory international knee documentation committee subjective knee form (IKDC) scores.

### CONCLUSION

Posterolateral Corner Injury (PLC) injury with associated PCL injury showed positive results when managed in a single-stage procedure.

### KEYWORDS

*Chronic Knee Dislocation, Posterolateral Corner Injury, Posterior Cruciate Ligament, Laprade Technique.*



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## Assessing the Functional Outcome after Fixation of Distal Femoral Fractures with DF-LCP: A Prospective Study

### PUBLICATION

International Journal of Endorsing Health Science Research. 2021

### JOURNAL CATEGORY: Y

### AUTHORS

Muhammad Naseem<sup>1</sup>  
Rahila Kanwal<sup>2</sup>  
Rahat Zahoor Moton<sup>3</sup>  
Naseem Munshi<sup>4</sup>  
Saleha Samreen<sup>5</sup>

### AUTHOR INSTITUTES

1. Karachi Medical & Dental College & Abbasi Shaheed Hospital, Karachi-Pakistan
2. Karachi Medical & Dental College & Abbasi Shaheed Hospital, Karachi-Pakistan
3. Karachi Medical & Dental College & Abbasi Shaheed Hospital, Karachi-Pakistan
4. Ziauddin Medical University Hospital, Karachi-Pakistan
5. Karachi Medical & Dental College & Abbasi Shaheed Hospital, Karachi-Pakistan

### BACKGROUND

Management of distal femoral fractures remains a real challenge due to the involvement of unique and vital anatomical structures. These are usually treated with operative measures. Distal femoral locking compression plate (DF-LCP) has gained popularity due to favorable biological insertion and minimal periosteal damage, but locally little is known about it. Therefore, the present study aimed to identify the functional outcomes after fixation of distal femoral fractures with DF-LCP.

### METHODOLOGY

This prospective cohort study, including 21 patients with distal femoral fractures, was conducted at Abbasi Shaheed Hospital from Jan 1, 2017, to Dec 31, 2018. All enrolled patients were treated with DF-LCP. The postoperative clinical and radiological outcomes were evaluated for one year. The data were statistically analyzed using SPSS version 22.0.

### RESULTS

There were 21 patients with distal femur fractures with a mean age of  $46.6 \pm 19.2$  years. The majority of the fractures were due to road traffic accidents (RTA), i.e., 57.1%, followed by ground-level fall (33.3%). The mean time for fracture union was  $20.2 \pm 11.1$  weeks, and the mean range of motion of the knee was  $108.5 \pm 18.5^\circ$  (at one-year follow-up). The complications were minimal; superficial infection and stiffness of knee joint were observed in 2 patients each while there was 1 case each of non-union, delayed union, and implant failure.

### CONCLUSION

DF-LCP is an effective treatment for distal femoral fractures as it permits stable fixation and early mobilization. Satisfactory to excellent functional and radiological outcomes were achieved.

### KEYWORDS

*Distal Femoral Fracture, Functional Outcome, Distal Femoral Locking Compression Plate, Neer's Score.*



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## Comparison of SAPS III and SOFA Score for the Prediction of Mortality among ICU Patients

### PUBLICATION

International Journal of Endorsing Health Science Research. 2021

### JOURNAL CATEGORY: Y

### AUTHORS

Ahmed Farhan<sup>1</sup>  
Syed Muneeb Ali<sup>2</sup>  
Valeed Bin Mansoor<sup>3</sup>  
Rabail Chaudhary<sup>4</sup>  
Hassan Ur Rehman<sup>5</sup>

### AUTHOR INSTITUTES

Pakistan Institute of Medical Sciences, Islamabad-Pakistan

### BACKGROUND

The present study was designed to assess the comparative performance of the Simplified Acute Physiology Score III (SAPS III) and sequential organ failure assessment (SOFA) score in predicting mortality among critically ill ICU patients.

### METHODS

A cross-sectional study was conducted from January 2019 to December 2019, including 162 patients admitted to the medical intensive care unit (ICU) of PIMS, Islamabad. The SOFA and SAPS III scores were calculated for all patients on admission. Outcome parameters included death or discharge from the hospital and disability. The receiver operating characteristic (ROC) curve was constructed for the studied models, and the scores were correlated with mortality.

### RESULTS

The overall mortality rate in the studied population was 46.9%. The mean SAPS III and SOFA scores were  $55.26 \pm 18.46$  and  $14.41 \pm 5.67$ , respectively. The area under the ROC curve (aROC) for the SAPS III was 0.71 at a cut-off value of 43.5, whereas the aROC for SOFA was 0.64 at a cut-off score of 12.5. The ROC curve for predicting hospital mortality exhibited that both SAPS III and SOFA scores were sensitive predictors of mortality, given SAPS III had relatively better prediction (85%) compared to SOFA (76%).

### CONCLUSION

It is concluded that SAPS III and SOFA scores are sensitive predictors of mortality; however, SAPs score is better at predicting mortality than SOFA score.

### KEYWORDS

*Simplified Acute Physiology Score III (SAPS III) and sequential organ failure assessment (SOFA) score, ICU, Mortality.*



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## Ivabradine Effects on Heart Rate and Quality of Life among Chronic Heart Failure Patients

### PUBLICATION

Journal of Pakistan Medical Association. 2021

**IMPACT FACTOR:** 0.781

**JOURNAL CATEGORY:** X

### AUTHORS

Fawad Farooq<sup>1</sup>  
Nida Imran<sup>2</sup>  
Mahwish Abbas<sup>3</sup>

### AUTHOR INSTITUTES

National Institute of Cardiovascular Diseases, Karachi, Pakistan

### OBJECTIVE

To determine the effect of Ivabradine in lowering heart rate and quality of life in chronic heart failure patients.

### METHODS

The observational study was conducted in the out-patient department of the National Institute of Cardiovascular Disease, Karachi, from December 2016 to June 2017, and comprised chronic heart failure patients aged 30-70 years who were on 5mg Ivabradine for 8-weeks. Heart rate was evaluated through electrocardiogram, and health-related quality of life was measured using the validated questionnaire. Baseline demographics and clinical characteristics were recorded, with follow-ups at week-4 and week-8. Safety and tolerability were assessed by adverse drug reactions monitoring. Data was analysed using SPSS 21.

### RESULTS

Of the 50 patients, 34 (68%) were males. The overall mean age was 54.8±9.17 years. Baseline mean heart rate significantly reduced at first and second follow-up visit (p<0.001). Mobility problems declined significantly as well (p<0.05). Health-related quality of life significantly improved on follow-up visits (p<0.001).

### CONCLUSION

There was significant control of heart rate in chronic heart failure patients with improvement in all parameters of quality of life.

### KEYWORDS

*Heart failure, Ivabradine, Heart rate, Health-related quality of life.*



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## Self-Expandable Metal Stents for the Management of Gastric Outlet Obstruction: Experience from a Tertiary-Care Facility in Pakistan

### PUBLICATION

Japanese Journal of Gastroenterology and Hepatology. 2021

**IMPACT FACTOR:** 1.920

### AUTHORS

Saad Khalid Niaz,  
Syed Zea Ul Islam Farrukh\*,  
Syed Afzal Haqqi,  
Arif Rasheed Siddiqui,  
Abdul Samad Dheddi and  
Aisha Rumman

### AUTHOR INSTITUTES

Department of Gastroenterology Patel Hospital, Karachi, Sindh, Pakistan

### AIM

Gastric outlet obstruction is commonly considered as advanced malignancies of the stomach, duodenum, pancreas, hepatobiliary, and ampullary regions. Surgical bypass and chemotherapy are the common treatment modalities for gastric obstruction. This study was done to determine the outcomes of self-expandable metal stents in patients with gastric outlet obstruction.

### METHODS

Forty-seven symptomatic patients with gastric outlet obstruction who underwent self-expandable metal stents in Patel hospital, Karachi-Pakistan from January 2013 till January 2020 were selected for the study. Data on the relief of obstructive symptoms such as; nausea and vomiting and improvement in food intake was the primary clinical success outcome, measured by the gastric outlet obstruction score. Data were statistically analyzed using SPSS version 21.0 (SPSS Inc., Chicago, IL, USA).

### RESULTS

Number of 47 patients received uncovered self-expandable stent (Boston Scientific WallFlex) placements during the study period with n=22 (46.8%) single stents, while n=25 (53.2%) dual stents (enteral and biliary), with a mean ±SD age of 60.6 (±14.1) years. Fifteen (31.9%) participants showed good improvement, n=23 (48.9%) patients showed mild improvements, n=04 (8.5%) reported moderate improvement, while only n=05 (10.6%) patients showed no improvements at all after placement of the intervention. The median survival time after the intervention was 8.5 weeks (95% CI: 5.469 – 11.674) in the study population.

### CONCLUSION

The endoscopic stenting for malignant gastric outlet obstruction appears to be an effective alternative to surgical palliative bypass.

### KEYWORDS

*Gastric outlet obstruction; Self-expandable metal stents; Technical success; Clinical success; Gastric outlet obstruction score.*



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## Psychological and Clinical Predictors of COVID-19 Severity and Outcomes

### PUBLICATION

Cureus Journal of Medical Sciences. 2021

### AUTHORS

Mian Mufarih Shah<sup>1</sup>  
Sumira Abbas<sup>2</sup>  
Jehan Z. Khan<sup>3</sup>  
Mehwash Iftikhar<sup>1</sup>  
Ayesha Jamal<sup>4</sup>  
Jehan Zeb Khan<sup>5</sup>  
Sami Ullah<sup>5</sup>

### AUTHOR INSTITUTES

1. Department of Medicine, Medical & Teaching Institution, Hayatabad Medical Complex, Peshawar, Pakistan
2. Department of Pathology, Medical & Teaching Institution, Hayatabad Medical Complex, Peshawar, Pakistan
3. Department of Pharmacy, University of Peshawar, Peshawar, Pakistan
4. Internal Medicine, Canadian Red Cross, Winnipeg, Canada
5. Department of Pharmacy, Hayatabad Medical Complex, Peshawar, Pakistan

### OBJECTIVE

The present study aimed to assess the psychological and clinical determinants of coronavirus disease 2019 (COVID-19) and their association with the disease severity and outcomes.

### METHODS

This prospective study was conducted at Hayatabad Medical Complex, Peshawar-Pakistan. Admitted patients were screened for COVID-19 with reverse transcription-polymerase chain reaction (RT-PCR) and subsequently, 250 COVID positive patients were included in the final analysis. Data were obtained from the patient's medical chart; demographic and clinical characteristics were recorded using a structured questionnaire. Psychological determinants, including anxiety and depression, were measured using the Hospital Anxiety and Depression Scale (HADS). The predictors of disease severity and outcomes (recovery vs. mortality) were also studied.

### RESULTS

A total of 250 patients were included in this study; out of which, 193 patients recovered from this deadly virus and 57 died. Based on psychological assessment, 58.4% of the enrolled COVID-19 patients had poor HADS scores. Most of the patients who died (70.2%) had severe symptoms (poor HADS scores). Similarly, 49.6% of the total cases were observed with poor HADS, and 50.9% of those who died had severe depression.

### CONCLUSION

It is concluded from the study results that psychological distress is frequent in COVID-19 patients. Age, hypertension, fatigue, abnormal respiratory rate, oxygen saturation, ferritin, and poor HADS score were determined as the significant predictors of COVID-19 severity and outcomes.

### KEYWORDS

*Outcomes, psychological determinants, covid severity, mental health, covid-19.*



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## Frequency of Success and Complications of Primary Endoscopic Third Ventriculostomy in Infants with Obstructive Hydrocephalous

### PUBLICATION

Pakistan Journal of Medical Sciences. 2021

### IMPACT FACTOR: 1.088

### JOURNAL CATEGORY: X

### AUTHORS

Seema Sharafat<sup>1</sup>  
Zahid Khan<sup>2</sup>  
Farooq Azam<sup>3</sup>  
Mumtaz Ali<sup>4</sup>

### AUTHOR INSTITUTES

Department of Neurosurgery Medical and Teaching Institute, Lady Reading Hospital, Peshawar, Pakistan

### OBJECTIVE

To determine the success rate and complications of primary endoscopic third ventri-culostomy (ETV) in infants with obstructive hydrocephalous.

### METHODS

This case series was conducted at the Department of Neurosurgery, Medical and Teaching Institute, Lady Reading Hospital Peshawar from July 2016 to June 2018. All consecutive patients with age less than one year who underwent ETV for primary obstructive hydrocephalous, of both gender, were included in the study. The patients were followed up to six months after surgery. The data was entered in a specially designed Performa. Patients' data was analyzed using SPSS version 21.0.

### RESULTS

We had total 21 patients with age less than one year during the study period. Male patients were 11 (52.4%). Success rate of ETV at six months of follow up was 12 (57.1%). Post-op complications observed were in 9.52% (2/21) cases. One patient had cerebrospinal fluid (CSF) leak and the other had significant bleed.

### CONCLUSION

ETV is successful in 57.1% of infants with obstructive type of hydrocephalous. The post op complications in case of ETV are lower than Ventriculo-peritoneal shunts. Therefore, ETV can be offered to infants having obstructive hydrocephalous.

### KEYWORDS

*Congenital Hydrocephalus, Endoscopic Third Ventri-Culostomy, Infants, Obstructive Hydrocephalus, Ventriculo-Peritoneal shunt.*



Scan the code to read the full manuscript

## The Role of Hydroxychloroquine in High-Risk Individuals with Coronavirus Disease (COVID-19)

### PUBLICATION

International Journal of Clinical and Experimental Medicine. 2021

### JOURNAL CATEGORY: Y

### AUTHORS

Rauf Naizi  
Fibha Syed  
Mohammad Ali Arif  
Rana Imran Sikander  
Adil Ramzan  
Valeed Bin Mansoor

### AUTHOR INSTITUTES

1. Pakistan Institute of Medical Sciences  
2. Shaheed Zulfiqar Ali Bhutto Medical University Islamabad, Pakistan

### OBJECTIVE

This study aimed to compare the symptoms and the severity of the illness among positive Coronavirus Disease 2019 (COVID-19) high-risk individuals with or without the prophylactic use of hydroxychloroquine (HCQ).

### METHODS

This cross-sectional study was conducted at the Pakistan Institute of Medical Sciences (PIMS), Islamabad. A total of 485 high-risk individuals with possible exposure to COVID-19 were enrolled in the study. The data were collected through a pre-designed self-reporting questionnaire inquiring about the individual's history, baseline characteristics, COVID-19 associated risk factors, exposure history, polymerase chain reaction (PCR) and antibody screening results, HCQ drug dosage, and adverse effects. The COVID-19 symptoms and the severity of the illness were also recorded. The individuals were divided into two groups as per the HCQ intake, i.e. users and non-users, and compared for statistical significance. The data of 121 PCR positive COVID-19 individuals were also compared between the two groups.

### RESULTS

Out of 485 individuals, 264 (54.4%) were HCQ users. All the study demographics were comparable in both study groups. The study revealed that the COVID-19 positive cases were significantly less reported in the HCQ user group than in the non-HCQ user group (40.3% vs. 58.5%; P-value = 0.004). Of these 121 COVID-19 positive cases, shortness of breath (11.6%), anosmia (13%) and the severity of the illness requiring hospitalization (14.5%) were profound among non-HCQ users as compared to those who were prophylactically receiving HCQ. No serious side-effects were reported by the HCQ users.

### CONCLUSION

Voluntary pre-exposure HCQ administration significantly reduces the severity of illness, both symptomatic and radiological, among COVID-19 positive individuals.

### KEYWORDS

*Coronavirus disease (COVID-19), hydroxychloroquine (HCQ), illness severity, pre-exposure prophylaxis.*



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## Pre-exposure Prophylaxis with Various Doses of Hydroxychloroquine among Healthcare Personnel with High-Risk Exposure to COVID-19: A Randomized Controlled Trial

### PUBLICATION

Cureus Journal of Medical Science. 2021

### AUTHORS

Fibhaa Syed<sup>1</sup>  
Muhammad Hassan<sup>2</sup>  
Mohammad Ali Arif<sup>1</sup>  
Sadia Batool<sup>1</sup>  
Rauf Niazi<sup>1</sup>  
Ume E. Laila<sup>1</sup>  
Sadia Ashraf<sup>1</sup>  
Junaid Arshad<sup>3</sup>

### AUTHOR INSTITUTES

1. Internal Medicine, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan  
2. Neurology, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan  
3. Cardiology, Shaheed Zulfiqar Ali Bhutto Medical University, Islamabad, Pakistan

### OBJECTIVE

This trial aimed to evaluate the safety and efficacy of pre-exposure prophylaxis (PrEP) with various hydroxychloroquine (HCQ) doses against a placebo among healthcare personnel (HCP) with high-risk exposure to coronavirus disease 2019 (COVID 19).

### METHODS

A phase II, randomized, placebo-controlled trial was conducted including 200 subjects with no active or past severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection (antibody testing and reverse transcription-polymerase chain reaction (RT-PCR) were taken at the time of enrollment). Subjects of experimental groups one to three received HCQ in various doses and the control group received a placebo. The study outcomes in terms of safety and efficacy were monitored. Participants exhibiting COVID-19 symptoms were tested for SARS-CoV-2 during the study and by the end of week 12 with RT-PCR or serology testing (COVID-19 IgM/IgG antibody testing).

### RESULTS

Out of the total participants, 146 reported exposure to a confirmed COVID-19 case in the first month, and 192 were exposed by week 12 of the study. Moreover, the precautionary use of personal protective equipment (PPE) significantly varied; initially more than 80% of the exposed HCPs were not ensuring PPE being used by the patients treated by them, which gradually developed over time. Mild treatment-related side effects were observed among the interventional and placebo arm patients. There was no significant clinical benefit of PrEP with HCQ as compared to placebo ( $p > 0.05$ ).

### CONCLUSION

It is concluded that the PrEP HCQ does not significantly prevent COVID-19 among high-risk HCPs.

### KEYWORDS

*Hydroxychloroquine, healthcare personnel, covid-19, pre-exposure prophylaxis, sars-cov-2.*



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# POSTERS 2021

# Safety and Efficacy of Empagliflozin in Pakistani Muslim Patients with Type 2 Diabetes (SAFE-PAK)

## PUBLICATION

AACE. 2021

## AUTHORS

1. Azizul H. Aamir- Presenter & Primary Author, Hayatabad Medical Complex
2. Umar Y. Raja, Shifa International Hospital
3. Ali Asghar, Fatimiyah Hospital
4. Saeed A. Mahar, National Institute of Cardiovascular Disease
5. Tahir Ghaffar, Hayatabad Medical Complex
6. Ibrar Ahmed, Lady Reading Hospital
7. Faisal M. Qureshi, Al-Khaliq Hospital
8. Jamal Zafar, Hanif Medical Center
9. Imtiaz Hassan, Diabetes Institute of Pakistan
10. Amna Riaz, Jinnah Hospital
11. Irshad khoso, Balochistan Medical Center
12. Jahanzeb K. Khan, Dow University of Health Sciences
13. Mahwish Raza, Shaheed Zulfikar Ali Bhutto Institute of Science & Technology
14. Jaffer B. Baqar, University of Karachi
15. Abbas Raza, DBIM, National Defence Center

## OBJECTIVE

Glycosuria increases the risk of genitourinary infections in diabetes. To establish the safety and efficacy of empagliflozin versus usual care in Pakistani Muslim diabetic patients having wet personal hygiene practices.

## METHODS

A multicenter randomized clinical trial conducted in five cities across Pakistan from July-19 to August - 20. Twelve participating centers screened 745 patients and of these 244 (32.7%) were enrolled. Both gender aged 18-75 years, Body Mass Index 45kg/m<sup>2</sup>, HbA1c 7% - 10% and treatment naïve to empagliflozin were included. Exclusion criteria included estimated glomerular filtration rate < 45mL/min/1.73m<sup>2</sup>, positive urine culture, presence of serum ketones, and impaired liver functions. Treatment allocation was done through randomization; G-1: empagliflozin over and above standard care and G-2: standard care group (without empagliflozin). Patients were followed-up for 24 weeks.

## RESULTS

Out of 244, total 129 (52.7%) were randomized to G-1. All baseline demographics and laboratory investigations were comparable with p-value>0.05. Hypoglycemic events were significantly more in G-2 (G-1:12.9% vs G-2:17.8%; p¼0.041) whereas positive urine culture (G-1:7.4% vs G-2: 9.9%; p¼0.521), fungal infection (G-1:0 vs G-2:2%; p¼0.522), dehydration (G-1:3.7% vs 3.9%; p¼0.923) and hypotension (G-1:0.9% vs 2.9%; p¼0.281) were insignificant. The 6 months mean HbA1c reduction was significant in both groups; [G-1:0.91 ± 0.2; p<0.001 vs G2:0.8 ± 0.1; p<0.001]. The mean reduction of weight [G-1:1.4 ± 0.4; p¼0.002 vs G-2:0.01 ± 0.5; p¼0.999] and systolic blood pressure [G-1:9.5 ± 3.3; p¼0.025 vs G-2:7.6 ± 3.5; p¼0.120] were significant in G-1.

## CONCLUSION

Empagliflozin showed better safety profile as compared to standard care group and achieved better glycemic control without weight gain and no additional risk of genitourinary infections in Muslim diabetic patients.



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## SAFETY AND EFFICACY OF EMPAGLIFLOZIN IN PAKISTANI MUSLIM PATIENTS WITH TYPE 2 DIABETES

Poster # P187



**Authors:** AH Aamir<sup>1</sup>, UY Raja<sup>2</sup>, A Asghar<sup>3</sup>, SA Mahar<sup>4</sup>, T Ghaffar<sup>1</sup>, I Ahmed<sup>5</sup>, FM Qureshi<sup>6</sup>, J Zafar<sup>7</sup>, MI Hasan<sup>8</sup>, A Riaz<sup>9</sup>, SA Raza<sup>10</sup>, IA Khosa<sup>11</sup>, J Khan<sup>12</sup>, M Raza<sup>13</sup>, JB Baqar<sup>14</sup>  
**Affiliations:** 1. Hayatabad Medical Complex, Peshawar 2. Shifa International Hospital, Islamabad 3. Fatimiyah Hospital, Karachi 4. National Institute of Cardiovascular Diseases, Karachi 5. Lady Reading hospital, Peshawar 6. Al-Khaliq Hospital, Lahore 7. Hanif Medical Center, Islamabad 8. Diabetes Institute of Pakistan, Lahore 9. Jinnah Hospital, Lahore 10. National Defence Center, Lahore 11. Balochistan Medical Center, Quetta 12. Dow University of Health Sciences, Karachi 13. Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, Karachi 14. University of Karachi, Karachi, Pakistan. Correspondence E-mail: [drahaamir@gmail.com](mailto:drahaamir@gmail.com).  
**Conflicts of interest:** None

**Background & Objective:** SGLT2 inhibitor (Empagliflozin) is an effective drug in controlling blood glucose through predominantly glycosuria. Glycosuria increases the risk of genitourinary infections in diabetes. This study was aimed to establish the safety and efficacy of Empagliflozin versus usual care in Pakistani Muslim diabetic patients having wet personal hygiene practices.

**Methodology:** A multicenter, randomized clinical trial conducted in five cities across Pakistan from July-19 to August-20. Both gender aged 18-75 years, Body Mass Index ≤45kg/m<sup>2</sup>, HbA1c 7%-10% and treatment naïve to empagliflozin were included. Exclusion criteria included estimated glomerular filtration rate <45mL/min/1.73m<sup>2</sup>, positive urine culture, presence of serum ketones, and impaired liver functions. Clinicaltrials.gov registration number **NCT04665284**

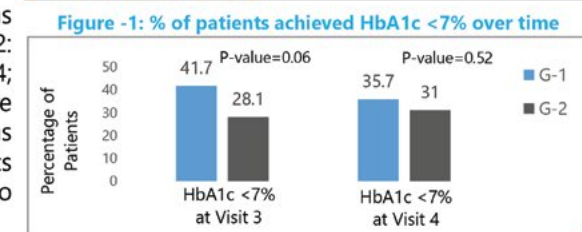


**Results:** Total 745 patients were screened and 333 met the eligibility criteria. Out of 333, total 244 (73.3%) were randomized to G-1(Empagliflozin) and G-2 (usual care) groups. All baseline demographics and laboratory investigations were comparable in both the groups.  
**Safety Outcomes:** Hypoglycemic events were significantly reported more in usual care group (p=0.041) whereas positive urine culture (p=0.521), fungal infection (p=0.522), dehydration (p=0.923) and hypotension (p=0.281) were insignificant between two groups. (Table -1)

**Table -1: Treatment Related Adverse Events**

Adverse Events	G-1 (Empagliflozin) n=108	G-2 (Usual Care) n= 101	P-value
Hypoglycemia	9 (12.9%)	18 (17.8%)	<b>0.041</b>
Dehydration	4 (3.7%)	4 (3.9%)	0.923
Hypotension	1 (0.9%)	3 (2.9%)	0.281
Positive Urine Culture	8 (7.4%)	10 (9.9%)	0.521
Positive Fungal Infection	0	2 (2%)	0.522
Treatment Discontinuation due to AE	2 (1.6%)	2 (1.7%)	0.908

**Efficacy Outcomes:** The 6 months mean HbA1c reduction was significant in both groups; [G-1: 0.91±0.2; p<0.001 vs G-2: 0.8±0.1; p<0.001]. The mean reduction of weight [G-1: 1.4±0.4; p=0.002 vs G-2: 0.01±0.5; p=0.999] and systolic blood pressure reduction [G-1: 9.5±3.3; p=0.025 vs G-2: 7.6±3.5; p=0.120] was significant in Empagliflozin group. Higher number of patients in Empagliflozin group achieved HbA1c <7% from baseline to week 12 and 24. (Figure -1)



## Conclusion:

- Empagliflozin proved as a safe drug of choice in terms of UTI and hypoglycemia as compared to usual care in Pakistani Muslim diabetic population.
- In a real life clinical setting, Empagliflozin is as effective as usual care but achieves glycemic control with weight reduction in type 2 diabetics.
- In addition, Empagliflozin had a significant blood pressure lowering effect specially systolic blood pressure as compared to usual care.

This study was supported through an unrestricted research grant by **Getz** pharma

# About 8.8% employees working in a private healthcare organization had reactive antibodies of COVID-19

Most importantly 92.3% were found asymptomatic and only 1% had close unprotected contact with a confirmed or suspected case of COVID-19.

## Employees Screening for COVID-19 in a Private Healthcare Organization using the Rapid Antibody Test

Mahwish Raza<sup>1</sup>, Muhammad Nauman Sheikh<sup>2</sup> Jaffer Bin Baqar<sup>3</sup>, Jahanzeb Kamal Khan<sup>4</sup>.

1. Shaheed Zulfikar Ali Bhutto Institute of Science & Technology, Karachi. Pakistan 2. Institute of Business Management, Karachi, Pakistan 3. University of Karachi 4. King's College, London, United Kingdom.

### BACKGROUND

- Considering the constraints of Polymerase Chain Reaction (PCR) testing, selective patients were tested by the Government of Pakistan, and the reported infection rate is underestimated.
- To ensure workplace safety and continuation of business operations requires mass level testing via alternative methods. Globally, where there is little or no access to PCR testing, people are being screened using Rapid Antibody Testing, providing quick results at a very low-cost.
- This study aims to determine the frequency of COVID-19 cases by screening all employees using the Rapid Antibody Test and factors associated with positivity.

### METHODS

- A total of 1500 employees, with or without COVID-19 symptoms, screened using the Rapid Antibody Test from 16 to 24 April 2020, of which 1182 who gave informed consent were enrolled.
- Information related to the employee's demographics, medical, contact, and traveling history was recorded.
- A team of trained staff using personal protection equipment and necessary social distancing protocols were involved for both data recording and testing.
- The data was statistically analysed using SPSS version 22.0.

### RESULTS

- The median age of participants was 30 years (range: 18-68) with BMI 25.4 ±5.3 kg/m2.
- Based on Rapid Antibody Test results, total positives were 104 (8.8%), of which 83 (80%) and 16 (15%) had IgM and IgG antibodies respectively, and 05 (5%) had both.
- Of these 104 positive cases;
  - 76% had a household size of more than 04 persons.
  - The majority of cases were asymptomatic 96 (92.3%).
  - Those who had symptoms, only fatigue 07 (7.3%); p<0.001, and diarrhoea 05 (5.2%) p=0.018 were found significantly associated with reactive antibodies.
  - Only 10 (9.6%) cases had comorbid conditions and hypertension 05 (5.2%) was the most reported followed by diabetes 04 (4.2%) and cardiovascular diseases 01 (1%).

### CONCLUSION

- The reported prevalence rate in our study was much higher than the one reported by the Government, emphasizing the need for mass level screening using alternative methods.
- Screening and isolating asymptomatic is highly recommended to prevent the further spread of the disease.
- Moreover, the Rapid Antibody Test can be a potential option based on its convenience and immediate results specially in developing countries like Pakistan.

### FUNDING

- The study was funded by a pharmaceutical manufacturing company Getz Pharma.

## Cost-Effectiveness Analysis of Rapid Antibody Test in comparison to Polymerase Chain Reaction (PCR) in low-resource healthcare setting of Pakistan

Dr. Nauman Shaikh<sup>1</sup> | Dr. Kashif Shafiq<sup>2</sup> | Dr. Jahanzeb Kamal<sup>3</sup> | Jaffer Bin Baqar<sup>4</sup>  
<sup>1</sup> Institute of Business Management | <sup>2</sup> DOW University of Health Sciences | <sup>3</sup> King's College London | <sup>4</sup> University of Karachi

### Key Findings

The overall cost (mean) of the Antibody test with sensitivity equal to 91.94% was PKR 9,640. In contrast, the RT-PCR test with 78.2% sensitivity was comparatively expensive, i.e. PKR 18,815.

In terms of positive predictive value (PPV), RT-PCR is better than Rapid Antibody Test, conversely for negative predictive value (NPV), later is better.

### Background

The World Health Organization (WHO) has stressed the importance for countries to "Test, Trace and Isolate" to stop the further spread of the virus, but seems very difficult to implement in any low healthcare resource setting, including Pakistan 1, 2.

Currently, reverse transcription-polymerase chain reaction (RT-PCR) which is considered the gold standard, and antibody testing are the two prevailing methods used across global healthcare systems for COVID-19 detection. Both testing methods have their benefits and demerits 3.

Due to the constrain of scaling up PCR testing, only symptomatic patients were tested by the Government of Pakistan, as per the advice of the COVID-19 task force.

Cost-effectiveness analysis (CEA) is an important tool for identifying, prioritizing and redirecting resources (public/private) for better use of health interventions. There is a lack of health economic evidence on what would work best for a low-resource healthcare setting of Pakistan for the screening of COVID-19 suspects 4.

This study aims to ascertain the cost-effectiveness of the Rapid Antibody Test in comparison to the Polymerase Chain Reaction (PCR) for COVID-19 in Pakistan.

### Methods

A single-center observational study, which included 1182 employees of a private organization with or without COVID 19 related symptoms, using Rapid Antibody Testing and confirmation of active infection through PCR for selected participants.

A cost-effectiveness analysis was performed using the decision tree model with a test-based approach and the cost effectiveness ratio (ICER) was estimated. To measure the utility of the two tests, the standard gamble (SG) technique was used, for decision-making under uncertainty.

The sensitivity and specificity were referenced (Table 1) for both tests. For Rapid Antibody Test through product label and for PCR Test from the existing literature. For both testing strategies, the minimum fixed direct cost was used for which they were being offered in local healthcare settings.

Table 1: Predictive Parameters of Rapid Antibody Test and PCR Test used in the Model.

Testing Method	Total (n=1182)	COVID (+ve)	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
Rapid Antibody Test	1182	104	91.94	90.63	48.6	99.1
PCR Test	32	18	78.2	98.8	100	77.9

\*PPV: Positive Predictive Values; NPV: Negative Predictive Values

### Results

The incremental cost-effectiveness ratio (ICER) was estimated to determine the additional cost (Table 2).

Table 2: Health and Economic Outcomes among positive COVID-19 Individuals.

Strategy	Cost of Test (PKR)	Effectiveness	C/E Ratio	ICER
Antibody Test (n=104)	9,640	0.740	13,027.02	-
PCR Test (n=18)	18,815	0.712	26,425.56	324,204.9

\*Values are given as Mean; C/E - Cost-Effectiveness Ratio; ICER - Incremental Cost-Effectiveness Ratio

### Conclusion

Rapid Antibody Test was more cost-effective in comparison to RT-PCR. Considering the constraints of scaling up PCR testing in any low healthcare resource setting, including Pakistan. Rapid Antibody Testing is a potential option for mass COVID-19 screening. Identifying infected individuals for isolation is the key to prevent the further spread of disease and minimizing economic loss.

### Acknowledgment

The author(s) would like to acknowledge the efforts of the testing and data collection team for their untiring efforts.

### References

1. Sheikh A, Sheikh A, Sheikh Z, Dhani S, Sridhar D. What's the way out? Potential exit strategies from the COVID-19 lockdown. Journal of global health. 2020 Jun;10(1).
2. Anser MK, Yousaf Z, Khan MA, Nassani AA, Abro MM, Vo XII, Zaman K. Social and administrative issues related to the COVID-19 pandemic in Pakistan: better late than never. Environmental science and pollution research international. 2020 Sep;27(27):34567-73.
3. Udugama B, Kadhiresan P, Kozlowski HN, Malekjahani A, Osborne M, Li VY, Chen H, Muhareka S, Gubbay JB, Chan WC. Diagnosing COVID-19: the disease and tools for detection. ACS nano. 2020 Mar 30;14(4):3822-35.
4. Khalid A, Ali S. COVID-19 and its Challenges for the Healthcare System in Pakistan. Asian Bioethics Review. 2020 Aug 13:1-4.



## Insight into socioeconomic status of Multidrug resistant TB patients treated in a tertiary care hospital of Khyber Pakhtunkhwa

Anila Basit, Mohammed Umer, Zia Ullah, Zafar Iqbal, Mohammed Yousaf Khan, Arshad Javaid

1. Department of Pulmonology, Lady Reading Hospital, Peshawar - Pakistan

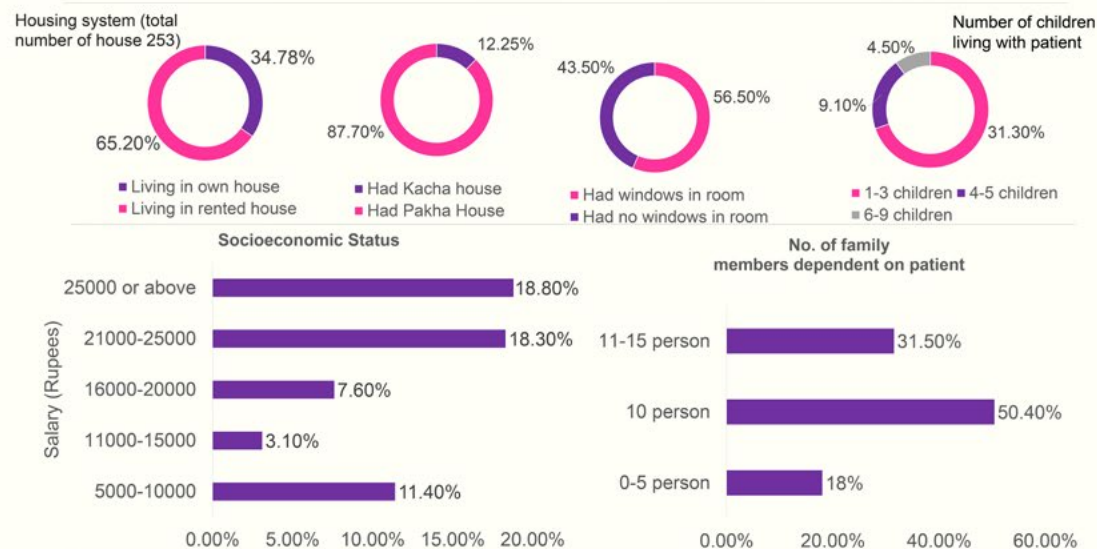
2. Programmatic Management of Drug Resistant TB Unit, Lady Reading Hospital, Peshawar - Pakistan

**Background:** The emergence of multidrug-resistant tuberculosis (MDR-TB) strains has resulted in an increase in tuberculosis, which seems to be a major threat to community well-being worldwide. Approximately 3.6 % of new tuberculosis patients, with MDR-TB reaching 20% in the past, were treated with TB treatment. Pakistan is ranked fifth among the 22 countries with the highest prevalence of MDR-TB. According to WHO estimates, new MDR-TB cases account for 4.2 percent of all cases, while recurrence/retreatment cases account for 16 percent of all cases. This ratio accounts for about 15,000 MDR- TB cases in Pakistan each year. MDR-TB treatment can take up to two years, leads to social isolation, job loss, and long-term socioeconomic and psychological consequences. This study was aimed to highlight the socioeconomic status of MDR-TB patients.

**Methodology:** From January 2018 to December 2020, 377 patients were enrolled in this retrospective study at the Department of Pulmonology at Lady Reading Hospital in Pakistan, which serves as the provincial reference point for the management of MDR-TB. To collect data, consecutive sampling was used.

**Results:** Of the 377 patients, 80 (21.2 %) are between the ages of 10 and 29, and indeed the sample data also include 212 (56.2%) males and 165 (43.8%) females. The married proportion was 217 (57.5%), 153 (40.6%) of patients had less than Rs. 25000 monthly wages, and 98 (25.9 %) of these MDR-TB patients were illiterate. In addition to the monthly wages, 247 (65.5%) of patients are financially dependent on someone other than their brother, father, or husband.

Total no of patients = 377		Percentage
Gender	Male	56.2
	Female	43.8
Age Distribution	10-29 years	21.2
	30-49 years	50.4
	50 years and above	28.4
	Married	57.5
Marital Status	Single	41.9
	Widow	0.5
	Brother	10.3
Relationship of Patient with Treatment supporter	Husband	11.1
	Father	12.9
	Others	65.5
Family history of TB	Simple TB in family	18.3
	MDR-TB in family	5.6



**Conclusion:** MDR-TB treatment and management face one of the most serious risks, owing to the persistence and potential consequences of infection and the confined social and economic intervention strategies. These studies have suggested significant improvement in both adherence to treatment and cure rates among MDR-TB patients. Overall the socio economic status of these patients are very poor, with significant number of children exposed and financial burden on them.

The authors would like to acknowledge the Medical Affairs Department of Getz Pharma for their support

Organization WH. Global tuberculosis report 2013. World Health Organization, 2013.  
Khan MA, Mehreen S, Basit A, Khan RA, Jan F, Ullah I, et al. Characteristics and treatment outcomes of patients with multi-drug resistant tuberculosis at a tertiary care hospital in Peshawar, Pakistan. Saudi medical journal. 2015;36(12):1483.  
Organization WH. The global plan to stop TB 2011-2015: transforming the fight towards elimination of tuberculosis. 2010.  
Ormerod LP. Role of surgery in pulmonary multidrug-resistant tuberculosis. BMJ Publishing Group Ltd. 2007.  
Booker MJ. Compliance, coercion, and compassion: moral dimensions of the return of tuberculosis. Journal of Medical Humanities. 1996;17(2):91-102.



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# GUIDELINES 2021

## Metabesity Guideline: A Pakistan Perspective

### PUBLICATION

Journal of the Pakistan Medical Association. 2021

IMPACT FACTOR 0.781

JOURNAL CATEGORY: X

For author details please scan QR code and access full text

### ABSTRACT

Pakistan is among the top ten countries in terms of obesity, with individuals at a higher risk of metabolic disorders or metabesity. Metabesity is a combination of obesity with metabolic disorders such as diabetes, which also increases the risk of cardiovascular and neurovascular disorders, and accelerated ageing. There is a complex interplay of genetic, behavioural and metabolic influences in metabesity, which necessitates the need for comprehensive guidelines for its management, especially in the Pakistani population. For this purpose, rigorous literary evidence was gathered, and standardized guidelines such as the American Association of Clinical Endocrinology (AACE) were explored. The prepared guidelines for metabesity suggest screening tests for hyperglycaemia, dyslipidaemia and coronary disorders at regular intervals, and following a standard diagnostic criteria for metabesity. This involves measurement of waist circumference (Asian-based cut off >90cm in men and >80cm in women), lipid profile (HDL <40mg/dl in men and <50mg/dl in women), blood pressure (>135/85mmHg), and fasting blood glucose (>99mg/dl) to determine the risk. Treatment protocol involves lifestyle changes including 500-750kcal reduction in diet per day along with 150 minutes of weekly physical activity. Pharmacotherapy is advised for weight loss, hypertension, hyperglycaemia, and dyslipidaemia, along with management of other comorbid conditions if any. In patients with a body mass index (BMI) above 35, surgical options such as bariatric surgery can be considered. Metabesity impacts other comorbid conditions and has individual risks for each age group. A more personalised approach for management should be preferred in persons with polycystic ovary syndrome (PCOS), neurologic disorders, Alzheimer's, stroke and infections, due to significant impact of the disease.

### KEYWORDS

Metabesity, Medical Nutrition therapy, Diabetes mellitus, Obesity.



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**“Knowing is not enough, we must apply. Willing is not enough, we must do.”**  
Johann Wolfgang von Goethe

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# PUBLICATIONS 2020

## SGLT 2 Inhibitors; Glycemic Control, Weight Loss and Safety Profile in Patients with Type 2 Diabetes, at Medicell Institute (MIDEM)

### PUBLICATION

Pakistan Journal of Medical Sciences. 2020

**IMPACT FACTOR:** 1.088

**JOURNAL CATEGORY:** X

### AUTHORS

Syed Erum Sohail<sup>1</sup>  
Tasnim Ahsan<sup>2</sup>  
Saima Ghaus<sup>3</sup>  
Wasfa Aijaz<sup>4</sup>

### AUTHOR INSTITUTES

Medicell Institute of Diabetes Endocrinology & Metabolism (MIDEM), Karachi, Pakistan

### BACKGROUND AND OBJECTIVES

Sodium glucose co-transporter-2 inhibitors (SGLT 2 inhibitors) are newer anti-hyperglycemic agents, which improve glycemic control independent of insulin secretion with a low risk of hypoglycemia. This study aimed to assess the efficacy of SGLT 2 inhibitors in terms of glycemic control, weight reduction and safety profile in our patients with type 2 Diabetes (T2D).

### METHODS

This is a prospective analysis, conducted at Medicell Institute of Diabetes, Endocrinology and Metabolism (MIDEM), Karachi Pakistan from January 2018 till July 2019. This study included patients with T2D, who were treated with SGLT 2 inhibitors add on to other anti-diabetic drugs. Baseline and follow up weight, BMI, HbA1c, blood pressure (BP), renal function and side effect profile was assessed.

### RESULTS

Study included 140 patients; 53% females and 47% males. Mean Age was  $55.6 \pm 10.3$  years. Mean weight at baseline was  $81.5 \pm 16.5$  kg. Mean duration of T2D was  $10.3 \pm 6.75$  years, with a mean HbA1C at baseline of  $9.1 \pm 1.6\%$ . Follow up data was available for 90 patients at the time of analysis. HbA1C improved considerably to  $7.6 \pm 0.9$  ( $P < 0.001$ ) and mean weight reduced to  $78.5 \pm 16.1$  kg ( $P \leq 0.003$ ), at first follow-up.

### CONCLUSION

Dapagliflozin and Empagliflozin offer a significant additional drug in improving glycemic control with the additional advantage of weight loss and hypoglycemia safety.

### KEYWORDS

*SGLT 2 Inhibitors, Efficacy, Safety, Glycemic control.*



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## Retrospective Audit of Parotid Gland Tumor Cases Reported in Dr. Ruth K.M. Pfau Civil Hospital, Karachi

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Atif Hafeez Siddiqui<sup>1\*</sup>  
Hira Hameed<sup>2</sup>  
Irfan Ahmed Shaikh<sup>2</sup>  
Danish ur Rahim<sup>2</sup>  
Saad Shakil<sup>2</sup>

### AUTHOR DETAILS

<sup>1</sup>Associate Professor, Department of ENT-Head and Neck Surgery, University of Health Sciences, Dr. Ruth K. M. Pfau Civil Hospital Karachi, Pakistan

1. Dow University of Health Sciences, Dr. Ruth K. M. Pfau Civil Hospital Karachi, Pakistan
2. Department of ENT-Head and Neck Surgery, Dow University of Health Sciences, Dr. Ruth K. M. Pfau, Civil Hospital Karachi, Pakistan

### ABSTRACT

To determine the pattern and histological type of parotid gland tumors presenting in a tertiary care hospital in Pakistan to determine the frequency of benign versus malignant disease. It was a retrospective study for which data was extracted from Department of Otorhinolaryngology, Dow University of Health Sciences, Dr. Ruth K.M.Pfau Civil Hospital, Karachi for the period between September 2010 to July 2019. The data of (n=82) patients with presenting complain of parotid gland tumors who came to the hospital for treatment was retrieved and analyzed. The results included those patients who underwent parotid gland surgery and excision of tumors, out of which 66 (80.48%) had superficial parotidectomy and 16 (19.51%) underwent total parotidectomy. Among those 40 (48.78%) and 42 (51.21%) were male and female respectively. More common were Benign tumors 67 (81.7%) as compared to malignant tumors 15 (18.29%). Malignancy was more common in males than in females [12 (14.6%) vs 3 (3.65%)].

### KEYWORDS

*Parotidectomy, Parotid tumors, Pleomorphic Adenoma, Mucoepidermoid carcinoma.*



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## Frequency of Menstrual Irregularities after Tubal Ligation in Women of Reproductive Age

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Shazia Majid Khan  
Ammara Batool  
Noreen Nasim\*  
Amna Saeed  
Ayesha Munawar

### AUTHOR INSTITUTES

Shaikh Zayed Medical College and Hospital, Rahim Yar Khan, Pakistan

### ABSTRACT

To find frequency of menstrual irregularities after tubal ligation in women of reproductive age. Case series. The study was conducted from 1<sup>st</sup> June 2017 to 30<sup>th</sup> November 2017 at Department of Obstetrics and Gynaecology/Population Welfare Department of Shaikh Zayed Hospital Rahim Yar Khan. A total of 96 women with parity more than 3 having tubal ligation  $\geq 6$  months were included. Patients with history of leiomyoma, diabetes, hypertension, uterine size of  $> 9$  cm, hemoglobin  $< 9$  mg/dL and pelvic inflammatory disease were excluded. All the patients were asked to note the menstrual interval on a paper to control recall bias. Women were asked to come after three menstrual cycles. All patients were interviewed by the researcher herself and asked to describe their three most recent menstrual cycles. A menstrual interval shorter than 21 days and longer than 35 days was defined as menstrual irregularities. Data was recorded and noted on especially designed proforma. In present study, age range in this study was from 28 to 39 years with mean age of  $33 \pm 2.3$  years, mean weight  $71 \pm 13$  kg, mean height  $1.5 \pm 0.09$  meters, mean BMI  $30 \pm 5.1$  Kg/m<sup>2</sup> and mean duration of tubal ligation  $12.7 \pm 4.02$  months. Menstrual irregularities were seen in 35.42% patients. Our study results revealed that more than one third of the women had menstrual irregularities after tubal ligation.

### KEYWORDS

*Menstruation Disturbances; Sterilization, Tubal, Parity, Parturition.*



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## Ten years Risk Assessment of Atherosclerotic Cardiovascular Disease using Astro-CHARM and Pooled Cohort Equation in a South Asian Sub-Population

### PUBLICATION

BMC Public Health. 2020

### IMPACT FACTOR: 3.177

### AUTHORS

Tariq Ashraf<sup>1</sup>  
Muhammad Naeem Mengal<sup>1</sup>  
Atif Sher Muhammad<sup>1</sup>  
Asal Khan Tareen<sup>1</sup>  
Muhammad Nauman Khan<sup>1</sup>  
Khawar Abbqas Kazmi<sup>1</sup>  
Asif Nadeem<sup>2</sup>  
Shakil Sarwar<sup>2</sup>  
Zara Bashir<sup>3</sup>  
Nadeem Qamar<sup>1</sup>  
Musa Karim<sup>1</sup>

### AUTHOR DETAILS

1. National Institute of Cardiovascular Diseases, Karachi, Pakistan
2. Combined Military Hospital (CMH) Malir, Karachi, Pakistan
3. Aga Khan University Hospital, Karachi, Pakistan

### BACKGROUND

Atherosclerotic cardiovascular diseases (ASCVD) are on the rise in low and middle-income countries attributed to modern sedentary lifestyle and dietary habits. This has led to the need of assessment of the burden of at-risk population so that prevention measures can be developed. The objective of this study was to assess ten years risk assessment of ASCVD using Astro-CHARM and Pooled Cohort Equation (PCE) in a South Asian sub-population.

### METHODS

A total of 386 residents of all six districts of Karachi with no ASCVD were enrolled in the study through an exponential non-discriminative referral snowball sampling technique. The inclusion criteria consisted of age 40 years or above and either gender. Study participants were enrolled after obtaining informed written consent and those study participants who were found to have either congenital heart disease or valvular heart diseases or ischemic heart disease were excluded from the study based on initial screening. For the calculation of 10 years risk of ACVD based on Astro-CHARM and PCE, the variables were obtained including medical history and coronary artery calcium and C-reactive protein measurements.

### RESULTS

Mean estimated 10-year risk of fatal or non-fatal myocardial infarction or stroke as per the Astro-CHARM was  $13.98 \pm 8.01\%$ , while mean estimated 10-year risk of fatal or non-fatal myocardial infarction or stroke as per the PCE was  $22.26 \pm 14.01\%$ . Based on Astro-CHARM, 11.14% of the study participants were labeled as having high risk, while PCE estimated 20.73% of study participants as having high risk of ASCVD.

### CONCLUSION

Despite the fact that our findings showed substantial differences in ten-year risk of ASCVD between Astro-CHARM and PCE, both calculators can be used to develop a new population and specific risk estimators for this South Asian sub-population. Our study provides the first step towards developing a risk assessment guided decision-making protocol for primary prevention of ASCVD in this population.

### KEYWORDS

*Atherosclerotic cardiovascular disease, Astro-CHARM, Pooled cohort equation, South Asia.*



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## Efficacy of Sucralfate in Alleviation of Postoperative Morbidity after Tonsillectomy

### PUBLICATION

The Professional Medical Journal. 2020

### JOURNAL CATEGORY: Y

### AUTHORS

Atif Hafeez Siddiqui<sup>1</sup>  
Danish ur Rahim<sup>2</sup>  
Irfan Ahmed Shaikh<sup>3</sup>  
Iqbal A. Muhammad Khayani<sup>4</sup>  
Vijay Kumar Khatri<sup>5</sup>  
Subata Siddiqui<sup>6</sup>

### AUTHOR INSTITUTES

<sup>1,2,3</sup>Dow Medical College & Dr. Ruth K. M. Pfau Civil Hospital Karachi  
<sup>4</sup>Dow International Medical College & Dow Hospital Karachi  
<sup>5</sup>Dow Medical College & Dr. Ruth K. M. Pfau Civil Hospital Karachi  
<sup>6</sup>Dow International Medical College Karachi

### OBJECTIVE

Despite of the therapeutic advancement, post-tonsillectomy pain is one of the most commonly observed morbidities associated with this surgical procedure which in turn highlights the need for appropriate analgesic consumption that assures safety and efficacy. Through this study our basic motive was to evaluate the sucralfate efficacy in the management of post-tonsillectomy symptoms during the first week of the surgery.

**Study Design:** An Interventional, Quasi Experimental, (double-blind), purposive study. **Setting:** Department of Otorhinolaryngology and Head and Neck Surgery, Dow University of Health Sciences & Civil Hospital Karachi. **Period:** From January to June 2018.

### MATERIAL AND METHODS

One hundred and forty tonsillectomy patients of both genders between the age group of 7 to 35 years were randomly included in the study and categorized into 2 groups i.e. trial (Sucralfate group; Group A) and control (Pyodine group; Group B) with 70 patients in each group. The patients in group A were recommended to gargle with sucralfate suspension 4 times a day while following the same procedure except the group B interventional product was replaced with Pyodine mouth wash. The post-operative symptoms and secondary outcomes including pain, otalgia, odynophagia, analgesic requirements, slough shedding, bleeding and other associated side-effects were monitored. Pain, otalgia and odynophagia were assessed using the universal pain assessment tool (UPAT) while the secondary outcomes through a scoring system generated internally.

### RESULTS

It is revealed from the study results that there was significant decrease in the throat pain and odynophagia in group A from 3<sup>rd</sup> to 7<sup>th</sup> post-tonsillectomy day ( $p < 0.05$ ); while the results were not very significant for otalgia. The same could be applied for other secondary outcomes i.e. the analgesic requirement greatly decreased in patients given sucralfate presenting faster recovery. Moreover, early return to normal diet was observed for the patients

treated with sucralfate. No serious adverse effects observed among the patients both groups.

### CONCLUSION

Sucralfate can be recommended as the first choice of treatment for the management of post-tonsillectomy symptoms on the basis of its efficiency in treating pain and other symptoms and hence providing maximum safety.

### KEYWORDS

*Morbidity, Postoperative Pain, Sucralfate, Tonsillectomy, Universal Pain Assessment Tool (UPAT).*



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## Potential Risk Factors Influencing the Development of End-Stage Renal Disease

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Samiullah\*  
Wasil Khan  
Aleem ur Rashid  
Abdul Jabbar  
Amin ul Haq  
Akhtar Nawab

### AUTHOR INSTITUTES

Department of Medicine and Pathology, Saidu Medical College, Teaching Hospital Swat, Pakistan

### ABSTRACT

End-stage renal disease (ESRD) is the irreversible decline of the kidney function, which has affected huge population proportions in recent years. The associated symptoms and comorbidities precipitate the condition, increasing severity leading to mortality. The aim of this study was to determine the frequency of ESRD and its risk factors among the patients presenting to the medical unit of Saidu Group of Teaching Hospitals (SGTH), Swat. A cross sectional study was conducted from June to December 2018, at the medical unit of SGTH, Swat. Total 300 patients either male or female, having clinical profiles potentially predictive of ESRD and aged  $\geq 15$  years enrolled in the study after obtaining written informed consent. Patients were subjected to abdominal or pelvic ultrasound and estimation of Glomerular filtration rate (eGFR) to confirm the presence of ESRD. The diagnosed ESRD cases were then scrutinized to evaluate the associated risk factors such as uncontrolled diabetes, hypertension, glomerulonephritis and renal calculi. Data was analyzed using SPSS Version 20.0. Out of 300 patients enrolled, 56.7% were presented with persistent vomiting, anuria (44.7%), oliguria (39.7%), dyspnea (35.5%) and acidotic breathing (35%) while 296 of them were diagnosed with ESRD upon clinical investigations. These symptoms continued to appear for 19-22 days in the majority of ESRD cases (43.2%). Glomerulonephritis (37.1%), Uncontrolled Hypertension (29.7%), Uncontrolled Diabetes Mellitus (25.6%) and Renal Calculi (7.43%) were the significant risk factors for ESRD ( $p < 0.05$ ). No statistical significance exists between age, gender, duration of symptoms and ESRD ( $P > 0.05$ ). ESRD was highly prevalent among the studied population. Glomerulonephritis and Hypertension were found to be the common risk factors leading to ESRD, the consistent change in the intensity of the disease risk and symptoms highlights the need to build up strategies confronting the ESRD associated mortality and morbidity rate.

### KEYWORDS

*End Stage Renal Disease, Frequency, Risk Factors, Symptoms of ESRD.*



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## Frequency of Hypocalcemia in Patients with Chronic Liver Disease

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Tamoor Chughtai  
Arif Rahim Khan  
Nasir Jamal Khan  
Ghulam Abbas\*  
Zahra Nazish  
Absar Sirati

### AUTHOR DETAILS

Department of Medicine and Nephrology, Nishtar Medical University, Multan, Pakistan

### ABSTRACT

Hypocalcemia may occur primarily or secondary to other associated disease conditions, which increases the complications, symptomatic burden and the intensity of physiological alterations associated with each etiological factor. The aim of the current study was to determine the frequency of hypocalcemia in patients with chronic liver disease (CLD) due to chronic hepatitis. This cross-sectional, single center study was conducted from July 2018 to June 2019. A total of 166 CLD patients presented to Department of Medicine, Nishtar Hospital, Multan, between the age group of 18-60 year irrespective of gender were included in the study. After attaining consent from the patients, data regarding demographic details and clinical characteristics were recorded. The serum  $Ca^{+2}$  concentration was assessed using the blood sample (10 ml) drawn from each patient. Based on the serum  $Ca^{+2}$  concentration the patients were then categorized as hypocalcemic and normocalcemic. The recorded data was analyzed using SPSS version 22. Results Of these 166 study enrolled cases, there were 92 (55.4%) male patients and 74 (44.6%) female patients with the mean age  $49.95 \pm 7.53$  years. Around 54.8% patients had CLD for more than 18 months. The mean treatment duration was  $9.54 \pm 2.78$  months, only 28 (16.9%) cases were receiving treatment. Moreover, 28 CLD cases were observed with co-existing hepatitis B while 138 cases with hepatitis C. Mean serum calcium level was  $7.54 \pm 0.67$  mg/dl, where hypocalcemia was present in 147 (88.6%) cases. It can be concluded from the study results that hypocalcemia is significantly associated with CLD as high frequency of calcium deficiency was observed among the studied population suffering from both CLD and viral hepatitis.

### KEYWORDS

*Vitamin D, Chronic Liver Disease, Cirrhosis, Vitamin D deficiency, Hepatitis B virus infection, Hepatitis C virus infection.*



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## Non-Invasive Prediction of High-Risk Esophageal Varices through Platelet Count to Spleen Diameter Ratio

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Zia ul Mustafa<sup>1\*</sup>  
Muhammad Aleemuddin<sup>1</sup>  
Shafait Ali Rana<sup>2</sup>  
Ramla Kazmi<sup>1</sup>

### AUTHOR INSTITUTES

<sup>1</sup>Sahara Medical College, Narowal, Pakistan  
<sup>2</sup>Department of Medicine, Sialkot Medical College, Pakistan

### ABSTRACT

The aim of the study was to determine the positive predictive value (PPV) of platelet count to spleen diameter (PS/SD) ratio for the diagnosis of high-risk esophageal varices (HREV) taking endoscopic findings as gold standard exclusively in Hepatitis C Virus (HCV) related cirrhosis. A cross-sectional study was conducted at Outdoor patient department, Service Hospital, Lahore for a duration of six months from 25<sup>th</sup> June 2012 to 24<sup>th</sup> December 2012. A total of 200 HCV related cirrhotic patients were included in the study after attaining written informed consents. The data was collected using a pre-designed questionnaire inquiring patients' demographic details and ultrasonographic measurement of spleen diameter were observed. For PC/SD ratio, total blood count was obtained using Cell-DYN 1700. The risk of esophageal varices was predicted on the basis of the platelet count/spleen diameter ratio, patients with less than 830.8 (PC/SD ratio) received upper gastrointestinal tract endoscopy in order to determine the presence and grade of esophageal varices. Collected data was analyzed using SPSS Version 10. The mean age of the study patients was 56.9±9.4 years; 127 (63.5%) males and 73 (36.5%) females. Grade-I esophageal varices were found in 84 (42%) patients, grade-II in 77 (38.5%) and grade-III in 39 (19.5%) patients. Positive cases of HREV on endoscopy were 146 and PC/SD ratio diagnose HREV in 182 cases, PPV of PC/SD ratio was 75.2%. It can be concluded from the study results that PC/SD ratio is useful for the non-invasive diagnosis of HREV among patients with HCV related cirrhosis.

### KEYWORDS

*High Risk Esophageal Varices, HCV, Platelet Count to Spleen Diameter Ratio, Liver Cirrhosis.*



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## Outcome of Modified Interlaminar Decompression: A Conservative Decompressive Surgery for Lumbar Spine Stenosis

### PUBLICATION

Pakistan Journal of Medical Sciences. 2020

### IMPACT FACTOR: 1.088

### JOURNAL CATEGORY: X

### AUTHORS

Farooq Azam<sup>1</sup>  
Seema Sharafat<sup>2</sup>  
Zahid Khan<sup>3</sup>  
Mumtaz Ali<sup>4</sup>

### AUTHOR DETAILS

Department of Neurosurgery Medical and Teaching Institute, Lady Reading Hospital, Peshawar, Pakistan

### OBJECTIVE

To evaluate the outcomes of modified interlaminar decompression in patients with degenerative lumbar spinal stenosis (LSS).

### METHODS

This descriptive observational study was conducted at the Department of Neurosurgery, Lady Reading Hospital Peshawar from July 2014 to June 2018. All patients with degenerative LSS who underwent modified interlaminar decompression during the study period were included in the study. The patients were followed up to one year after surgery. The data was entered into a structured questionnaire designed according to the study which was then analyzed using SPSS version 21.

### RESULTS

A total of 182 LSS cases were included in the study and 236 levels were operated during the study period. According to the records increased prevalence of LSS was found among males i.e. 58.8%. The common level with degenerative stenosis involved was L4-5. Good to excellent outcomes were observed in 93.9% patients in the 1st follow-up visit. The most common complication of surgery was dural tear followed by wound infection.

### CONCLUSION

Modified interlaminar decompression is a conservative surgical technique, proved to be a potential approach with acceptable complications, satisfactory outcomes and it is easy to learn.

### KEYWORDS

*Lumbar Spine, Lumbar Spinal Stenosis, Laminectomy, Lumbar Decompression, Lumbar Disc Herniation, Lumbar Fusion.*



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## Comparative Safety and Efficacy of Sitagliptin and Glimepiride in Combination with Metformin in Type 2 Diabetic Patients

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Ibrar Ahmed<sup>1\*</sup>  
Zafar Ali<sup>2</sup>  
Mohammad Nawaz<sup>1</sup>  
Tahir Ghaffar<sup>1</sup>  
Mohammad Abdur Rahman Afridi<sup>2</sup>

### AUTHOR INSTITUTES

<sup>1</sup>Endocrinology Unit, Lady Reading Hospital, Pakistan  
<sup>2</sup>Medicine unit, Lady Reading Hospital, Pakistan

### ABSTRACT

Combination therapies are becoming vital for the appropriate glycemic control; Metformin is recommended as the first line treatment for type 2 diabetes mellitus (T2DM) while dipeptidyl peptidase 4 inhibitor Sitagliptin and Glimepiride are being utilized as add-on therapy to improve the efficacy profile. The purpose of this study was to compare the safety and efficacy of Sitagliptin and Glimepiride in combination with Metformin in T2DM patients. An observational, comparative, single center study was conducted on a sample of 180 T2DM patients presented at the Medicine & Endocrinology Department of Lady Reading Hospital (LRH), Peshawar. Patients were randomized to either Sitagliptin (50-100 mg) and Glimepiride (1- 2 mg), both in combination with Metformin (500 -1000 mg)/day. Follow-up visits were planned twice after the baseline visit i.e. after 3 months and 6 months. Data regarding patients' clinical characteristics were collected and analyzed using SPSS Version 22. The mean HbA1c level (%) was significantly reduced in group 1 as compared to group 2 (-2.26 vs -2.39), the same pattern was observed for the mean PPG reduction as well ( $p < 0.05$ ). While for FPG (mg/dl) the mean reduction rate was more prominent in group 2 (-50.07 vs -46.76). Minor adverse effects like weight gain and hypoglycemic incidences were common among group 2 patients administering Glimepiride, in contrast, the patients of group 1 administering sitagliptin-metformin combination reported weight loss. Both groups showed significant improvement in the efficacy profile by the end of the study period. Moreover, no serious side-effects were associated with the drugs administered.

### KEYWORDS

*Type 2 Diabetes Mellitus, Blood Glucose, Sitagliptin, Glimepiride, Metformin.*



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## Vitamin D Deficiency among Patients with HCV Genotype 3A

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Aleem ur Rashid  
Amin ul Haq  
Samiullah  
Haroon ul Rashid  
Abdul Ahad  
Amir Zeb

### AUTHOR DETAILS

Medical B Ward, Saidu Teaching Hospital, Swat, Pakistan  
Pathology Department, Saidu Teaching Hospital, Swat, Pakistan

### ABSTRACT

Vitamin D has several classical functions that are important for bone maintenance. Among patients with hepatitis C, vitamin D deficiency can lead to liver fibrosis, necro-inflammation, bone disease, and treatment failure. The aim of the current study was to determine the frequency of vitamin D deficiency among patients with Hepatitis C virus (HCV) genotype-3a. This cross-sectional study was conducted from April 2017 to July 2018 at the outdoor department, Saidu teaching hospital, Swat. A total of 160 patients having HCV genotype 3a were selected. The data was recorded using a pre-designed questionnaire and patient's baseline characteristics were taken. Serum 25-hydroxyvitamin D [25(OH)D] level was also measured and severity of vitamin D deficiency was categorized as severe deficiency, deficiency, insufficiency and sufficiency. Data was analyzed using SPSS version 22. Of the 160 patients, 142 (88.75%) had some degree of vitamin D deficiency, 62 (38.8%) patients had insufficiency, 67 (41.9%) had deficiency, and 13 (8.1%) had severe vitamin D deficiency. Vitamin D levels were equally insufficient among HCV patients of both genders and insignificant association exist between the two variables ( $p$  value  $> 0.05$ ). In conclusion, Vitamin D deficiency is highly prevalent among HCV patients, emphasizing the need of Vitamin D supplementation.

### KEYWORDS

*Chronic Hepatitis C, Genotype 3a, Vitamin D deficiency.*



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## Knowledge and Clinical Practice Pattern Related to Hypothyroidism Management of the Physicians from Different Specialties; A KAP Survey June

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Ibrar Ahmed<sup>1\*</sup>  
Aisha Sheikh<sup>2</sup>  
Syed Zubair Hussain<sup>3</sup>  
Fawad Ahmad Randhawa<sup>4</sup>

### AUTHOR INSTITUTES

<sup>1</sup>Endocrinology Unit, Lady Reading Hospital, Peshawar, Pakistan.  
<sup>2</sup>Medicine Unit, Agha Khan Hospital, Pakistan.  
<sup>3</sup>Endocrinology Unit, Quaid e Azam Hospital, Islamabad, Pakistan  
<sup>4</sup>Endocrinology Unit, Mayo Hospital, Lahore, Pakistan

### ABSTRACT

Due to numerous diagnostic complexities and inappropriate disease management practices, it is essential to provide evidence-based research highlights. This study aims to provide a documented summary regarding the knowledge, attitude and practices (KAP) of the physicians in managing hypothyroidism and also to assess the clinician's insight upon the specific cases including pregnancy and old age. The study was conducted upon the physicians attending the current medical education (CME) programs and meeting conducted by Pakistan Endocrinology Society. Data was collected through a questionnaire, designed to assess the knowledge and practices pattern regarding hypothyroidism including thyroid diagnosis, treatment options, follow-up frequency and associated risk factors influencing the decision making in different case scenarios was also acquired. Out of 760 physicians, 291 (38.3%) physicians recommended Anti-thyroid peroxidase (Anti-TPO) as the diagnostic test for middle aged females presented with hypothyroidism symptoms. 82.6% physicians preferred a dose increment of 25 mcg/day (Levothyroxine), follow-up after every 6 weeks was preferred by 79.1% physicians and Levothyroxine (12.5 mcg) daily was recommended during follow-up visit by majority of the physicians. Thyroid Stimulating Hormone (TSH) target ranges were evaluated for different case scenarios, where the most preferable target was <1 mU/L in case of a 25-year-old female (hypothyroidism and trying to conceive), and same as in case of an 85-year-old female. Based on the current practicing patterns and knowledge, awareness programs and campaigns highlighting the practices and management of thyroid imbalances is very important in order to avoid maladministration and treatment failures.

### KEYWORDS

*Knowledge, Attitude, Practicing Patterns, Hypothyroidism, Physicians Decision Making.*



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## Knowledge of Rare Diseases and its Management

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Syed Hussain Baqar Abidi<sup>1\*</sup>  
Asima Faisal<sup>1</sup>  
Muhammad Rahim Bhurgri<sup>2,3</sup>  
Aylia Mazhar<sup>4</sup>  
Mahwish Raza<sup>5</sup>  
Jaffer Bin Baqar<sup>6</sup>

### AUTHOR DETAILS

<sup>1</sup>Institute of Business Management, Korangi Creek, Karachi, Pakistan.  
<sup>2</sup>Muhammad Medical College Mirpurkhas, Pakistan  
<sup>3</sup>Bhurgri Hospital Matli District Badin, Pakistan  
<sup>4</sup>Dr. Ziauddin University Hospital, Clifton, Karachi, Pakistan  
<sup>5</sup>Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology, Karachi Campus, Pakistan  
<sup>6</sup>University of Karachi, Pakistan

### ABSTRACT

Health sector in Pakistan lacks the basic health facilities due to economic constraints and hence increasing the death rate among the patients with preventable diseases. There is a progressive trend in preventable disease outbreaks in Pakistan at nearly double pace from 38 outbreaks in 2015 to 70 in 2016. Increasing preventable deaths in Pakistan demand attention towards Primary Health concerns. The aim of this study was to investigate the knowledge and management skills of the physician's regarding the rare diseases. A cross-sectional study was conducted over a sample of 118 physicians serving at various government & private hospitals of Karachi, Pakistan. The data was collected from March to August 2014, all the physicians working at the registered clinics or hospitals with at least one-year work experience were enrolled in the study. Demographic characteristics and physician knowledge regarding rare disease was recorded. Moreover, the level of skills and awareness was rated from 1 (poor) to 5 (Excellent) by the enrolled physicians based on their perception and work experience. The study showed that there is considerable unawareness about rare diseases among the healthcare providers as indicated by the self-reported scores i.e. 62.7% physicians rated their level of knowledge as average or below average. Overall, 44.1% physicians suggested that delayed diagnosis is the major cause of mortality among rare disease patients followed by misdiagnoses or treatment unviability i.e. 27.1% each. Moreover, the specialized physicians were found to have greater knowledge of the rare diseases as compared to the general practitioners (p-value = 0.036). As per the physicians rating, the general practitioners lack the basic knowledge and awareness of rare disease i.e. 49.2% gave a score 1 (poor) to general practitioners and 43.2% indicated it as substandard. Consultants are more aware about the rare diseases as compared to the general practitioners. It is essential to employ strategic plans in order to identify the rare diseases in Pakistan, by increasing the knowledge and awareness among the healthcare professionals.

### KEYWORDS

*Rare Diseases, Physicians knowledge, Skills, Awareness.*



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## High Blood Pressure as an Early Predictor of Mortality among Patients with Acute Hemorrhagic Stroke

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Irfan Ullah<sup>1\*</sup>  
Muhammad Nadeem<sup>2</sup>  
Muhammad Bilal<sup>2</sup>  
Kashif Kamal<sup>3</sup>  
Faraz Ahmed<sup>4</sup>  
Jahingeer Shoro<sup>5</sup>

### AUTHOR INSTITUTES

<sup>1</sup>Department of Neurology, Mufti Mehmood Teaching Hospital, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan

<sup>2</sup>Department of medicine, Lady Reading hospital, Peshawar, Pakistan.

<sup>3</sup>DHQ Hospital, Karak, Pakistan

<sup>4</sup>Indus Medical College, Tando Muhammad Khan, Pakistan

<sup>5</sup>Almana General Hospital Alkhobar, Saudi Arabia

### ABSTRACT

Hypertension is a common risk factor for premature disability and death among patients with acute hemorrhagic stroke. The diagnosis and management of hypertension among stroke patients is complex due to the multifactorial etiology and the associated heterogeneous consequences. Our aim was to determine the frequency of early mortality among acute hemorrhagic stroke patients admitted with the patients with high blood pressure. This prospective cohort study was conducted at a medical science institute of Islamabad from 31st January to 30th July 2015. A total of 126 stroke patients were enrolled and their detailed history and blood pressure (BP) was recorded. Early mortality was noted by monitoring in hospital death within 7 days of admission. SPSS Version 17.0 was used for statistical analysis. There were 126 patients with a mean age of  $50.35 \pm 28.72$  years, 48 (38%) female patients and 78 (62%) patients were male. The overall early mortality rate among the enrolled stroke patients was 42%, while 58% patients were discharged after treatment completion. Blood pressure was significantly associated with stroke incidence & associated mortality ( $p < 0.05$ ). The mean systolic and diastolic BP was comparatively higher among expired patients than those discharged. In conclusion, high BP among stroke patients is significantly associated with death. Therefore, it might be a significant predictor of early mortality among hemorrhagic stroke patients.

### KEYWORDS

*Early Mortality, Blood Pressure, Hypertension, Acute Hemorrhagic Stroke.*



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## Early Laparoscopic Cholecystectomy Treatment Outcomes among Patients with Acute Gallstone Pancreatitis

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Ajmal Farooq\*  
Muhammad Nasir  
M. Idrees Shabbir  
Ayyaz

### AUTHOR DETAILS

Ameer-ud-Din Medical College (AMC), Lahore, Pakistan

### ABSTRACT

Among acute gallstone pancreatitis cases, laparoscopic cholecystectomy has been considered as the treatment of choice for years to prevent further biliary complications. But there has been an ongoing debate on the timing of the procedure i.e. recommendation of early or delayed laparoscopic cholecystectomy. Our aim was to determine the outcome of early laparoscopic cholecystectomy in terms of post-operative wound infection and hospital stay among patients with acute gallstone pancreatitis. This descriptive study was conducted at one of the surgical units of Lahore General Hospital, Pakistan for 15 months. A total of 155 patients with acute mild to moderate gallstone pancreatitis were included in the study after obtaining written informed consent. Outcomes were determined in terms of post-operative wound infection and duration of hospital stay. The severity level and mortality risk were determined through Ranson's score. The collected data was statistically analyzed using SPSS Version 20.0. Of the total AP patients, 82 (52.90%) were males and 73 (47.10%) were females with a mean age of  $39.40 \pm 13.69$  years. These patients had only 5% mortality risk as per the Ranson's Criteria i.e. 46.5% patients had Ranson score 1 while 53.5% of patients had Ranson score 2. Wound infection was observed among 7.74% patients and the mean duration of hospital stay was  $2.61 \pm 1.17$  days. We conclude that early laparoscopic cholecystectomy is associated with reduced duration of hospital stay and causes no prominent increase in the post-operative complications among patients with mild to moderate acute gallstone pancreatitis.

### KEYWORDS

*Laparoscopic cholecystectomy, Early cholecystectomy, Gallstone Disease, Acute Pancreatitis, Wound Infection, Hospital stay.*



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## Risk of Atherosclerotic Cardiovascular Diseases in Various Ethnicities of Pakistan

### PUBLICATION

Pakistan Journal of Medical Sciences. 2020

IMPACT FACTOR: 1.088

JOURNAL CATEGORY: X

### AUTHORS

Tariq Ashraf<sup>1</sup>  
Asif Nadeem<sup>2</sup>  
Shakil Sarwar<sup>3</sup>  
Musa Karim<sup>4</sup>

### AUTHOR INSTITUTES

National Institute of Cardiovascular Diseases, Karachi, Pakistan  
Combined Military Hospital (CMH) Malir, Karachi, Pakistan

### OBJECTIVE

To estimate the risk of atherosclerotic cardiovascular diseases (ASCVD) in various ethnicities of Pakistan using Astronaut Cardiovascular Health and Risk Modification (Astro-CHARM) risk calculator and the Pooled Cohort Equations (PCE).

### METHODS

Individuals of both gender between 40 to 65 years of age without pre-existing coronary artery disease from residents of Karachi were recruited through snowball sampling technique. Study was conducted at the National Institute of Cardiovascular Diseases, Karachi, Pakistan during January to June 2019. Ethnicity of the participants was categorized based on their mother tongue. Ten-year risk of ASCVD event was estimated using Astro-CHARM Calculator and PCE.

### RESULTS

Mean age of a total of 386 individuals was 49 ( $\pm 7.1$ ) years and 45.3% (175) were females. Urdu-speaking individuals were 33.4% (129) of the sample, while, 18.4% (71) Pushtoons, 14% (54) Sindhi, 13% (50) Punjabi, 2.6% (10) Balochi, and remaining 18.7% (72) were of other ethnicities. High risk ( $\geq 7.5\%$ ) individuals were 20.7% (80/386) as per PCE and 11.1% (43/386) as per Astro-CHARM. As per Astro-CHARM, Sindhis' had the least risk of ten-years ASCVD event among all the ethnicities, while, Urdu-speakers' had the highest risk with mean rank of 145.18 vs. 216.50, p-value=0.001.

### CONCLUSION

A significant 10-years risk of first ASCVD event was observed in our population. ASCVD risk is alarmingly high in some ethnicities, such as Urdu-speaking, owing to the increased prevalence of traditional modifiable risk factors, such as diabetes and smoking.

### KEYWORDS

*Atherosclerotic Cardiovascular Diseases, Risk Assessment, Pooled Cohort Equations, Ethnicities, Pakistan, Astro-CHARM, Primary Prevention.*



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## Incidental Prostate Cancer among Patients with Benign Prostatic Hyperplasia Undergoing Transurethral Resection: A Hospital-Based Retrospective Study

### PUBLICATION

Indian Journal of Natural Sciences. 2020

### AUTHORS

Sadaqat Ali Khan<sup>1</sup>  
Ikram Ullah<sup>2\*</sup>  
Khurshed Alam<sup>3</sup>  
Akhtar Nawaz<sup>4</sup>

### AUTHOR INSTITUTES

<sup>1</sup>Behram Medical Centre, Kohat, Pakistan  
<sup>2</sup>Khattak Medical Centre, Peshawar, Pakistan  
<sup>3</sup>Anwar Hospital Saidu Sharif Swat, Pakistan  
<sup>4</sup>Institute of Kidney Disease, Peshawar, Pakistan

### ABSTRACT

Benign Prostatic Hyperplasia (BPH) has been known to increase the risk of urological cancers. The incidental prostate cancer frequency varies globally, as several influencers are altering the identification and malignancy in the Transurethral Resection of Prostate (TURP) specimens. This study aimed to investigate the frequency of incidental prostate cancer among patients with BPH undergoing transurethral resection. This retrospective, single-center study involving histopathological examination of TURP specimens among the BPH patients undergoing transurethral resection was conducted at Behram Medical Center Kohat during January 2018 to April 2019. All BPH patients between 41 to 100 years of age were enrolled while those with diagnosed prostate cancer were excluded from the study. The age and weight of the resected specimens were recorded for each case and the malignancy was denoted using Gleason's scores. Data was analyzed using SPSS Version 22.0. A total of 100 samples were studied as per the inclusion criteria. The incidence of prostate cancer in the study group was 13%. Out of these, 7% had high-grade prostate cancer, 3% had low grade 2% followed by intermediate grade favorable and unfavorable prostate cancers. The age group 61 to 80 years displayed a maximum frequency of incidental prostate cancer. There was a significant association between age and incidental prostate cancer ( $p=0.000$ ) whereas the resected specimen weight had an insignificant correlation with the incidence rate of prostate cancer. Hence the incidence rate was higher among the low volume prostates weighing  $< 20$  gm ( $p=0.286$ ). The occurrence of incidental prostate cancer among BPH patients undergoing TURP was found to be 13%, indicating a significant risk of prostate cancers among patients with BPH. Moreover, the incidence rate was more pronounced among patients aged 61 to 80 years specifying the positive correlation between age and incidental rate.

### KEYWORDS

*Benign Prostatic Hyperplasia (BPH), Incidental Prostate Cancer, Transurethral Resection of Prostate (TURP).*



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## Frequency of Three-Vessel Disease among Patients with Non-ST Segment Elevation Myocardial Infarction

### PUBLICATION

Cureus Journal of Medical Sciences. 2020

### AUTHORS

Faisal Ahmed<sup>1</sup>  
Muhammad Sami Khan<sup>2</sup>  
Syed Dilbahar Ali Shah<sup>1</sup>  
Javed Jalbani<sup>3</sup>  
Arshad Ali Shah<sup>1</sup>  
Ghulam Abbas Shaikh<sup>4</sup>

### AUTHOR INSTITUTES

<sup>1</sup>Civil Hospital Karachi, Pakistan  
<sup>2</sup>Civil Hospital Karachi, Pakistan  
<sup>3</sup>National Institute of Cardiovascular Diseases, Karachi, Pakistan  
<sup>4</sup>Civil Hospital Karachi, Pakistan

### BACKGROUND

Though the presence of three-vessel disease (3VD) among patients with non-ST Segment Elevation Myocardial Infarction (NSTEMI) is relatively common, very limited data is available regarding its clinical significance. The current study aimed to determine the frequency of 3VD among NSTEMI patients presenting at the tertiary care hospital of Karachi, Pakistan.

### METHODS

This cross-sectional study was conducted at the National Institute of Cardiovascular Diseases, Karachi from August 15 2015 to February 15 2016 over a sample of 139 NSTEMI patients. Data regarding patients' baseline characteristics were recorded in a proforma. Coronary angiography was performed to determine the presence of 3VD. The frequency of occluded arteries and 3VD was also recorded and the collected data was then analyzed using Statistical Package for Social Sciences (SPSS) version 20.0 (IBM Corp., Armonk, NY, USA).

### RESULTS

A total of 139 NSTEMI patients were enrolled in the study with a mean age of  $50.47 \pm 12.47$  years. The majority of them were males (70.5%), mostly  $\geq 40$  years of age (67.6%). Among the comorbidities, 50.4% of patients had diabetes mellitus (DM), 61.9% were hypertensive and 30.9% had dyslipidemia. The overall frequency of 3VD among the enrolled NSTEMI patients was 30.2%. Three major arteries were found to be occluded; 68.3% NSTEMI patients had occlusion in the left anterior descending (LAD) artery, followed by right coronary artery (RCA) among 49.6%, 40.3% had left circumflex (LCX) artery occlusion, and 50.4% had diagonal and obtuse marginal (OM) artery occlusion respectively. Among the effect modifiers, no significant impact of age, gender, and smoking habits was observed on the frequency of 3VD among NSTEMI patients ( $p > 0.05$ ). Among the reported comorbidities, DM was significant among NSTEMI patients with 3VD ( $p < 0.05$ ).

### CONCLUSION

Our study results indicated that a significant proportion of NSTEMI patients had 3VD, independent of the effect of age and gender.

### KEYWORDS

Three vessel disease, non-ST-segment elevation myocardial infarction, angiography, coronary artery occlusion.



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*For the 7<sup>th</sup> consecutive time, presented by the Horticulture Society of Pakistan.*



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**PUBLICATIONS 2019**

## Efficacy of Oral Montelukast in Comparison of Inhaled Steroids for Mild Persistent Asthma among Children Aged 1-5 years: A Randomized Clinical Trial in Sri-Lanka

### PUBLICATION

Pulmonary and Critical Care Medicine. 2019

**IMPACT FACTOR: 1.4**

### AUTHORS

Jayawardena PP\*  
Galappaththi J  
Imalke KACP

### AUTHOR INSTITUTES

Department of Pediatrics,  
Faculty of Medicine,  
University of Ruhuna,  
Galle, Sri Lanka

### BACKGROUND

In Sri Lanka, the incidence of asthma has been reported as 2.6% in children. Increased cost and poor adherence of Inhaled Corticosteroids (ICSs) put forward the advancement of leukotriene antagonists like montelukast. However, the efficacy of montelukast has not been studied fully in children of Sri Lanka. The aim of this study is to compare the efficacy of montelukast and ICS in children aged 1 to 5 years with mild persistent asthma.

### METHODS

This randomized clinical trial was conducted from December 2011 - May 2013. Children age 1-5 years having cough and wheeze were included. The endpoint of the study was to determine the effectiveness of montelukast in the improvement of asthma symptoms measured by asthma score in comparison to ICS. Participants were divided into 2 groups where group 1 was designated for ICS and group 2 for montelukast. Data was recorded daily in the symptom diary, while coded and analyzed on SPSS. This trial is registered with Sri Lanka Clinical Trial Registry under number: SLCTR/2011/006.

### RESULTS

The study population of 81 children of which 64.2% were male, mean age was  $40.12 \pm 13.50$  months and weight of  $17.70 \pm 21.65$  Kg. Significant improvement in the mean asthma score was observed in both groups. As compared to ICS, nasal congestion was significantly reduced in montelukast group with mean score of  $281.71 \pm 27.05$  ( $p = 0.034$ ) and improvement in physical activities were equally achieved.

### CONCLUSION

Montelukast is equally effective as inhaled corticosteroids in prevention of mild persistent asthma among 1-5 years and additional significant benefit in controlling rhinitis.

### KEYWORDS

*Asthma symptoms, efficacy, inhaler corticosteroid, montelukast.*



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## Frequency of Diabetes Mellitus and Various Factors Leading to Diabetes Mellitus in Stroke Patients Presenting to Tertiary Care Hospital

### PUBLICATION

Indian Journal of Natural Sciences. 2019

### AUTHORS

Imran Ullah<sup>1</sup>  
Muhammad Bilal<sup>2\*</sup>  
Saima Khattak<sup>3</sup>  
Yaseen Khan<sup>4</sup>

### AUTHOR INSTITUTES

<sup>1</sup>Medical Officer, THQ  
Kulachi, D.I. Khan,  
Pakistan

<sup>2</sup>Assistant Professor,  
Medical-B Ward, Lady  
Reading Hospital,  
Peshawar, Pakistan

<sup>3</sup>Assistant Professor,  
Gynae-A Ward, Lady  
Reading Hospital,  
Peshawar, Pakistan

<sup>4</sup>Associate Professor,  
Medical-B, MTI, Lady  
Reading Hospital,  
Peshawar, Pakistan

### ABSTRACT

Stroke accounts for 11.8% of the deaths globally and has become the 2<sup>nd</sup> leading cause of death after heart diseases. According to the statistics of 2013, around 6.5 million deaths were reported due to stroke while 25.7 million were stroke survivors and 10.3 million new cases of stroke. The incidence ratio and mortality due to stroke has significantly increased during the period 1990 - 2013. Through this study our aim was to determine the frequency of diabetes mellitus and various factors leading to diabetes mellitus (DM) in stroke patients presenting to the tertiary care hospital. A cross-sectional study was conducted at the Department of Medicine, Lady Reading Hospital, Peshawar for a period of 6 months. A total of 230 patients were enrolled in the study. The aim of the study was explained to each patient prior to the study and patient's confidentiality was maintained. Ethical approval was sought before the inception of the study. Detailed history was taken regarding patient's age, residence, educational status, presence of diabetes and its duration, family history of diabetes, presence of smoking and hypertension. Data was analyzed using IBM SPSS Statistics for Windows Version 20.0. In present study a total of 230 patients were enrolled of which 52% patients were males while 48% were females. 40% patients had DM in which the most common factors were old age, people living in urban area, illiteracy rate of our population, positive family history of DM, smoking and hypertension. It is evident that diabetes produces profound effects among stroke patients resulting in slow recovery rate and increased mortality.

### KEYWORDS

*Diabetes Mellitus, Stroke, Risk Factors, Outcomes.*



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## Screening of Hepatitis B and C Virus Infections among Surgery Patients; Determining the Significance of Pre-Operative Investigations as a Preventive Measure

### PUBLICATION

Indian Journal of Natural Sciences. 2019

### AUTHORS

Muhamamd Rahim<sup>1</sup>  
Mehtab Rahim<sup>2</sup>  
Fareed Ahmed<sup>3</sup>

### AUTHOR DETAILS

1. Associate Professor, Surgery Department, Muhammad Medical College, Mirpurkhas, Pakistan
2. Gynaecologist, Bhurgri Hospital, Matli, Pakistan
3. House officer, Indus Medical College, Tando Muhamamd Khan, Pakistan

### ABSTRACT

Pre-operative screening of Hepatitis B and C is not very common in the medical setting of Pakistan. This major public health issue is increasing rapidly resulting in numerous chronic conditions specifically involving liver and under severe cases it may also lead to primary hepatocellular carcinoma. The aim of this study was to determine the seroprevalence of hepatitis B and C viral infections among the presurgical patients presented to the tertiary care hospital of Matli, Pakistan. A descriptive unicentre study was conducted at Bhurgri Hospital, Matli-Pakistan over a sample of 6108 patients presented for elective or emergency surgical procedures. The study continued from October 2014 to November 2018. The inclusion was made after attaining written informed consent from each patient. Patient demographic and clinical characteristics, hepatitis B surface antigen (HBsAg) and hepatitis C antibody (Anti-HCV) through immunochromatographic (ICT) methods. The recorded data was analyzed using SPSS Version 22. According to our findings, out of 6108 patients presented to the study setting 187 (3.06%) had HBV while 504 (8.25%) were having HCV infection. Majority patients were from 20-29 years age group majority patients. Moreover, increased prevalence of both the viral infections was observed among the patients from early and late adulthood. HBV and HCV infections were frequently present among the study population as identified through pre-operative screening. Indicating the necessity to add the screening of these measures before surgical procedures in order to avoid all sorts of complications during, before or after surgery and to execute appropriate management and treatment strategies.

### KEYWORDS

*Hepatitis B, Hepatitis C, Pre-surgical Screening, Hepatitis B Surface Antigen (HbsAg), Hepatitis C Antibody (Anti-HCV).*



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## Perceptions and Practices towards Medication Non-Adherence among Hypertensive Patients: An Observational Study

### PUBLICATION

Cureus Journal of Medical Science. 2019

### AUTHORS

Muhammad N. Khan<sup>1</sup>  
Najia Soomro<sup>2</sup>  
Tariq Ashraf<sup>3</sup>  
Khalid Naseeb<sup>4</sup>  
Rajesh Kumar<sup>5</sup>  
Usman Bhatti<sup>3</sup>  
Syed Taha Ali<sup>6</sup>  
Musa Karim<sup>7</sup>

### AUTHOR INSTITUTES

- 1,3,4,5 National Institute of Cardiovascular Diseases (NICVD), Karachi, Pakistan
- 2 Liaquat National Hospital, Karachi, Pakistan
- 6 Cardiology, Medical Student
- 7 National Institute of Cardiovascular Diseases, Karachi, Pakistan

### BACKGROUND

The present study broadly evaluates the adherence to pharmacotherapy, perceptions, and practices among ambulatory hypertensive patients attending a cardiac institution in Karachi, Pakistan.

### METHODS

A cross-sectional, single-center study was conducted at the National Institute of Cardiovascular Diseases Karachi, Pakistan. The study continued from 4 July 2019 to 3 September 2019. A total of 200 patients with a primary diagnosis of hypertension (HTN) were recruited for the study. The data was collected through a questionnaire based on a nine-item modified adherence predictor scale to assess medication adherence. Along with the demographic details patients smoking status, history of comorbidities and past complications were noted.

### RESULTS

It was found that the mean age of the study population was 56.45±12.36 years. A total of 62.5% of patients were taking medication daily while 15.5% were consuming medications intermittently and only 6.5% patients were not adherent at all. Around 35% patients preferred follow-up visits once in a month. Besides this, 35.5% patients never monitored their blood pressure while more than half of the studied population believed that their BP has mostly been controlled and skipped the prescribed medication.

### CONCLUSION

The study indicated that the perception and awareness among the hypertensive patients regarding their medical condition are suboptimal. Concerted strategies like health education program and campaigns must be launched in order to help the sufferers.

### KEYWORDS

*Non-adherence, hypertension, blood pressure, perceptions, medication.*



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## Incidence of Diabetic Retinopathy in Newly Diagnosed Type 2 Diabetes Mellitus Patients

### PUBLICATION

Indian Journal of Natural Sciences. 2019

### AUTHORS

Saleh Muhammad Channa<sup>1</sup>  
Aijaz Ahmed<sup>2</sup>  
Hafiz Muhammad Zeeshan Aslam<sup>3</sup>  
Bashir Ahmed Chandio<sup>4</sup>  
Salma Lakho<sup>5</sup>  
Abdul Haleem Meerani<sup>6</sup>  
Zulfiqar Ali Soomro<sup>7</sup>  
Aftab Ahmed Soomro<sup>8</sup>  
Zamant Ali<sup>9</sup>  
Fiyaz Hussain<sup>10</sup>

### AUTHOR INSTITUTES

<sup>1,4,5,6,7,8,9,10</sup> Ghulam Muhammad Mahar Medical College Teaching Hospital, Sukkur, Pakistan

<sup>2</sup>Medical Specialist Indus Hospital Bhung tehsil Sadqabad, Dist Rahimyar Khan, Pakistan

<sup>3</sup>Bahawal Victoria Hospital, Bahawalpur, Pakistan.

### ABSTRACT

Since type 2 diabetes mellitus may be present well before its clinical diagnosis is made, it is not uncommon to see its micro vascular complications at the time of diagnosis. The longer a person has diabetes, higher the chances of developing diabetic retinopathy. The objective of this study was to determine the incidence of diabetic retinopathy in newly diagnosed type II diabetes patients. Total 113 cases of newly diagnosed type II diabetes mellitus patients with age range from 30-60 years were enrolled in this study at Department of Medicine Department of Medicine, Ghulam Muhammad Mahar Medical Teaching College Sukkur. Patients with type I diabetes, hypertension and with history of previous retinal surgery were excluded. Fundoscopic examination and presence or absence of retinopathy and grades of retinopathy were noted. The observed incidence of diabetic retinopathy was 18 (15.93%) which is relatively high and emphasizes the detailed ophthalmic examination of each patient at the time of diagnosis of diabetes. mean age of the patients was  $45.46 \pm 7.40$  years. Among them 69 (61.06%) were male and 44 (38.94%) were females with male to female ratio of 1.6:1.

### KEYWORDS

*Type 2 Diabetes Mellitus, newly diagnosed, retinopathy, Incidence.*



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**PUBLICATIONS 2018**

## Determinants of Vitamin D Deficiency in Asymptomatic Healthy Young Medical Students

### PUBLICATION

Pakistan Journal of Medical Sciences. 2018

IMPACT FACTOR: 1.088

JOURNAL CATEGORY: X

### AUTHORS

Shabnam Nadeem<sup>1</sup>  
Tazeen Fatima Munim<sup>2</sup>  
Hareem Fatima Hussain<sup>3</sup>  
Deebaj Fatima Hussain<sup>4</sup>

### AUTHOR INSTITUTES

<sup>1,2</sup> Karachi Medical & Dental College, Abbasi Saheed Hospital, Karachi, Pakistan

<sup>3,4</sup> Dow University of Health Sciences (DUHS), Civil Hospital, Karachi, Pakistan

### OBJECTIVE

The study aimed to determine vitamin D status and frequency of its determinants related to diet, clothing, lifestyle and exposure to sunlight among young healthy medical students living in Karachi, Pakistan.

### METHODS

This cross sectional study included responses gathered on questionnaire from medical students of Karachi Medical & Dental College from 4<sup>th</sup> of August 2017 till 30<sup>th</sup> April 2018. All the participants were healthy young adult's year of age who gave written informed consent to participate in the study. Questions regarding demographics, sun exposure, diet, clothing, living patterns and any symptoms like pain or body aches were recorded. Serum 25 (OH) vitamin D3, calcium and phosphorus levels were measured through laboratory examination. For serum 25OHD, the cutoff values  $\leq 20\text{ng/ml}$ ,  $\geq 21\text{-}29\text{ng/ml}$ , and  $\geq 30\text{ng/ml}$  were defined as deficiency, insufficiency, and sufficiency respectively.

### RESULTS

Total number of medical students enrolled in the study was 221. Among total participants 191 (86.43%) were females and 30 (13.57%) were males. Mean  $\pm$  SD age was almost similar ( $23.00 \pm 2.56$  vs.  $23.03 \pm 2.05$ ). Majority of the females 115 (60.2%) had BMI within normal range, and were predominantly single 164 (85.9%). Vitamin D deficiency was found in 197 (89.14%), insufficiency in 16 (7.24%), and only 8 (3.62%) had sufficient levels. Determinant factors reported by deficient group (n=197); fabric color (dark mix) 87.3%, fabric material (synthetic +mix) 48.7%, full length of sleeves by 45.7%, exposure to sun only on hands and face during outdoors was reported by 64.5%, milk up to 250 cc was consumed by 77.2%, one egg per day in diet was taken by 56.9% and intake of cod liver oil was less common in only 27.4%. Conclusion: Deficiency of vitamin D is common among healthy young adults particularly females which emphasize need to add vitamin D supplements in their routine diet.

### KEYWORDS

*Associated Risk Factors, Vitamin D, Young Healthy Medical Students.*



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## Practice Patterns of Primary Care Physician on Clinical Management of GERD In Gujranwala - Pakistan

### PUBLICATION

European Journal of Pharmaceutical and Medical Research. 2018

### AUTHORS

Dr. Naveed Aslam\*

### AUTHOR INSTITUTES

Assistant Professor, Medicine, Medical Unit II, Gujranwala Medical College

### BACKGROUND

Gastro-esophageal Reflux disease (GERD) is the most commonly managed condition by primary care physicians while little is known about perception and practice patterns for its clinical management.

### OBJECTIVE

To observe the practice patterns used for the diagnosis and management of GERD, among primary care physicians of Gujranwala - Pakistan.

### METHODS

A pilot study was conducted from September 2017 to March 2018 in Gujranwala – Pakistan. Knowledge, Attitude, and Practice (KAP) survey questionnaire were utilized in this study, comprised of 8 items related to clinical practices and diagnosis of GERD. Physicians from age between 30 to 85 years of both genders, with a minimum of two years of current clinical experience, were included in this study. The study was conducted according to the guidelines of Good Epidemiology Practice and the data was analyzed through SPSS version 21.0.

### RESULTS

A total of 81 physicians (79% males & 21% females) with a mean age of  $38.18 \pm 11.21$  years were asked to fill the questionnaire for their practice in GERD management. Out of all, 53.1% physicians had 10 years of work experience while only 4.9% had up to 40 years of practicing experience and dealt with an average of 52.4% GERD complaints per week. Around 77% of the physicians reported that they rely on medical history for diagnosis. 79% preferred management through proton pump inhibitors (PPIs) as first-line treatment, 12% preferred prokinetic agents and 54.3% favored lifestyle modifications along with medication.

### CONCLUSION

Lifestyle modifications along with medication is the most deployed practice while the effective therapeutic agent was found to be PPIs. It has also been observed that national clinical practices are complimenting with international guidelines for GERD diagnosis & management.

### KEYWORDS

*Gastro-esophageal, preferred management, proton pump Inhibitors, heart burn.*



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